STRENGTH ASSESMENT OF TURKISH CEMENTS

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ABSTRACT

STRENGTH ASSESMENT OF TURKISH CEMENTS

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Cement, a hydraulic binder material, is the most important of building materials. The compressive strength test method is used to determine the quality of cement. The cement manufacturers are obliged to carry the CE Marking in accordance with the EN 197 standards for cement production in Europe and Turkey and in accordance with the Building Materials Regulation (CPR). Within the scope of CE Marking, the product certification body performs sampling from the factory in specified periods. The samples obtained are subject to simultaneous experimentation by both the manufacturers and the accredited laboratories of the certification bodies. The difference between the compressive strength test results obtained in this frame must be less than 4 MPa for all produced cement types and strength classes within the scope of the statistical conformity assessment including the 12 month period. The fact that, this difference is one of the problems most frequently encountered by cement manufacturers.

In this study, the limit value of 4 MPa specified in EN 197-2 standard was examined statistically according to cement type, constituents' type and strength class. In the study, the compressive strength results of 5037 different types and strength classes of

cements belonging to 68 manufacturers taken from a notified body, TCMA’s Economic Enterprise, The Council for Quality and Environment, were used.

As a result, it was found that the difference between the certification body and the manufacturer's compressive strength test results is dependent on the strength class of cement and especially on the determined compressive strength. In addition, the effects of cement type and constituents have been determined.

Keywords: Portland Cement, Compressive Strength, EN 197, Statistical Conformity Evaluation, Types of Cement

ÖZ

TÜRK ÇİMENTOLARININ DAYANIM DEĞERLENDİRMESİ

Kul Gül, Nazlı İpek
Yüksek Lisans, Çimento Mühendisliği Bölümü
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Şubat 2017, 123 sayfa

Hidrolik bağlayıcı bir malzeme olan çimento, yapı malzemelerinin en önemlilerindendir. Basınç dayanım deneyi ise çimentonun kalitesinin tespitinde kullanılan bir metottur. Avrupa'da ve Türkiye'de çimento üretimine ilişkin kullanılan ve EN 197 standartları kapsamında ve Yapı Malzemeleri Regülasyonu (CPR) gereği, çimento üreticileri CE işareti taşımakla yükümlüdür. CE işareti kapsamında, ürün belgelendirme kuruluşu tarafından fabrikadan belirli periyotlarda numune alımı gerçekleştirmektedir. Elde edilen numuneler, hem üreticiler hem de belgelendirme kuruluşunun akredite laboratuvarı tarafından eş zamanlı olarak deneylere tabii tutulmaktadır. Bu çerçevede elde edilen basınç dayanım deney sonuçları arasındaki farkın üretilen bütün çimento tipleri ve dayanım sınıfları için 4 MPa'dan düşük olması, 12 aylık periyodu içeren istatiksel uygunluk değerlendirmesi kapsamında gerekmektedir. Bu farkın sağlanması durumu çimento üreticilerinin en sık karşılaştıkları sorunlardan bir tanesidir.

Bu çalışmada, EN 197-2 standardında belirtilmiş olan 4 MPa değerindeki sınır değer, çimento tipi, katkı tipi ve dayanım sınıfına göre istatistiksel olarak irdelenmiştir. Çalışmada bir uygunluk değerlendirme kuruluşu olan TÇMB- Kalite ve Çevre Kurulu İktisadi İşletmesi'nden alınan 68 üreticiye ait toplam 5037 adet farklı tip ve dayanım sınıfındaki çimentoların basınç dayanım sonuçları kullanılmıştır.

Sonuç olarak, belgelendirme kuruluşu ile üreticinin basınç dayanım deney sonuçları arasındaki farkın çimentonun basınç dayanım sınıfına ve özellikle tespit edilen basınç dayanım sonucuna bağlı olduğu görülmüştür. Bunun yanında çimento tipinin ve katkı tiplerinin etkileri de tespit edilmiştir.

Anahtar Kelimeler: Portland Çimentosu, Basınç Dayanımı, EN 197, İstatiksel Uygunluk Değerlendirmesi, Çimento Tipleri

To my father Haydar KUL for contribution to the cement sector,

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ABBREVIATIONS

ACI	: American Concrete Institute
ASTM	: American Society for Testing and Materials
Bt	: Billion tons
CE	: Conformité Européenne
CEN	: The European Committee for Standardization
CPR	: Construction Products Regulations
EN	: European Norm
FPC	: Factory Production Control
Mt	: Million tons
NANDO	: New Approach Notified and Designated Organisations
OPC	: Ordinary Portland Cement
SPSS	: Statistical Package for the Social Sciences
TCMA	: Turkish Cement Manufacturers' Association
TCMA-CQE	:Economic Enterprise of Turkish Cement Manufacturers' Association– The Council for Quality and Environment
TCMA-IQC	: Turkish Cement Manufacturers' Association - Quality Control Testing Laboratories
TS	: Turkish Standard
TSE	: Turkish Standards Institution
TURKAK	: Turkish Accreditation Agency

CHAPTER 1

INTRODUCTION

1.1. General

Concrete is one of the most widely used construction material. But the research on the production and technology of a material that is used so much does not depend on far away histories. Approximately, 50 years ago in Turkey, concrete was a material produced by hand mixing in construction site without being subject to any quality control. Nowadays, it becomes indispensable product for rail tunnel, high-rise buildings, huge dam constructions, rapid and mega projects. It is an inevitable reality that concrete must constantly develop and change in order to be able to respond to the needs of the fast and growing industry.

When considering the raw materials of a heterogeneous material, concrete, no doubt cement comes to mind. Cement reacts with water in concrete to produce the hydration reactions. The products of these reactions fulfil the binding role of cement between aggregate particles.

Cement industry is very valuable for Turkey economy with 53 integrated plants and 18 grinding units, 72.8 Mt production in 2015 [1, 2]. Energy savings, alternative fuels, greenhouse gas emission, improving quality to ensure the construction industry are the recent issues of cement industry. The workers' of the Turkish cement industry which tries to improve the industry by dealing with these issues intensively; are in a position to take the necessities according to all legal requirements such as directives, regulations, European Norms' standards.

305/2011/EU Construction Products Regulation (CPR), published on the Official Gazette with 28703 Serial Number and the date of 10th July 2013, is one of the important legal requirement for construction materials like cement. CPR introduces

CE marking and performance declaration (DoP) requirements for manufacturers, distributors and suppliers of construction materials. Another legal requirements for cement are EN 197 standards.

EN 197-1 is included five main cement types and totally twenty seven cement types according to its chemical composition. Moreover, there are three standard strength classes: 32.5, 42.5, 52.5 and each of standard strength class has three classes of early strength: ordinary early strength, N, high early strength, R and low early strength, L. According to these different cement types and strength classes, the manufacturers designate their products and put on the market with these notations.

There are certain responsibilities of the manufacturer and the notified body under CE marking and in accordance with EN 197 standards. The responsibilities of the manufacturers' are autocontrol testing at specified periods, factory production control (FPC). The responsibilities of the notified bodies are initial type testing, initial inspection of factory and FPC, taking and testing the audit samples, the statistical conformity assessment, continuous surveillance of factory and FPC.

The statistical conformity assessment must be done two times in a year by the product certification body according to EN 197 standards. This assessment basically includes two parts. One of them is done with autocontrol test results, the other one is done with audit test results. Autocontrol test results must be verified by variables for compressive strength or attributes for physical and chemical properties. Evaluation of the representativeness and the accuracy of the standard compressive strength test results are parts of the assessment of audit test results.

Accuracy evaluation of standard compressive strength test results includes the strength difference control, as if it is equal to or less than 4 MPa and the standard deviation of the differences, as if it is equal to or less than 3.4 MPa.

1.2. Objective and Scope of the Thesis

The main aim of this study is to check the validity of the limit of 4 MPa that is specified in EN 197-2 standard which is used to check the accuracy of the standard compressive strength test results. Moreover, the strength difference is to be analysed statistically according to cement types, constituents' types, strength classes and the strength test results of the notified body. In the study, 5037 strength test results with different cement types and strength classes belonging to 68 manufacturers taken from Turkish Cement Manufacturers' Association - Quality and Environment Economic Enterprise, which is a notified body, are to be used.

In Chapter 2, first history of cement, quantity of production and consumption of cement in the world and Turkey are described. Then, cement production is briefly mentioned. The standards and cement types in Turkey, Europe and the USA; outgoing issue of the study are described. It is clearly presented how standards for cement production begin and at what point today, especially in Turkey. Lastly, the obligations of CPR and CE Marking and the notified bodies in Turkey are explained. The chapter is completed with quality requirements of cement.

In the Chapter 3, the sources of the data used in the study are given. All the details of the statistical study are given step by step and the results of the study classifying to cement types, constituents' types, strength classes and the strength test results of the product certification body are presented and also discussed.

In the Chapter 4, the study is concluded according to the results from the Chapter 3 and the recommendations are introduced for further studies.

CHAPTER 2

THEORETICAL CONSIDERATIONS

2.1. History of Cement

Cements may be defined as adhesive to get a compact whole from particles such as aggregates. This definition includes a large number of substances because of their adhesiveness. The very dissimilar technical and scientific importance of different members has tended to bring about a restriction of the designation to one group of adhesive substances. Cements of this kind, the plastic materials employed to produce adhesion between stones, bricks, aggregates etc. in the construction of variable structures, also take a chemical reactions. Besides that, they are consisting mixtures containing compounds of lime as their principal constituents. In this sense, the term "cements" then becomes equivalent to "calcareous cements", but it may be allowed to include certain related compounds of magnesium [3].

The word "cement" is of ancient Roman origin. The Romans made a kind of concrete included broken stone or similar material with burned lime as a binding element. This form of construction was called "opus caementitium". Later on, the term "cementium" was used to designate those admixtures added to the lime, such as brick dust and volcanic tuff to give "hydraulic" properties to it, i.e., to set and harden under moist conditions and also under water [4].

Although the first reinforced concrete building dates back to 1852, utilization of binding materials in construction could be traced back to ancient times. The first material used as a binding material was lime. Besides the fact that there are no certain evidences concerning this claim, it is possible to state that binding characteristic of lime was invented in the early periods of the human history as old as 2000s B.C. Some evidences have been revealed about usage of lime as a material of construction in various regions of ancient Egypt, Cyprus, Crete and Mesopotamia

[1]. But until the 18th century, there were not any work on the quality and production of cement.

The most important advance in the knowledge of cement was made by John Smeaton given the task of erecting a new lighthouse on the Eddystone Rock. This rock, covered by sea at high tide, is situated in the main shipping lanes of Plymouth in the English Channel. The previous structures had both failed because of a storm in 1703 and fire in 1755. Smeaton researched various mortars, made from lime obtained from different locations, according to their cementing properties and invented that the best mortars were made from the calcination of limes that contained huge proportions of clay minerals. This was the first time that the importance of clay had been known in the formation of hydraulic setting cement. Then, Smeaton used the cementitious material mixed with an equal quantity of pozzolan and made from such a clay containing lime. The lighthouse which constructed by Smeaton stood for 123 years, until 1879 and only failed when its foundations were ruined by sea [5].

In 1818, Vicat, in France, prepared artificial 'Roman cement' by calcining artificial mixture of limestone and clay, which is known as the ancestor of Portland cement. He also invented the Vicat needle which is still used today to determine the setting time of the cement [5].

Portland cement was patented in 1824 by Joseph Aspdin. It is said that before the process was patented, Aspdin used to put brightly coloured, but useless salts, into his kiln in order to deceive his rivals. The cement was of rather poor quality due to the low calcination temperature used. The product was called Portland cement because the product resembled Portland stone. Unlike the Roman mortars which would resist water only after setting had started, Portland cement would set under water [5].

The first cement plant in the world was established in England afterwards of invention of Portland cement in 1848. On the other hand in Turkey, Darıca Cement Plant established by the *"Aslan Osmanlı A.Ş."* company and Eskihisar Cement Plant established by *"Eskihisar Portland Çimento ve Su Kireci Osmanlı A.Ş."* company in 1912. About in the same period, total annual hydraulic lime production in Turkey

was 60,000 tons and its production remained higher than cement production until 1930- 1931 [1].

2.2. Quantity of Production and Consumption of Cement

Firstly, when cement production and consumption amounts are taken into consideration in Turkey, it is possible to view a continuous increase from 1950 to 2015 as seen in Figure-1. Annual cement production of Turkey was 72.8 Mt in 2015 while 71.4 Mt of this amount was produced by the members of the TCMA. Total cement domestic sale of the TCMA members in Turkey was 63.7 Mt while 80% of this amount was in bulk and the total domestic sale of cement in Turkey was 65 Mt. According to the distribution of cement types sold in 2015 as they were exhibited in Table 1, it could be observed that the most widely sold cement type in Turkey was the CEM I 42.5 type cement with 35 Mt sales amount; secondly, this was followed by the CEM II/A-M 42.5 type. Domestic sales of cement grew by 1.2%, 0.8% of this growth was recorded by TCMA members on an annual basis. At the end of 2015, 2.9 Mt clinker and 7.8 Mt cement were exported. This was caused decrease of 3.7% in cement exports compared to the previous year, while clinker exports remained nearly the same. This decline in cement exports resulted from the situation in foreign markets in 2015 [2,6].

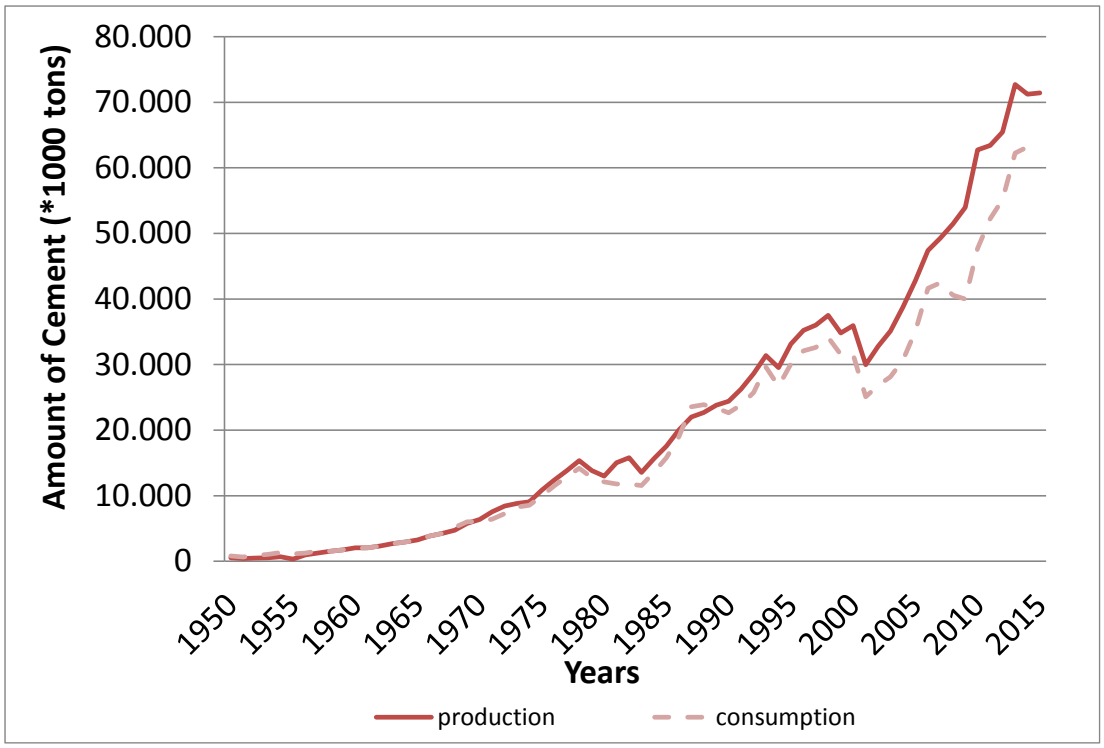

Figure 1: Quantity of Cement Production and Consumption (x 1000 tons) (TCMA Members) [2]

Figure –2 exhibits the amount of OPC and blended cement sold by the members of TCMA in the last 10-year period until the end of 2015. In 2006, sales amount of the blended cement was higher with respect to OPC; as of 2009, an increasing trend was observed with the sales of OPC. Moreover, as a result of this increase, sales of OPC was higher than blended cement in the period between 2012 and 2016. Significant increase in usage of high strength concrete in construction projects, the view that high strength could be obtained mostly by using OPC than blended cement, increasing importance of project delivery times, contractors' desire for rapid formwork removing process, and customer-oriented strategies in concrete marketing rather than environmental sensitiveness explain this situation.

However, although OPC has certain advantages over blended cement in terms of contractor and concrete manufacturer, undoubtedly this situation would result in significant drawbacks from the point of long-lasting constructions, which could not be underestimated. One of the prominent ones of these drawbacks is high heat of

hydration that could arise in mass construction consequently the cracks resulting from the temperature difference between core of concrete and ambient. The high heat of hydration and the result of the cracks can be decrease by some approaches of material selection, mixture proportioning, scheduling the construction and other practices on the plant site [7]. In addition to such issues, subject to the temperature-related limitations imposed by TS EN 206 and TS 13515, increasing trend in sales of blended cement is expected to happen.

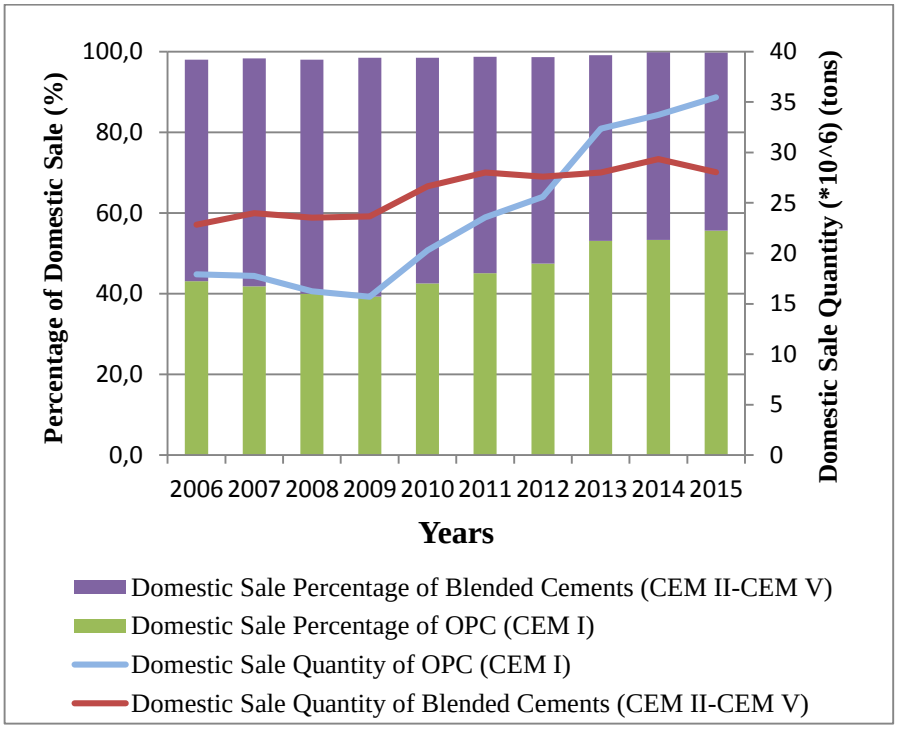

Figure 2: Domestic Sale of OPC and Blended Cements (TCMA Members) [2]*

* *The cement types not cover by EN 197-1 are excluded from the graph.*

Table 1: Domestic Sales due to Years and Cement Types (tons) (TCMA Members) [2]

TYPES	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
CEM I 32.5	467	278643	64079	436475			220813	23321	11209	
CEM I 42.5	17913619	17480791	16124255	15223946	20106263	23403804	25059508	31839391	32918312	35009266
CEM I 52.5	17468		50292	36106	206212	152605	316953	495337	783849	448865
CEM II/A-M 32.5	96652	60150	447733		137			354262	203519	
CEM II/A-M 42.5	5426706	6979748	7568372	6834749	8401572	9781828	9555937	9376410	10024146	9556279
CEM II/A-M 52.5					2784				83295	528739
CEM II/B-M 32.5	6373976	5459995	5553507	5983008	4742791	3716194	3222585	4205140	2724902	2503907
CEM II/B-M 42.5	671504	1067061	1114027	1378059	1377708	1255729	3222621	2405688	1802217	2035368
CEM II/A-L 42.5	1278117	1183562	1236480	972839	1134286	1922462	1763882	2799897	921075	970819
CEM II/B-L 32.5	438772	361740	113989	353665	730198	800334	774227	465169	452290	463876
CEM II/B-L 42.5		39525		91786	35287	140835	77660	79186	42446	37809
CEM II/A-P 42.5	273663	996958	787411	865261	1290882	1041797	657918	165036	757138	502666
CEM II/B-P 32.5	419751	401959	256998	177586	466514	472775	113260			
CEM II/B-P 42.5								97762	143232	
CEM II/A-S 42.5					84743	111148	268172	110287	270379	675197
CEM II/B-S 42.5		204284		22500	55531	20494	931			154746
CEM II/B-S 52.5				102992	2595					
CEM II/B-Q 42.5									127730	
CEM II/A-V 42.5									119529	50825
CEM II/B-V 42.5									18983	
CEM II/B-W 42.5										5682
CEM II/A-LL 42.5									2486607	2333383
CEM II/B-LL 32.5									1018265	873290
CEM II/B-LL 42.5									69692	55856
CEM III 32.5	367264	188628	179155	111030	143674	249810	330859	443999	278571	143166
CEM III 42.5	336003	341331	507764	408230	734929	1011125	743216	759351	647490	542070
CEM IV 32.5	3943399	3785138	3255002	3759419	5453790	5785963	5918744	5853778	5640414	5380127
CEM IV 42.5	171009	4210	69802	602271	31210	32837	55092	64553	436811	250121
CEM V 32.5	3052789	2899845	2441733	1992748	1967282	1665351	892009	844637	550784	982082
CEM V 42.5				19739					515763	
Others	828425	722432	803408	613858	751612	685789	735805	557200	127273	192524
TOTAL	**41609584**	**42456000**	**40574007**	**39986267**	**47720000**	**52250880**	**53930192**	**60940404**	**63175921**	**63696663**

On the other hand, world cement production was nearly 4.6 Bt in 2015 and this means 6.3% increase compared to 4.3 Bt recorded in 2014. Although there was a global economic slowdown around the fourth quarter of 2015, this increase demonstrated positive developments in cement demand. In sense of major world countries producing cement, it can be seen from Figure-3 that China remained by far the largest world cement producer, representing 51.3% of global cement production [6].

Figure-4 shows the variation of the cement consumption in Cembureau countries 2014 to 2015. However, it can be said clearly that Turkey cement consumption was increased from 2014 to 2015, this increment is nearly 3.5%.

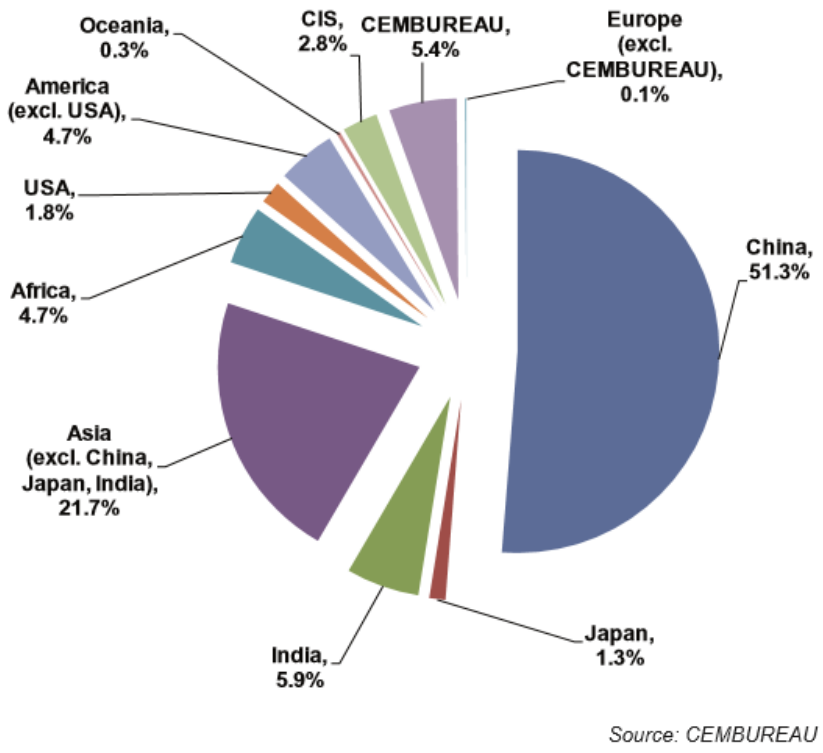

Figure 3: World Cement Production 2015 (by region and main countries) [6]

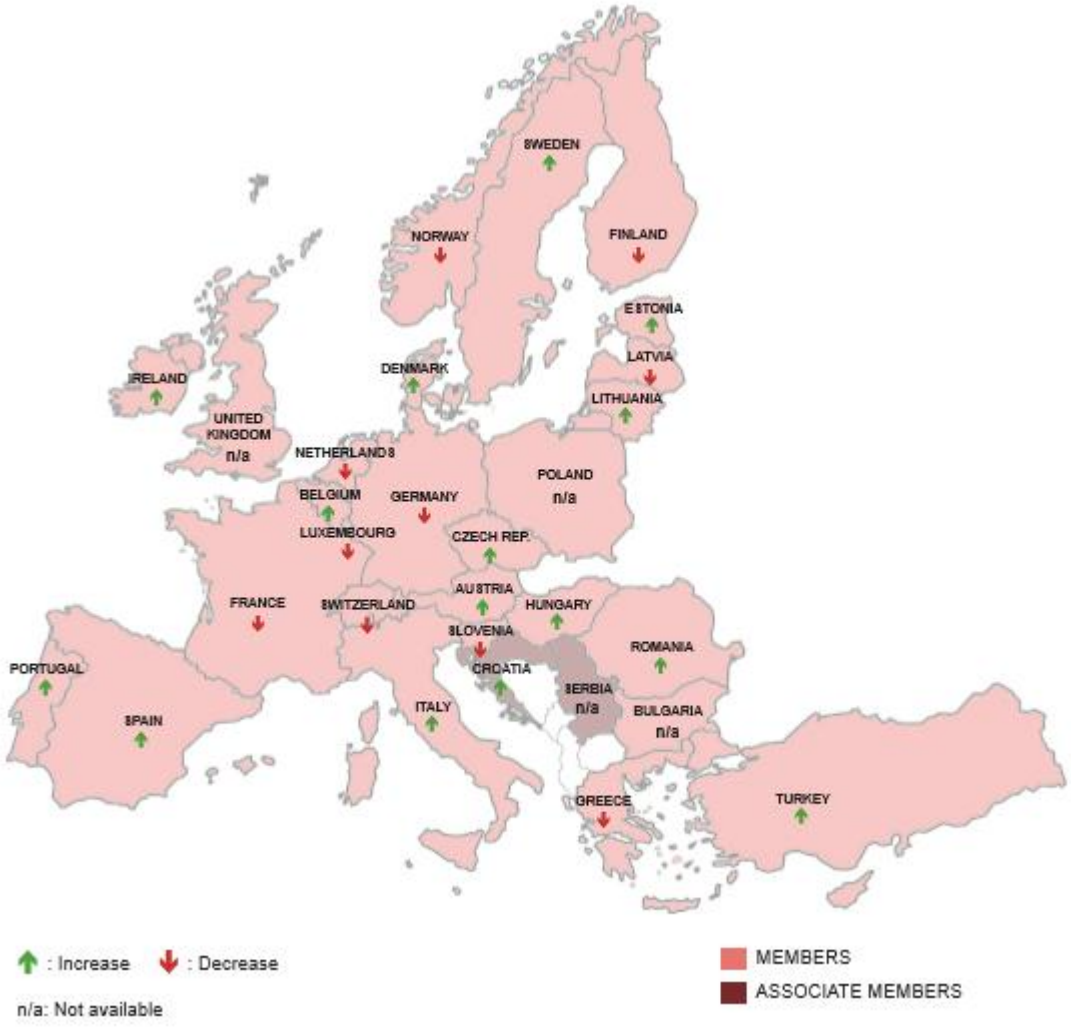

Figure 4: Evolution of Cement Consumption in Cembureau Coun6tries (variation 2015/2014) [6]

2.3. Chemistry and Production of Cement

Cement is a fine, generally grey powder which sets in a few hours after mixing with water, and then hardens in a few days into a solid, strong material. Cement is mainly used as a binder to bring together aggregates in concrete [8].

Cement is produced in two basic steps: first step is producing clinker from raw materials. The second step is grinding clinker and additives to produce cement. The first step can be a dry, wet, semi-dry or semi-wet process according to the raw

material [8]. Nowadays almost all cement plants have dry process in Turkey, because of high productivity and energy efficiency.

Cement plants are usually located closely to the market and the quarries of raw materials especially limestone to reduce transportation costs [8].

In the cement production first the raw materials are transported from the quarries, crushed, milled and proportioned so that the resulting mixture called as "raw meal" has the desired chemical composition. The raw materials can be divided into two groups: calcareous (limestone) and argillaceous (clay, shale) materials. Secondly, the raw meal is fed into the upper end of a kiln. The raw meal passes through the kiln at a rate controlled by the slope and rotational speed of the kiln. Burning fuel (fuel-oil, natural gas, coal etc.) is forced into the lower end of the kiln where temperatures of 1400 - 1550 ^{0}C to change the raw meal to clinker. Lastly; the semi-product, clinker, is cooled and milled with a small amount of gypsum to regulate the setting time of the cement. After milling process, the fine gray powder product is called as portland cement [9].

2.4. Standards and Types of Cement

The first standard on cement was issued in Germany in 1860. After the establishment of American Concrete Institute (ACI) in 1913, the preliminary American Regulations was structured by this institute [1]. Today, EN 197 standard regulates the cement manufacturing in the Europe and ASTM C 150, ASTM C 595 and ASTM C 1157 standards are in regulation in the USA.

2.4.1. Standards and Types of Cement in Turkey and Europe

The first standard regulating the manufacturing of cement in Turkey was TS 19 "Portland Cements" issued by Turkish Standards Institution (TSE) in 1959; and it has been revised three times of which the last one was in 1992. While TS 19 regulates the portland cements; there are nine more others as they were exhibited in

Table-2 concerning the special cements such as blast furnace slag cements, white portland cements, sulphate-resisting cements [10]. Majority of these standards were abolished together with TS 19 on 08.06.2004. Today, only TS 21 - "Cement - Composition, specifications and conformity criteria for white portland cement" standard which considers white portland cement still in effect.

Table 2: Turkish Standards for Cement between 1959 -2004

Standard No	The Date of Published	Title
TS 19	1959-2004	Cement- Portland Cements
TS 20	1959-2004	Cement-Blast Furnace Slag Cements
TS 21	1959-2007	Cement - Composition, specifications and conformity criteria for white portland cement
TS 22	1959-2000	Cement-Masonry Cement
TS 26	1959-2004	Cement - Trass Cement
TS 640	1992-2004	Cement-Fly Ash Cement
TS 809	1994-2004	Cement-Super Sulphated Cement
TS 3646	1994-2004	High Early Strength Cement
TS 10156	1992-2004	Cement- Blended Cement
TS 10157	1992-2012	Cement - Composition, specifications and conformity criteria for sulphate- resisting cement

When TS 19 standard was issued in 1959, three main groups were defined as according to the strength values of the portland cements exhibited in Table-3. However, cement plants in these years were only able to manufacture the NPÇ-350 type cement [11]. Numbers used in reference of cements were based on the figures reflecting 28-day compressive strength values in unit of kg/cm^2. Upon the revision of TS 19 standard on 01.04.1972, titles of cement types were amended and blended cement of KPÇ-325 type was included into the relevant standard [12].

Table 3: The Cement Types according to TS 19

TS 19: 1959	TS 19: 1972	TS 19: 1992
NPÇ-350 (Normal Portland Cement)	PÇ 325 (Portland Cement)	PÇ 32.5 (Portland Cement)
YPÇ-500 (High Strength Portland Cement)	PÇ 400 (Portland Cement)	PÇ 42.5 (Portland Cement)
İPÇ-600 (High Initial Strength Portland Cement)	PÇ 500 (Portland Cement)	PÇ 52.5 (Portland Cement)
	KPÇ 325 (Blended Portland Cement)	

Afterwards of abolishment of the TS 19 standard in 08.06.2004, it was replaced by TS EN 197-1:2002 "Cement- Part 1: Compositions and conformity criteria for common cements" standard.

EN 197-1 was the first harmonised European standard for the construction products. TS EN 197-1 standard was issued by TSE in Turkey in 2002. After TS EN 197-1 being compulsory, conformity of European norms is arised for cement industry in Turkey. Today, its revised form as of 2012 is still in effect. Even though TS 19 has only three types of cement according to its strength, TS EN 197-1 included five main cement types and totally twenty seven cement types according to its chemical composition. These cement types were exhibited in Table- 4. TS EN 197-1 not only increased the types of cement but also given the new concept, conformity evaluation, to quality of cement.

Table 4: Cement Types and Compositions according to EN 197-1 [15]

Main Types	Notation of the 27 products (types of common cement)		Composition (percentage by mass[a])										
			Main constituents										Minor additional constituents
			Clinker	Blast-furnance slag	Silica fume	Pozzolana		Fly ash		Burnt shale	Limestone		
						natural	natural calcined	siliceous	calcareous				
			K	S	D[b]	P	Q	V	W	T	L	LL	
CEM I	Portland cement	CEM I	95-100	-	-	-	-	-	-	-	-	-	0-5
CEM II	Portland-slag cement	CEM II/A-S	80-94	6-20	-	-	-	-	-	-	-	-	0-5
		CEM II/B-S	65-79	21-35	-	-	-	-	-	-	-	-	0-5
	Portland-slica fume cement	CEM II/A-D	90-94	-	6-10	-	-	-	-	-	-	-	0-5
	Portland-pozzolana cement	CEM II/A-P	80-94	-	-	6-20	-	-	-	-	-	-	0-5
		CEM II/B-P	65-79	-	-	21-35	-	-	-	-	-	-	0-5
		CEM II/A-Q	80-94	-	-	-	6-20	-	-	-	-	-	0-5
		CEM II/B-Q	65-79	-	-	-	21-35	-	-	-	-	-	0-5
	Portland-fly ash cement	CEM II/A-V	80-94	-	-	-	-	6-20	-	-	-	-	0-5
		CEM II/B-V	65-79	-	-	-	-	21-35	-	-	-	-	0-5
		CEM II/A-W	80-94	-	-	-	-	-	6-20	-	-	-	0-5
		CEM II/B-W	65-79	-	-	-	-	-	21-35	-	-	-	0-5
	Portland-burnt shale cement	CEM II/A-T	80-94	-	-	-	-	-	-	6-20	-	-	0-5
		CEM II/B-T	65-79	-	-	-	-	-	-	21-35	-	-	0-5
	Portland-limestone cement	CEM II/A-L	80-94	-	-	-	-	-	-	-	6-20	-	0-5
		CEM II/B-L	65-79	-	-	-	-	-	-	-	21-35	-	0-5
		CEM II/A-LL	80-94	-	-	-	-	-	-	-	-	6-20	0-5
		CEM II/B-LL	65-79	-	-	-	-	-	-	-	-	21-35	0-5
	Portland-composite cement[c]	CEM II/A-M	80-88	<---------- 12-20 ---------->									0-5
		CEM II/B-M	65-79	<---------- 21-35 ---------->									0-5
CEM III	Blast furnace cement	CEM III/A	35-64	36-65	-	-	-	-	-	-	-	-	0-5
		CEM III/B	20-34	66-80	-	-	-	-	-	-	-	-	0-5
		CEM III/C	5-19	81-95	-	-	-	-	-	-	-	-	0-5
CEM IV	Pozzolanic cement[c]	CEM IV/A	65-89	-	<---------- 11-35 ---------->					-	-	-	0-5
		CEM IV/B	45-64	-	<---------- 36-55 ---------->					-	-	-	0-5
CEM V	Composite cement[c]	CEM V/A	40-64	18-30	-	<-------- 18-30 ------>			-	-	-	-	0-5
		CEM V/B	20-38	31-49	-	<-------- 31-49 ------>			-	-	-	-	0-5

a: The values in the table refer to the sum of the main and minor additonal constituents.
b. The proportion of slica fume is limited to 10%.
c. In Portland-compoite cements CEM II/A-M and CEM II/B-M, in pozzolanic cements CEMIV/A and CEM IV/B and in composite cements CEM V/A and CEM V/B the main constituends than clinker shall be declared by designation of the cement (for examples, see Clauses 8)

2.4.2. Standards and Types of Cement in the USA

In USA, portland cements are manufactured to meet the specifications of ASTM C 150 “Standard Specification for Portland Cement”, AASHTO M 85 “Specification for Portland Cement” and ASTM C 1157 “Performance Specification for Hydraulic Cement”. The requirements of AASHTO M 85 are almost identical to ASTM C 150. However, blended hydraulic cements must conform to the requirements of ASTM C 595 (ASSHTO M 240) “Standard Specification for Blended Hydraulic Cement” or ASTM C 1157 “Performance Specification for Hydraulic Cement”. Cement types according to ASTM standards are given in Table-6 [9].

Cement standards according to ASTM and other cement standards of the world, such as EN 197, are not same because of differences in test methods and limits on required properties. EN 197 cement types do not conform to the types in ASTM C 150 and also ASTM cements could not be an alternative for EN specified cement without the designers' or contractors' approval [9].

Table 5: Cement Types according to ASTM

Portland Cement Types (ASTM C 150)		**Blended Hydraulic Cement Types (ASTM C 595)**		**Performance Based Cement Types (ASTM C 1157)**	
Type I	Normal Portland Cement	Type IL	Portland-Limestone Cement	Type GU	General Use
Type II	Moderate Sulphate Resistance Portland Cement	Type IS	Portland-Slag Cement	Type HE	High Early Strength
Type II (MH)	Moderate Heat of Hydration Portland Cement (and Moderate Sulphate Resistance)	Type IP	Portland-Puzzolan Cement	Type MS	Moderate Sulphate Resistance
Type III	High Early Strength Portland Cement	Type IT	Ternary Blended Cement	Type HS	High Sulphate Resistance
Type IV	Low Heat of Hydration Portland Cement			Type MH	Moderate Heat of Hydration
Type V	High Sulphate Resistance Portland Cement			Type LH	Low Heat of Hydration

2.5. Quality of Cement

2.5.1. CE Marking and CPR

"CE" marking is a new policy approach that was adopted by the European Union (EU) in 1985. This policy aims to simplify and generalize the framework for technical harmonization of legislation for the free movement of products within

Europe. This marking is made up of initial capital letters of expression of "Conformité Européenne" so as to imply that products classified in this new approach directives prepared under this scope are deemed that they fulfil all conformity requirements under criterions of health, safety and protection of environment and consumers and that they conform to standard requirement.

In this context, 305/2011/EU Construction Materials Regulations (CPR) were issued and published on the Official Gazette with 28703 Serial Number and with July 10th, 2013 date to determine procedures and principles about supply and distribution of construction materials in the market by establishing the rules concerning placement of the CE marking on performance characteristics and on the materials themselves within the classification of construction materials.

CPR includes principles and methods concerning rules applied to construction materials, performance statement, CE marking, obligations of commercial enterprises, rules regarding harmonized technical specifications, assignment of approved organizations and technical evaluation organizations, auditing and assessment, reporting office, regulations on approved organizations, and market auditing and surveillance [13].

2.5.2. Accreditation of The Notified Bodies

Accreditation is a tool to develop the reliability and value of the work carried out by conformity assessment bodies and the attestations issued by them such as test and inspection reports, calibration certificates, certifications of management systems, products [14].

A product followed by a conformity attestation delivered by an accredited notified body inspires trust as to the compliance with applicable specified requirements. Thereby accreditation favours the elimination of technical barriers to trade. [14]. Also cement is very important construction material for exportation in Turkey. In this respect, accreditation becomes mandatory for Turkish cement manufacturers and also the notified bodies.

EU Commission assigns accreditation bodies and notified bodies according to relevant legislation, these bodies are listed in NANDO Information System. TURKAK, is the only accreditation body of Turkey that started to provide accreditation services in 2001. In Europe, there are 122 notified bodies assigned according to CPR and involved in product family of "Cement, building limes and other hydraulic binders". Five of them are present at Turkey, such as, TSE and TCMA-CQE.

2.5.3. Quality Requirements of Cement

There are some typical requirements of cement according to EN 197-1. The types of these requirements are can be listed as shown in Table-6 [15].

Table 6: The Types of Quality Requirements of Cement according to EN 197-1

Mechanical Requirements	Physical Requirements	Chemical Requirements	Durability Requirements
Standard Strength	Initial Setting Time	Loss on Ignition	Sulphate Resistance
Early Strength	Soundness	Insoluble Residue	
	Heat of Hydration	Sulphate Content	
		Chloride Content	
		Pozzolanicity	

The limit or requirements of the properties varies by cement type and strength class and they are given in EN 197-1.

2.5.3.1. Compressive Strength of Cement

One of the essential quality parameters of cement is its compressive strength. When TS 19 standard was first published, the moist mortar method was defined as compressive strength test method, thereafter the first revision, this method was replaced with the Rilem-Cembureau method. While the moist mortar method required water/cement ratio was to be determined under 30% empirically and constant consistency for all cement types in the laboratory, the Rilem-Cembureau method requires this ratio to be 0.50 at constant for all cement types. Moreover, while mortar was cast in molds by compressing through pounding with mallet in the moist mortar method, vibration is applied in the Rilem-Cembureau method similar to construction site applications [12]. Today, in TS EN 196-1 standard employed in determining cement compressive strength, water/cement ratio was kept constant at 0.50 like the Rilem-Cembureau method; compaction is ensured with jolting table (shock) device.

In USA, ASTM C109 is in use as the test method for compressive strength of cement. ASTM C109 is quite different from EN 196-1. The differences can be listed as below:

- ASTM C109 describes 50 mm cube specimens and EN 196-1 describes 40*40*160 mm prismatic specimens.

- The ingredients of mortars in EN 196-1 are 1 part of cement, 3 part of CEN standard sand and ½ part of water by weight. So the water/cement ratio of mortar is constant and equals to 0.50. On the other hand, the ingredients of mortars in ASTM C109 are 1 part of cement, 2.75 part of graded standard sand by weight. For portland and air-entraining portland cements, the water/cement ratios are 0.485 and 0.460 respectively. For the other types of cement, water quantity is determined by making trials until a specified flow of 110% is obtained.

- The compaction procedures of the mortars are also different for these standards. According to EN 196-1, compaction should be done by only jolting apparatus and

using 60 jolts for each layer so totally 120 jolts should applied to mortar. On the contrary, hand tamping or compaction by a qualified alternative methods are acceptable for ASTM C109.

- After molding the mortars, they are put into the moist air room at temperature of 20±1 ^{0}C and at least 90 % humidity for 24 hours in EN 196-1. According to ASTM C109, this is nearly same but the temperature of the cabinet and the curing water is 23±2 ^{0}C.

- The specimens are demolded at the end 24 hours to put into water for curing at temperature of 20±1 ^{0}C in EN 196-1. Unlike the ASTM C109, lime water is used for curing [16, 17].

2.5.3.2. Evaluation of Strength Test Results of Cement

Notified bodies take samples for each product produced by the cement plants at least six times a year. Received samples, called as audit samples, are tested by both the manufacturer and notified body. Also the manufacturer must test autocontrol samples regularly during production of each type of cement. According to EN 197-1 and EN 197-2, the conformity evaluations are done by the notified body two times a year. The conformity evaluation of autocontrol samples are inspected by variables and attributes as described in EN 197-1. Moreover, representativeness and accuracy evaluation for 28 day strength test results are performed as described in EN 197-2 Annex A. For this evaluation three test results sets are defined. These are:

Set of A: all test results from the autocontrol testing of the manufacturer
Set of B: the results of test carried out by the manufacturer on audit samples
Set of C: the results of test carried out by the notified body on audit samples

Sets of A and B are compared to check whether these results belong to the same population or not. Therefore, this comparison verifies the representativeness of audit

samples with respect to the autocontrol samples. If equation 2.1. is satisfied, sets of A and B is assumed to belong to the same population [18]:

$$|M_A - M_B| \leq 2.0\ MPa \tag{2.1}$$

where M_A is the is the average of all results of the autocontrol testing, M_B is the average of the results of the tests carried out by the manufacturer on audit samples.

If that equation is not satisfied, equation 2.2 must also be checked to control the representativeness of audit samples. [18]:

$$|M_A - M_B| \leq 2.58 \times S_A / (N_B)^{1/2} \tag{2.2}$$

where S_A is the standard deviation of the autocontrol test results. In the case of not providing the equation 2.3, the two sets of test results (A and B) are considered to belong to different populations with a confidence level of 99 %.

There are some factors that cause this non-conformity. Personnel errors, equipment errors, sampling errors, change in production, the results that not belong to real samples [19].

The second comparison is done between the sets of B and C. It is called as accuracy of 28 day strength test results of the autocontrol samples. Both of the equations 2.3 and 2.4 must be satisfied to conclude accuracy [18]:

$$S_D \leq 3.4 \tag{2.3}$$

$$|M_B - M_C| \leq 4.0\ MPa \tag{2.4}$$

where S_D is the standard deviation of the differences between the corresponding results of the audit samples. M_C is the average of the results of the tests carried out by the notified body on audit samples.

Also there are some factors that cause this non-conformity between the sets of B and C like A and B. Personnel errors is more important because the laboratories and the laboratory technicians are different, equipment errors, sampling errors [19]. Besides the effect of these factors, it is considered that the properties of cement such as the type of cement, strength and constituents' type are cause deviance in the strength test results. But the strength difference, Equation 2.4, does not change with respect to the type of cement, strength and constituents' type.

CHAPTER 3

STATISTICAL ANALYSIS AND RESULTS

3.1. General

In this study, a total of 5037 data from inspection samples of 68 cement plants, taken by the notified body of TCMA-CQE under CE marking between 2011 and 2015, were examined. According to EN 197-1, the inspection samples were examined by TCMA – IQCTL and each of cement plant laboratories. The data, given in Appendix A, includes early and standard compressive strength test results of manufacturers and notified body, the types of cement and also the date of sampling from the plant by notified body.

In this study, the difference of standard compressive strength test results of manufacturer and notified body is indicated as α and referred to as *the strength difference*.

$$\alpha = M_B - M_C \tag{3.1}$$

where M_B is the result of the tests carried by the manufacturer on samples taken for audit testing; M_C is the result of the tests carried by the notified body on samples taken for audit testing.

According to CE Marking and EN 197 standards, accuracy evaluation of standard compressive strength test results, a part of the conformity evaluation of manufacturers', includes the strength difference being equal to or less than 4 MPa. In this study, the validity of this value was asserted with respect to cement type, strength class and constituents' type statistically.

Before the statistical analysis of the study, strength results of all strength classes were compared in terms of value and quantity (Figure-5). This comparison was based on the notified body's standard compressive strength results, because all tests were done by same laboratory.

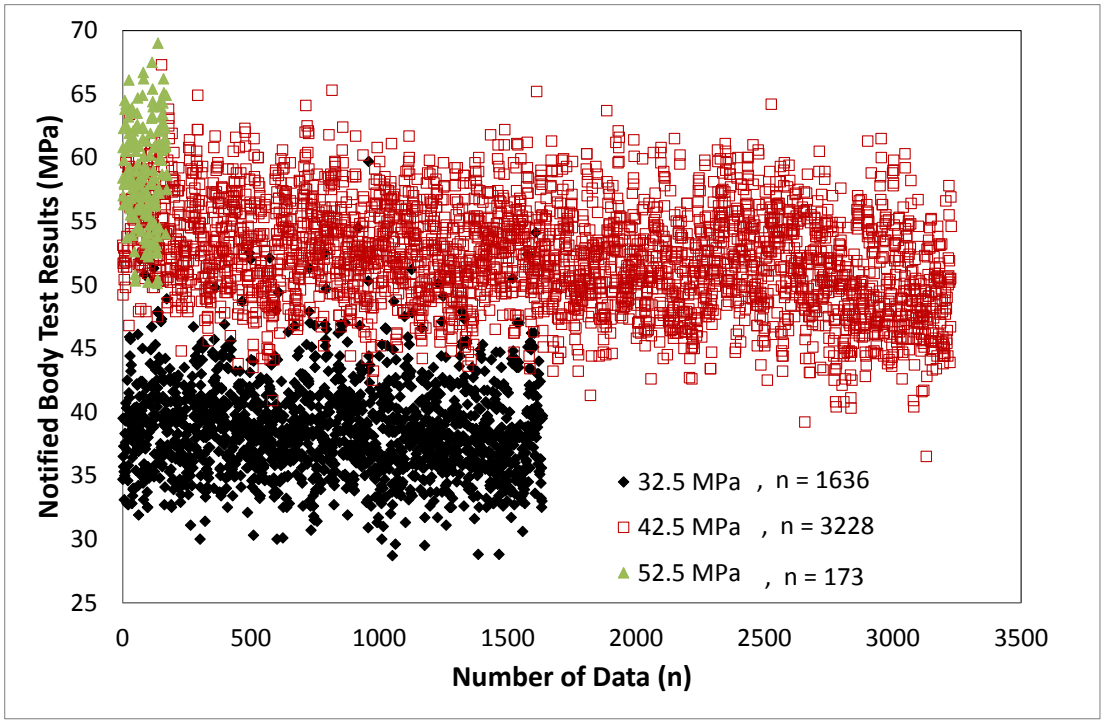

Figure 5: Distribution of Compressive Strength Results according to Strength Classes

As can be seen in Figure 5, the distributions' of the results of every strength class overlaps with the next strength class. This is especially clear at the strength classes of 42.5 MPa to 52.5 MPa. The reason for this situation is that the compressive strength values are higher than the values required by the strength classes due to the conditions in the market, that is to say, the customer's preference and being anxious about exceeding the limit values specified in the standard. On the other hand, the numbers of test results (n) are quite different according to the strength classes. There are limited data for 52.5 MPa strength class.

Therefore, in addition to the strength classes the intervals of strength values according to the results of the notified body were also examined. In Figure-6, the distributions of strength results according to the strength intervals were plotted as:

i. being greater than 52.5 MPa
ii. being between 42.5 to 52.5 MPa
iii. being less than 42.5 MPa.

By doing so the number of data points for each strength interval was increased, moreover, the overlaps were eliminated as can be seen in Figure 6.

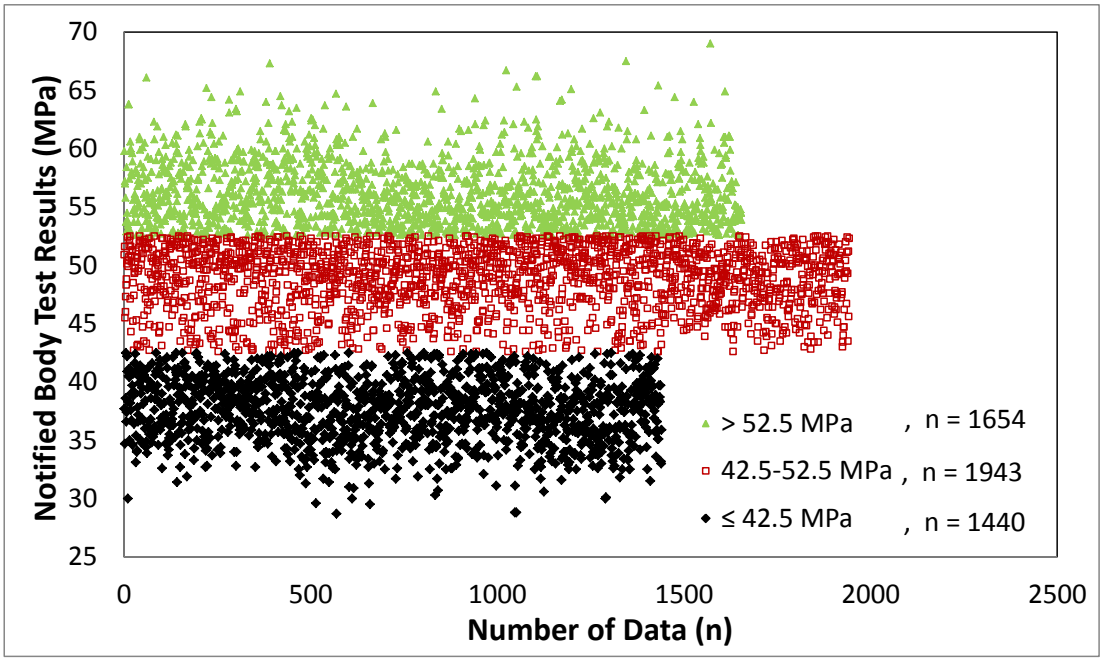

Figure 6: Distribution of Compressive Strength Results according to Strength Intervals

Consequently, the statistical analyses of the study were performed with respect to cement type, constituents' type, strength class and also strength intervals.

3.2. Statistical Study Procedures

In the study, strength differences were transformed into absolute values and analyses were performed to check the validity of 4 MPa with SPSS program and Microsoft Excel.

3.2.1. Statistical Study with SPSS Program

At this part of the study, the 5037 data were grouped as described at Table-7. A statistical program, SPSS, was used to examine whether meaningful differences were observed between the groups in the Table-7.

Table 7: The Groups of Statistical Analysis

Group 1 Strength Class Types	**Group 2** Intervals of Compressive Strength Results of Notified Body	**Group 3** Blended Cement vs. OPC	**Group 4** Cement Types	**Group 5** Constituents Types	**Group 6** Cement and Strength Class Types	**Group 7** Blended Cement vs. OPC according to Strength Class Types
32.5 MPa	≤ 42.5 MPa	OPC (CEM I)	CEM I	OPC (CEM I)	CEM I 42.5	CEM I 42.5
42.5 MPa	42.5-52.5 MPa	Blended Cement (CEM II-V)	CEM II	V(W)- (LL)	CEM I 52.5	CEM I 52.5
52.5 MPa	> 52.5 MPa		CEM III	P- L(LL)	CEM II 32.5	CEM II-V 32.5
			CEM IV	S- P	CEM II 42.5	CEM II-V 42.5
			CEM V	P- V(W)	CEM III 32.5	
				S- L(LL)	CEM III 42.5	
				L(LL)	CEM IV 32.5	
				P	CEM IV 42.5	
				S	CEM V 32.5	

Firstly, normality tests were done for all groups. Shapiro- Wilk test was selected for normality tests because it is most widely used test. Significance level (α) was 0.05 and all the normality test results were given in Appendix-B.

H_0 (the null hypothesis): the data set is normally distributed.
H_1 : the data set is not normally distributed.

If the calculated p-value (asymptotic significance) is greater than 0.05, the null hypothesis is accepted. This means that the data set is normally distributed. As a result of the normality tests, all the groups were found not to be normally distributed.

According to the normality tests results, nonparametric tests must be applied. In this study, Mann Whitney U test was used as a nonparametric test. This test is nonparametric version of One-way Anova test and suitable for comparing two groups. Moreover, Mann Whitney U test compares medians of these two groups. Due to fact that Mann Whitney U test is generally used when the obtained data are not normally distributed and two independent variables are compared.

In the study, the tests were performed at 0.05 significance level (α) and all groups given in Table-7 were compared in pairs. Also, the detailed test results taken from SPSS program were given in Appendix-B.

H_0 (the null hypothesis): there is not a meaningful difference between the groups.
H_1 : there is a meaningful difference between the groups.

If the calculated p-value (asymptotic significance) is greater than 0.05, the null hypothesis is accepted. This means there is not a meaningful difference between the selected groups.

3.2.2. Analysis of The Strength Difference Intervals

At this part of the study, percentage of the data in specified strength difference intervals given in Table-8 was analysed in detail according to cement types, strength classes, constituents' types and strength intervals (S. Yoncacı, personal communication, March 10, 2016).

Table 8: The Strength Difference Intervals according to Limit of 4 MPa

Strength Difference Interval	Number of Data in the Relevant Interval
$\|\alpha\| > 4$	n_1
$2 < \|\alpha\| \leq 4$	n_2
$0 \leq \|\alpha\| \leq 2$	n_3
Total number of data	**n**

According to all data, the percentages of differences were calculated and given in the Table-9.

Table 9: The Strength Difference Intervals for All of The Data

		$\|\alpha\| > 4$		$2 < \|\alpha\| \leq 4$		$0 \leq \|\alpha\| \leq 2$	
	$\sum n$	**n_1**	**%**	**n_2**	**%**	**n_3**	**%**
All of the Data	5037	262	5.2	1390	27.6	3385	67.2

According to all data, the rate of difference greater than 4 MPa was determined as 5.2% which indicates non-conformance to the standard. This amount was found rather high in terms of the quality control procedures at the facility and to the annual statistical conformity evaluation.

3.3. Statistical Study Results

Statistical studies were done according to the groups described in Table-7.

3.3.1. Statistical Analysis for Strength Class Types and Intervals of Compressive Strength (Group 1 and 2)

The strength classes and the strength intervals (Group 1 and 2) were compared with Mann Whitney U tests. The results were given at the Appendix B and summarized at the matrices below (Table-10 and 11)

Table 10: The Matrix of Mann Whitney U Test Results according to Strength Classes

	32.5	**42.5**	**52.5**
32.5		**+** (p= 0.000)	**-** (p= 0.224)
42.5	**+** (p= 0.000)		**-** (p= 0.688)
52.5	**-** (p= 0.224)	**-** (p= 0.688)	

+ : denotes that there is a significant difference between the groups

- : denotes that there is not a significant difference between the groups

p: denotes asymptotic significance

According to Table-10, there was a meaningful difference between the strength classes of 32.5 MPa and 42.5 MPa. But there were not meaningful differences between the strength class of 52.5 MPa and the other classes. It was considered that this results from having less data at the strength class of 52.5 MPa. Moreover, the distributions' of the results of every strength class, especially 42.5 MPa and 52.5 MPa, overlapped with the next strength class that can be seen from Figure-5.

However, according to Table-11, there were meaningful differences between all strength intervals. So the criteria of the strength difference must be change with strength class and compressive strength result of the cement.

Table 11: The Matrix of Mann Whitney U Test Results according to Strength Intervals

	≤ 42.5	**42.5 - 52.5**	**> 52.5**
≤ 42.5		+ (p= 0.000)	+ (p= 0.000)
42.5 - 52.5	+ (p= 0.000)		+ (p= 0.000)
> 52.5	+ (p= 0.000)	+ (p= 0.000)	

+ : denotes that there is a significant difference between the groups

- : denotes that there is not a significant difference between the groups

p: denotes asymptotic significance

In light of all these results, it was thought that 10% of the strength could be a criteria and the analysis related to this suggestion were made in the following sections. That is, the criteria of 4 MPa may change to 3 MPa for 32.5 MPa class, 5 MPa for 52.5 MPa class and remains same for 42.5 MPa class.

3.3.2. Statistical Analysis for Cement Types and Blended Cements (Group 3 and 4)

The cement types and blended cements to OPC were compared with Mann Whitney U tests. The results were given at the Appendix B and summarized at the matrices below (Table-12 and 13).

According to Table-12, there was a meaningful difference between blended cements and OPC.

Table 12: The Matrix of Mann Whitney U Test Results of Blended Cements to OPC

	CEM I	CEM II-V
CEM I		+ (p=0.001)
CEM II-V	+ (p=0.001)	

+ : denotes that there is a significant difference between the groups

- : denotes that there is not a significant difference between the groups

p: denotes asymptotic significance

According to Table-13, there was not a meaningful difference between CEM IV and CEM I (OPC). On the other hand, there were meaningful differences between CEM I and all other blended cements except for CEM IV. Moreover, it was judged whether or not there was a meaningful difference within the blended cement types, there was a meaningful difference between CEM II and CEM III; CEM IV and CEM III.

Table 13: The Matrix of Mann Whitney U Test Results according to Cement Types

	CEM I	CEM II	CEM III	CEM IV	CEM V
CEM I		+ (p=0.006)	+ (p=0.002)	- (p=0.110)	+ (p=0.012)
CEM II	+ (p= 0.006)		+ (p=0.043)	- (p=0.627)	- (p=0.094)
CEM III	+ (p=0.002)	+ (p=0.043)		+ (p=0.034)	- (p=0.826)
CEM IV	- (p=0.110)	- (p=0.627)	+ (p=0.034)		- (p=0.074)
CEM V	+ (p=0.012)	- (p=0.094)	- (p=0.826)	- (p=0.074)	

+ : denotes that there is a significant difference between the groups

- : denotes that there is not a significant difference between the groups

p: denotes asymptotic significance

3.3.3. Statistical Analysis for Constituents' Types (Group 5)

Constituents' types of cements were compared with Mann Whitney U tests. The results were given at the Appendix B and summarized at the matrix below (Table-14).

According to Table-14, there were meaningful differences between OPC and P-L, S constituents. There were also meaningful differences between constituent types. When the groups with significant difference were examined, it could be said that there were meaningful differences between fly ash and slag, fly ash and pozzolan, slag and limestone constituents. However, comparison of fly ash as a single type of constituent to other constituents' type could not be performed, because of inadequate data.

Table 14: The Matrix of Mann Whitney U Test Results according to Blended Cements Types

	OPC (CEM I)	V(W) - L(LL)	P-L(LL)	S-P	P-V(W)	S-L(LL)	L(LL)	P	S
OPC (CEM I)		- (p=0.287)	+ (p=0.001)	- (p=0.095)	- (p=0.125)	- (p=0.682)	- (p=0.892)	- (p=0.066)	+ (p=0.004)
V(W)-L(LL)	- (p=0.287)		+ (p=0.020)	+ (p=0.047)	- (p=0.058)	- (p=0.305)	- (p=0.318)	- (p=0.079)	+ (p=0.008)
P-L(LL)	+ (p=0.001)	+ (p=0.020)		- (p=0.775)	- (p=0.978)	- (p=0.371)	+ (p=0.017)	- (p=0.281)	- (p=0.354)
S-P	- (p=0.095)	+ (p=0.047)	- (p=0.775)		- (p=0.820)	- (p=0.398)	- (p=0.148)	- (p=0.427)	- (p=0.682)
P-V(W)	- (p=0.125)	- (p=0.058)	- (p=0.978)	- (p=0.820)		- (p=0.525)	- (p=0.187)	- (p=0.607)	- (p=0.512)
S-L(LL)	- (p=0.682)	- (p=0.305)	- (p=0.371)	- (p=0.398)	- (p=0.525)		- (p=0.741)	- (p=0.713)	- (p=0.205)
L(LL)	- (p=0.892)	- (p=0.318)	+ (p=0.017)	- (p=0.148)	- (p=0.187)	- (p=0.741)		- (p=0.199)	+ (p=0.017)
P	- (p=0.066)	- (p=0.079)	- (p=0.281)	- (p=0.427)	- (p=0.607)	- (p=0.713)	- (p=0.199)		- (p=0.113)
S	+ (p=0.004)	+ (p=0.008)	- (p=0.354)	- (p=0.682)	- (p=0.512)	- (p=0.205)	+ (p=0.017)	- (p=0.113)	

+ : denotes that there is a significant difference between the groups

- : denotes that there is not a significant difference between the groups

p: denotes asymptotic significance

3.3.4. Statistical Analysis for The Total Effect of Cement Types, Constituents Types and Strength Classes (Group 6 and 7)

The total effect of cement types, constituents' types and strength classes on the strength difference was also important to study. For this reason, groups 6 and 7 were composed. Group 6 included cement types according to strength classes, group 7 included blended cements and OPC according to strength classes. They were

compared with Mann Whitney U tests. The results were given at the Appendix B and summarized at the matrices below (Table-15 and 16).

According to Table-15, there were differences among the various classes. The difference between 32.5 MPa and 42.5 MPa classes and the difference between the cement types could be seen from this matrix.

Table 15: The Matrix of Mann Whitney U Test Results according to Cement Types and Strength Classes

	CEM I 42.5	**CEM I 52.5**	**CEM II 32.5**	**CEM II 42.5**	**CEM III 32.5**	**CEM III 42.5**	**CEM IV 32.5**	**CEM IV 42.5**	**CEM V 32.5**
CEM I 42.5		- (p=0.423)	+ (p=0.000)	- (p=0.223)	- (p=0.010)	+ (p=0.042)	- (p=0.058)	- (p=0.184)	+ (p=0.012)
CEM I 52.5	- (p=0.423)		- (p=0.084)	- (p=0.748)	- (p=0.080)	- (p=0.301)	- (p=0.855)	- (p=0.103)	- (p=0.129)
CEM II 32.5	+ (p=0.000)	- (p=0.084)		+ (p=0.000)	- (p=0.533)	- (p=0.822)	+ (p=0.014)	+ (p=0.005)	- (p=0.711)
CEM II 42.5	- (p=0.223)	- (p=0.748)	+ (p=0.000)		+ (p=0.024)	- (p=0.098)	- (p=0.351)	- (p=0.108)	+ (p=0.033)
CEM III 32.5	- (p=0.010)	- (p=0.080)	- (p=0.533)	+ (p=0.024)		- (p=0.431)	- (p=0.075)	+ (p=0.006)	- (p=0.846)
CEM III 42.5	+ (p=0.042)	- (p=0.301)	- (p=0.822)	- (p=0.098)	- (p=0.431)		- (p=0.251)	+ (p=0.020)	- (p=0.618)
CEM IV 32.5	- (p=0.058)	- (p=0.855)	+ (p=0.014)	- (p=0.351)	- (p=0.075)	- (p=0.251)		- (p=0.066)	- (p=0.099)
CEM IV 42.5	- (p=0.184)	- (p=0.103)	+ (p=0.005)	- (p=0.108)	+ (p=0.006)	+ (p=0.020)	- (p=0.066)		+ (p=0.008)
CEM V 32.5	+ (p=0.012)	- (p=0.129)	- (p=0.711)	+ (p=0.033)	- (p=0.846)	- (p=0.618)	- (p=0.099)	+ (p=0.008)	

+ : denotes that there is a significant difference between the groups

- : denotes that there is not a significant difference between the groups

p: denotes asymptotic significance

There were meaningful differences OPC and blended cements. So Table-16 shows that the differences were between the following types.

- OPC 42.5 MPa --- Blended Cement 32.5 MPa
- Blended Cement 32.5 MPa --- Blended Cement 42.5 MPa

Table 16: The Matrix of Mann Whitney U Test Results of Blended Cement to OPC according to Strength Classes

<table>
<tr><th></th><th>CEM I 32.5</th><th>CEM I 42.5</th><th>CEM I 52.5</th><th>CEM II-V 32.5</th><th>CEM II-V 42.5</th><th>CEM II-V 52.5</th></tr>
<tr><td>CEM I 32.5</td><td></td><td colspan="5">Not evaluated because of insufficient data</td></tr>
<tr><td>CEM I 42.5</td><td rowspan="5">Not evaluated because of insufficient data</td><td></td><td>- (p=0.423)</td><td>+ (p=0.000)</td><td>- (p=0.182)</td><td rowspan="5">Not evaluated because of insufficient data</td></tr>
<tr><td>CEM I 52.5</td><td>- (p=0.423)</td><td></td><td>- (p=0.297)</td><td>- (p=0.773)</td></tr>
<tr><td>CEM II-V 32.5</td><td>+ (p=0.000)</td><td>- (p=0.297)</td><td></td><td>+ (p=0.002)</td></tr>
<tr><td>CEM II-V 42.5</td><td>- (p=0.182)</td><td>- (p=0.773)</td><td>+ (p=0.002)</td><td></td></tr>
<tr><td>CEM II-V 52.5</td><td colspan="4">Not evaluated because of insufficient data</td><td></td></tr>
</table>

+ : denotes that there is a significant difference between the groups

- : denotes that there is not a significant difference between the groups

p: denotes asymptotic significance

3.4. Analysis for Strength Difference Intervals

Strength difference intervals were analysed according to the groups described in Table-7.

3.4.1. Effect of Strength Classes and Strength Intervals on The Strength Difference (Groups 1 and 2)

Firstly, analyses of the strength difference intervals for strength classes and strength intervals were done (Table-17 and 18).

Table 17: The Strength Difference Intervals by Strength Classes of Cement

Strength Class		$\|\alpha\| > 4$		$2 < \|\alpha\| \leq 4$		$0 \leq \|\alpha\| \leq 2$	
	$\sum n$	n_1	%	n_2	%	n_3	%
32.5 MPa	1636	77	4.7	410	25.1	1149	70,2
42.5 MPa	3228	176	5.5	927	28.7	2125	65.8
52.5 MPa	173	9	5.2	53	30.6	111	64.2

Table 18: The Strength Difference Intervals by Compressive Strength Result of Notified Body of Cement

The Strength Intervals		$\|\alpha\| > 4$		$2 < \|\alpha\| \leq 4$		$0 \leq \|\alpha\| \leq 2$	
	n	n_1	%	n_2	%	n_3	%
≤ 42.5 MPa	1440	46	3.2	339	23.5	1055	73.3
42.5- 52.5 MPa	1943	100	5.2	533	27.4	1310	67.4
> 52.5 MPa	1654	117	7.1	517	31.2	1020	61.7

When the strength differences of cements in the strength classes of 32.5- 42.5- 52.5 MPa was considered (Table-17), it could be observed that difference increases parallel to the strength in exceeding 4 MPa and the interval of 2-4 MPa; and difference decreases parallel to the strength in the interval of 0-2 MPa.

The cement group in 32.5 MPa strength class was taken into consideration (Table-17), it could be observed that whereas the strength difference greater than 4 MPa in the group was 4.7%; and this value decreased to 3.2% when the strength value interval of ≤ 42.5 MPa was taken into consideration (Table-18). If the cement group in 42.5 MPa strength class was taken into consideration, it could be observed that whereas the strength difference greater than 4 MPa in the group was 5.5%; and this value decreased to 5.1% for the strength value interval of 42.5- 52.5 MPa. Lastly, if the cement group in 52.5 MPa strength class was taken into consideration, it could be observed that whereas the strength difference greater than 4 MPa in the group was 5.2%; and this value increased to 7.1% for the strength value interval of greater than 52.5 MPa.

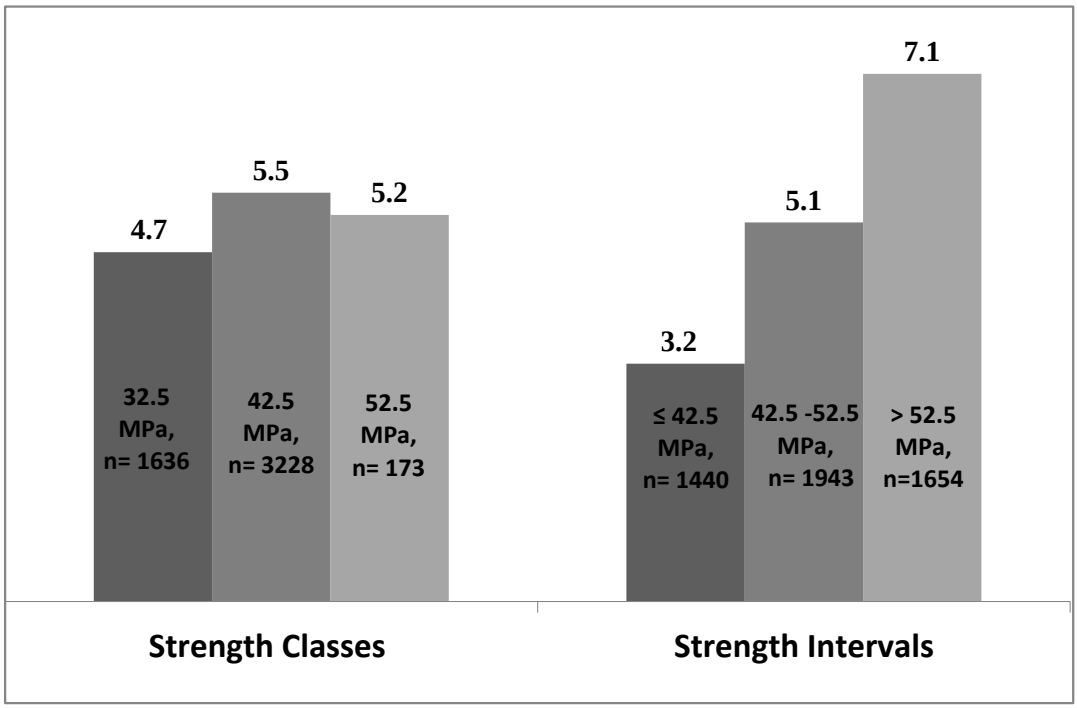

Figure 7: Percentages of Results at $|\alpha|$ > 4 MPa for Strength Classes and Intervals

These results could be summarized at Figure-7. These figure shows that the strength differences are increasing with increase of strength test results.

3.4.2. Effect of Cement Types and Blended Cements on The Strength Difference (Groups 3 and 4)

While investigating the effect of the cement types on the strength difference, the analysis of the strength difference intervals were looked for each of the cement types. According to Table-19, the strength difference greater than 4 MPa in CEM IV was 7.1%, CEM I 6.1%, CEM II 3.9%, CEM V 3.8% and CEM III 2.6%. So, it could be said that the strength difference was higher for CEM IV type cement and lower for CEM III type cement. Moreover, according to Table-20, the strength difference greater than 4 MPa in blended cements (CEM II-V) was 4.7%. It could be said that the strength difference was higher CEM I type cement than the blended cements.

The reason for the highest difference in CEM IV type cement is the compaction problem encountered in the compressive strength test. According to EN standard, the water content is constant for every cement type. But in USA, according to ASTM standard, the water content can be change to obtain constant flow.

Table 19: The Strength Difference Intervals by Compressive Strength Result of Notified Body of Cement

Cement Type		$\lvert\alpha\rvert > 4$		$2 < \lvert\alpha\rvert \leq 4$		$0 \leq \lvert\alpha\rvert \leq 2$	
	∑n	**n1**	**%**	**n2**	**%**	**n3**	**%**
CEM I	1710	105	6.1	498	29.1	1107	64.7
CEM II	2111	83	3.9	595	28.2	1433	67.9
CEM III	193	5	2.6	42	21.8	146	75.6
CEM IV	918	65	7.1	232	25.3	621	67.6
CEM V	105	4	3.8	23	21.9	78	74.3

Table 20: The Strength Difference Intervals by Blended Cements to OPC

Cement Type		$\|\alpha\| > 4$		$2 < \|\alpha\| \leq 4$		$0 \leq \|\alpha\| \leq 2$	
	∑n	**n1**	**%**	**n2**	**%**	**n3**	**%**
OPC (CEM I)	1710	105	6.1	498	29.1	1107	64.7
Blended Cements (CEM II- V)	3327	157	4.7	892	26.8	2278	68.5

3.4.3. Effect of Constituents Types on The Strength Difference (Group 5)

In terms of the constituents' types for 32.5 MPa strength class (Table-21), it was observed that the strength difference greater than 4 MPa was mostly displayed by the cement group containing fly ash (V-W) by 8.5% rate; and this was followed by the cement group containing pozzolan (P-Q) by 5.3%. The strength difference in the interval of 0-2 MPa, was mostly observed with the cement group containing granulated blast furnace slag (S) by 76.4%; and this was followed by the cement group containing limestone (L-LL) by 71.4%.

Table 21: The Strength Difference Intervals by Constituent Type of Cement in 32.5 MPa Strength Class

Constituent Type		$\|\alpha\| > 4$		$2 < \|\alpha\| \leq 4$		$0 \leq \|\alpha\| \leq 2$	
	∑n	**n_1**	**%**	**n_2**	**%**	**n_3**	**%**
L-LL	546	10	1.8	146	26.8	390	71.4
P-Q	1339	71	5.3	325	24.3	943	70.4
S	127	4	3.1	26	20.5	97	76.4
V-W	188	16	8.5	44	23.4	128	68.1

When types of constituents was taken into consideration for 42.5 MPa strength class (Table-22), it could be observed that strength difference greater than 4 MPa was displayed by the cement containing fly ash (V-W) by 8.8% rate; and this was followed by the cement groups containing pozzolan (P-Q) and limestone (L-LL) by 6.1% and 4.2 %, respectively. Additionally, the strength difference in the interval of 0-2 MPa was mostly displayed by the cement containing granulated blast furnace slag (S) additive by 71.0%; and this was followed by the cement groups containing pozzolan (P-Q) additives by 67.3%.

Table 22: The Strength Difference Intervals by Constituent Types of Cement in 42.5 MPa Strength Class

Constituent Types		$\|\alpha\| > 4$		$2 < \|\alpha\| \leq 4$		$0 \leq \|\alpha\| \leq 2$	
	$\sum n$	n_1	%	n_2	%	n_3	%
L-LL	1237	52	4.2	369	29.8	816	66.0
P-Q	968	59	6.1	256	26.4	653	67.5
S	183	4	2.2	49	26.8	130	71.0
V-W	125	11	8.8	32	25.6	82	65.6

According to the analysis of the data in Table-23 concerning the cements containing a single type constituent (except clinker), significant number of data regarding cements containing limestone (L-LL), natural pozzolan (P) and granulated blast furnace slag (S) constituents were analysed. The highest strength difference was observed with the strength difference intervals of greater than 4 MPa by 6.4% for the cement groups containing natural pozzolan (P). The highest strength difference was observed with the strength difference intervals of 0-2 MPa by 73.2% for the cement groups containing blast furnace slag (S).

Table 23: The Strength Difference Intervals by Constituent Types

Constituent Types		$\|\alpha\| > 4$		$2 < \|\alpha\| \leq 4$		$0 \leq \|\alpha\| \leq 2$	
	$\sum n$	n_1	%	n_2	%	n_3	%
L or LL	490	19	3.9	161	32.9	310	63.2
P	865	55	6.4	225	26.0	585	67.6
S	246	6	2.4	60	24.4	180	73.2

When blended cements from both 32.5 MPa and 42.5 MPa strength classes were taken into consideration, it could be observed that the highest strength difference, even greater than 4 MPa, was displayed by the cement group containing fly ash (V-W) and the lowest strength difference, that was the ones in the interval of 0-2 MPa was mostly displayed by the cement group containing granulated blast furnace slag (S).

The reason for the highest difference in the cement group containing fly ash and pozzolan is again the compaction problem encountered in the compressive strength test. Most pozzolans and some fly ashes, especially if they are ground, absorb and/or absorb water causing a reduction in the consistency of the cement mortar when a constant water/cement ratio is used in compressive strength testing. On the other hand, using slag and limestone in cement as a constituent that require less water than the fly ash and pozzolan, compaction problem occurs more rarely. So, it can be said that the compaction problem effects the strength differences which was also stated previously (Elçin Ülker, Hasan Tunç and Abdullah Üsame Tokgöz).

3.4.4. Total Effect of Cement Types, Constituents Types and Strength Classes on The Strength Difference (Group 6 and 7)

Table-24 and 25 exhibit data concerning the cement group in 32.5 MPa strength class. Strength difference greater than 4 MPa, was mostly observed with CEM IV

type cement by 6.8%; and this was followed by CEM V and CEM III type cements by 3.8% and 3.7%, respectively. The strength difference in the interval of 0-2 MPa, was mostly observed with CEM III type cement by 78%; and this was followed by CEM V and CEM II type cements by 74.3% and 72.0%, respectively.

Table 24: The Strength Difference Intervals by Cement Types in 32.5 MPa Strength Class

Cement Type		$\|\alpha\| > 4$		$2 < \|\alpha\| \leq 4$		$0 \leq \|\alpha\| \leq 2$	
	$\sum n$	n_1	%	n_2	%	n_3	%
CEM I	7	0	0.0	5	71.4	2	28.6
CEM II	578	11	1.9	151	26.1	416	72.0
CEM III	82	3	3.7	15	18.3	64	78.0
CEM IV	864	59	6.8	216	25.0	589	68.2
CEM V	105	4	3.8	23	21.9	78	74.3

Table 25: The Strength Difference Intervals by CEM II Type Cement in 32.5 MPa Strength Class

Cement Type		$\|\alpha\| > 4$		$2 < \|\alpha\| \leq 4$		$0 \leq \|\alpha\| \leq 2$	
	n	**n1**	**%**	**n2**	**%**	**n3**	**%**
CEM II/A	3	1	33.3	1	33.3	1	33.3
CEM II/B	165	1	0.6	46	27.9	118	71.5
CEM II/B-M	410	9	2.2	104	25.4	297	72.4

Table-26 and 27 exhibit data concerning cements from the 42.5 MPa strength class. Cements with strength difference greater than 4 MPa were mostly displayed by CEM IV type cement by 11.1% ; and this was followed by CEM I and CEM II types (the

highest share was with CEM II/A type cement) cement by 6.3% and 4.7%, respectively.

Table 26: The Strength Difference Intervals by Cement Types in 42.5 MPa Strength Class

Cement Type		$\|\alpha\| > 4$		$2 < \|\alpha\| \leq 4$		$0 \leq \|\alpha\| \leq 2$	
	$\sum n$	n_1	%	n_2	%	n_3	%
CEM I	1560	98	6.3	452	29.0	1010	64.7
CEM II	1503	70	4.7	432	28.7	1001	66.6
CEM III	111	2	1.8	27	24.3	82	73.9
CEM IV	54	6	11.1	16	29.6	32	59.3
CEM V	-	-	-	-	-	-	-

Table 27: The Strength Difference Intervals by CEM II Type Cement in 42.5 MPa Strength Class

Cement Type		$\|\alpha\| > 4$		$2 < \|\alpha\| \leq 4$		$0 \leq \|\alpha\| \leq 2$	
	$\sum n$	n_1	%	n_2	%	n_3	%
CEM II/A-M	748	30	4.0	213	28.5	505	67.5
CEM II/A	417	25	6.0	131	31.4	261	62.6
CEM II/B	125	5	4.0	40	32.0	80	64.0
CEM II/B-M	213	10	4.7	48	22.5	155	72.8

According to Table-28, it could be observed that analysis could not be performed since there is no sufficient data in terms of variability of cement in strength class of 52.5 MPa.

Table 28: The Strength Difference Intervals by Cement Types in 52.5 MPa Strength Class

Cement Type		$\|\alpha\| > 4$		$2 < \|\alpha\| \leq 4$		$0 \leq \|\alpha\| \leq 2$	
	$\sum n$	n_1	%	n_2	%	n_3	%
CEM I	143	7	4.9	41	28.7	95	66.4
CEM II (only CEM II/ A-M)	30	2	6.7	12	40.0	16	53.3
CEM III	-	-	-	-	-	-	-
CEM IV	-	-	-	-	-	-	-
CEM V	-	-	-	-	-	-	-

When the strength differences of 32.5 and 42.5 MPa strength type cements were examined by dividing them into intervals; the strength difference of higher than 4 MPa had the highest rate in the pozzolanic cement (CEM IV type) and the strength difference between 0-2 MPa had the highest rate in the blast furnace cement (CEM III type) for both of the strength types.

When strength difference was taken into consideration for all CEM II type cements, it could be observed that strength difference in the interval of 0-2 MPa was mostly displayed by the CEM II/A-M and CEM II/B-M type cements; and that strength difference in the interval of 2-4 MPa was mostly displayed by the CEM II/A and CEM II/B type cements. That is, difference decreases when constituent variability increases although constituent rate (except clinker) was remained at almost the same interval rate.

3.5. A New Approach

The strength difference intervals of 32.5 MPa and 52.5 MPa strength classes were reorganized for the suggestion described in part 3.3.1.

3.5.1. The New Strength Difference Limits for 32.5 MPa Strength Class Cements

The strength difference intervals were reorganized according to 3 MPa for 32.5 MPa strength class cements (Table-29).

Table 29: The Strength Difference Intervals according to 3 MPa

Strength Difference Interval	Number of Data in the Relevant Interval
$\|\alpha\| > 3$	n_1
$1.5 < \|\alpha\| \leq 3$	n_2
$0 \leq \|\alpha\| \leq 1.5$	n_3
Total number of data	**n**

Whereas the rate of cements from the 32.5 MPa strength class to displaying strength difference greater than 4 MPa was 4.9%, the rate of the ones displaying strength difference greater than 3 MPa increased to 13% (Table-30). In this case, when results relevant with the cements of the strength value higher than 42.5 MPa was taken into consideration, it could be observed that the rate of the cements with strength difference greater than 4 MPa was 3.2%, the rate of the ones greater than 3 MPa was 10.5% (Table-31).

Table 30: The Strength Difference Intervals by 32.5 MPa Strength Class

Strength Class		$\|\alpha\| > 3$		$1.5 < \|\alpha\| \leq 3$		$0 \leq \|\alpha\| \leq 1.5$	
	$\sum n$	n_1	%	n_2	%	n_3	%
32.5 MPa	1636	213	13.0	482	29.5	941	57.5

Table 31: The Strength Difference Intervals by Compressive Strength Result of Notified Body (≤ 42.5 MPa)

Compressive Strength Result of Notified Body		$\|\alpha\| > 3$		$1.5 < \|\alpha\| \leq 3$		$0 \leq \|\alpha\| \leq 1.5$	
	$\sum n$	n_1	%	n_2	%	n_3	%
≤ 42.5 MPa	1440	151	10.5	419	29.1	870	60.4

3.5.2. The New Strength Difference Limit for 52.5 MPa Strength Class Cements

The strength difference intervals were reorganized according to 5 MPa for 52.5 MPa strength class cements (Table-32).

Table 32: The Strength Difference Intervals according to Limit of 5 MPa

Strength Difference Interval	Number of Data in the Relevant Interval
$\|\alpha\| > 5$	n_1
$2.5 < \|\alpha\| \leq 5$	n_2
$0 \leq \|\alpha\| \leq 2.5$	n_3
Total number of data	**n**

In regard to cements from the 52.5 MPa strength class, it could be observed that whereas the rate of the ones displaying strength difference greater than 4 MPa was 5.2%, the rate of the ones greater than 5 MPa was 1.7% (Table-33). In this case, when the strength results greater than 52.5 MPa was considered, it could be observed that the rate of the ones displaying strength difference greater than 4 MPa was 7.2%, the rate of the ones greater than 5 MPa was 2.4% (Table-34).

Table 33: The Strength Difference Intervals by 52.5 MPa Strength Class

Strength Class		$\|\alpha\| > 5$		$2.5 < \|\alpha\| \leq 5$		$0 \leq \|\alpha\| \leq 2.5$	
	n	**n_1**	**n_1, %**	**n_2**	**n_2, %**	**n_3**	**n_3, %**
52.5 MPa	173	3	1.7	39	22.6	131	75.7

Table 34: The Strength Difference Intervals by Compressive Strength Result of Notified Body (> 52.5 MPa)

Compressive Strength Result of Notified Body		$\|\alpha\| > 5$		$2.5 < \|\alpha\| \leq 5$		$0 \leq \|\alpha\| \leq 2.5$	
	n	**n_1**	**n_1, %**	**n_2**	**n_2, %**	**n_3**	**n_3, %**
> 52.5 MPa	1654	40	2.4	414	25.0	1200	72.6

After changing the limit of strength differences according to strength classes, the rate of the differences were compared in the Table-35. It could be seen that, the rate of 32.5 MPa increases sharply than the decrement of the rate of 52.5 MPa. On the other hand, decreasing the strength difference limit to 3 MPa increased nonconforming results rate to as high as 10.5% for the results higher than 42.5 MPa (Table-36). So, 5 MPa value could be suggested for the strength difference limit of the cements with greater than 42.5 MPa strength; and 4 MPa value could be suggested for the strength difference of the cements with lower than 42.5 MPa strength (Table-37).

Table 35: The Change on Limit of The Strength Difference for Strength Classes

Percentages of results beyond the strength difference limit for 32.5 MPa class	Limit (MPa)	Percentages of results beyond the strength difference limit for 42.5 MPa class	Limit (MPa)	Percentages of results beyond the strength difference limit for 52.5 MPa class	Limit (MPa)
4.7%	>4	5.5%	>4	5.2%	>4
13%	>3			1.7%	>5

Table 36: The Change on Limit of The Strength Difference for Strength Intervals

Percentages of results beyond the strength difference limit for ≤ 42.5 MPa	Limit (MPa)	Percentages of results beyond the strength difference limit for 42.5- 52.5 MPa	Limit (MPa)	Percentages of results beyond the strength difference limit for > 52.5 MPa	Limit (MPa)
3.2%	>4	5.1%	>4	7.1%	>4
10.5%	>3			2.4%	>5

Table 37: The Suggested Limit of The Strength Difference for Strength Intervals

Percentages of results beyond the strength difference limit for ≤ 42.5 MPa	Limit (MPa)	Percentages of results beyond the strength difference limit for 42.5- 52.5 MPa	Limit (MPa)	Percentages of results beyond the strength difference limit for 52.5 MPa	Limit (MPa)
3.2%	>4	5.1%	>4	7.1%	>4
3.2%	>4	1.9%	>5	2.4%	>5

CHAPTER 4

CONCLUSIONS AND RECOMMENDATIONS

4.1. Summary and Conclusions

In this study, a total of 5037 standard compressive strength test results from inspection samples of 68 cement plants in Turkey between 2011 and 2015 were examined. According to CE Marking and EN 197 standards, accuracy evaluation of standard compressive strength test results, a part of the conformity evaluation of manufacturers', includes the strength difference control to see if it is equal to or less than 4 MPa. In this study, the validity of this value was checked with respect to cement type, strength class and constituents' type statistically.

The major conclusions that can be made from this study are listed as:

- ✓ When the distribution of the results of the strength classes in the study was examined, it was seen that the distributions' of the results of every strength class overlapped the next strength class. In addition to the strength classes, the intervals of strength values according to the results of the notified body were examined. It was found that, as strength increases, the strength differences also increase.

- ✓ It was found that the strength differences were the highest for pozzolanic cement (CEM IV) and according to the constituents' type, the strength differences were the highest for fly ash (V-W) containing cements.

- ✓ It was found that the strength differences were the lowest for blast furnace cement (CEM III) and according to the constituents' type, the strength differences were the lowest for blast furnace slag (S) containing cements.

- ✓ When the strength differences for portland-composite cements (CEM II) were evaluated, it was seen that differences are decreasing with the increase of constituents' varieties.

- ✓ When the cement types were compared, it was seen that there was a significant difference between the strength differences of the blended cements and OPC. However, there was no difference between OPC and pozzolanic cement (CEM IV).

- ✓ It was determined that the limit for the strength difference in the standard, which is described as a single value of 4 MPa, must be related to the compressive strength test results.

4.2. Recommendations for Future Studies

The recommendations for future studies can be listed as below:

- ❖ Despite a comparison study for differences greater than 4 MPa, no result was obtained due to insufficient amount of data. For this reason, statistical studies can be done for differences greater 4 MPa, if the data is increased by collecting from more than one notified body.

- ❖ In this study, 5 MPa is suggested for cements having a strength value higher than 42.5 MPa. This issue can be assessed by statistical programs, such as quantile test.

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APPENDICES

APPENDIX A

ALL THE DATA USED IN THE THESIS

Code of The Manufacturer	Type of Cement	The Date of Sampling	Standard Compressive Strength Result of Manufacturer (MPa)	Standard Compressive Strength Result of Notified Body (MPa)	Code of The Manufacturer	Type of Cement	The Date of Sampling	Standard Compressive Strength Result of Manufacturer (MPa)	Standard Compressive Strength Result of Notified Body (MPa)
46	CEM II/A-M (P-S) 42.5 R	03.01.2011	54.9	57	43	CEM II/B-M (P-L) 32.5 N	20.01.2011	42.5	45.2
53	CEM I 42.5 R	03.01.2011	59.9	57.2	43	CEM II/A-M (P-L) 42.5 R	20.01.2011	47.7	48.5
53	CEM II/A-M (P-L) 42.5 R	03.01.2011	60.5	59.8	43	CEM I 42.5 R	20.01.2011	56.9	58.2
21	CEM IV/B (P-V) 32.5 N	04.01.2011	37.9	37.7	56	CEM II/A-LL 42.5 R	21.01.2011	54.8	54.4
21	CEM I 42.5 R	04.01.2011	50.2	50.9	47	CEM IV/B (P) 32.5 N	25.01.2011	35.2	35
21	CEM II/A-M (P-L) 42.5 R	04.01.2011	51.1	51.6	36	CEM IV/B (P) 32.5 R	25.01.2011	39.7	41.1
29	CEM I 42.5 R	04.01.2011	49.8	52.9	60	CEM II/B-M (P-LL) 32.5 R	25.01.2011	40	42.7
29	CEM II/B-L 42.5 R	04.01.2011	49.9	53.7	47	CEM II/A-M (P-LL) 42.5 R	25.01.2011	46.2	47.4
56	CEM II/A-LL 42.5 R	04.01.2011	52.8	55.8	36	CEM II/A-M (P-LL) 42.5 R	25.01.2011	48.7	49.3
1	CEM V/A (S-P-Q) 32.5 R	05.01.2011	36.2	34.7	16	CEM II/A-M (P-L) 42.5 N	25.01.2011	48.3	49.4
11	CEM IV/B (P) 32.5 N	05.01.2011	36.1	37.7	47	CEM I 42.5 N	25.01.2011	47.5	49.7
22	CEM IV/B (P-V) 32.5 R	05.01.2011	36	38.6	60	CEM II/A-M (P-LL) 42.5 N	25.01.2011	47.7	50.3
41	CEM V/A (P-S) 32.5 R	05.01.2011	42.2	42.5	36	CEM I 42.5 N	25.01.2011	49.3	51.2
11	CEM IV/A (P) 42.5 N	05.01.2011	47.4	45.5	60	CEM I 42.5 N	25.01.2011	51.9	52.6
22	CEM II/B-M (P-V) 42.5 N	05.01.2011	48.2	46	45	CEM II/B-M (P-LL) 32.5 N	26.01.2011	36.7	38.2
41	CEM II/B-M (P-S) 42.5 R	05.01.2011	47.1	47.3	24	CEM II/B-LL 32.5 N	26.01.2011	41.7	45.3
27	CEM II/A-M (P-L) 42.5 N	05.01.2011	47.1	48.3	45	CEM II/A-M (P-LL) 42.5 N	26.01.2011	49.3	50.7
41	CEM III/A 42.5 N	05.01.2011	47.3	48.8	45	CEM I 42.5 N	26.01.2011	54.8	55.7
1	CEM II/B-M (P-Q-S) 42.5 N	05.01.2011	47	50.1	63	CEM IV/B (P) 32.5 R	27.01.2011	40.8	43.1
1	CEM II/B-LL 42.5 R	05.01.2011	47.4	50.4	63	CEM I 42.5 R	27.01.2011	47.1	50.6
1	CEM III/A 42.5 N	05.01.2011	53.6	52.4	18	CEM IV/B (P) 32.5 R	28.01.2011	34.42	37.6
1	CEM I 42.5 R	05.01.2011	51.8	53.1	34	CEM IV/B (P) 32.5 R	28.01.2011	36.7	39
27	CEM I 42.5 R	05.01.2011	54.9	53.5	34	CEM I 42.5 N	28.01.2011	53.9	56.8
11	CEM II/A-LL 42.5 R	05.01.2011	56.3	53.9	34	CEM II/A-M (P-L) 42.5 N	28.01.2011	56.5	57.9
11	CEM I 42.5 R	05.01.2011	55.5	54.5	15	CEM IV/B (P) 32.5 N	01.02.2011	36.8	36.7
1	CEM I 52.5 R	05.01.2011	56.6	58.4	12	CEM IV/B (P) 32.5 R	01.02.2011	41.4	43.2
48	CEM II/B-P 32.5 R	06.01.2011	34.5	36.6	12	CEM I 42.5 R	01.02.2011	56.5	53.7
37	CEM IV/B (P) 32.5 N	06.01.2011	34.4	37.4	35	CEM III/A 32.5 N	02.02.2011	35.8	34.7
2	CEM II/B-P 32.5 R	06.01.2011	42.3	42.2	3	CEM IV/B (P) 32.5 N	02.02.2011	40.6	39.7
2	CEM II/A-P 42.5 R	06.01.2011	50.8	49.9	3	CEM II/A-M (P-L) 42.5 N	02.02.2011	52.1	49.5
2	CEM I 42.5 R	06.01.2011	53.4	50.4	35	CEM II/B-S 42.5 R	02.02.2011	57.8	55
48	CEM I 42.5 N	06.01.2011	48.1	50.7	35	CEM II/A-S 42.5 R	02.02.2011	56.2	57.3
48	CEM II/A-P 42.5 R	06.01.2011	49.7	51.7	19	CEM IV/B (P) 32.5 R	03.02.2011	34.7	34.6
48	CEM I 42.5 R	06.01.2011	50.1	52.7	19	CEM II/A-M (P-L) 42.5 R	03.02.2011	47.5	49.7
37	CEM II/A-M (P-LL) 42.5 N	06.01.2011	50	53.1	19	CEM I 42.5 N	03.02.2011	49.4	51.5
24	CEM II/A-LL 42.5 R	06.01.2011	55.3	57.4	19	CEM I 42.5 R	03.02.2011	53.1	55.3
37	CEM I 42.5 R	06.01.2011	60.7	63.8	9	CEM V/A (P-S) 32.5 N	04.02.2011	39.8	40.7
37	CEM I 52.5 N	06.01.2011	60.7	63.8	9	CEM II/B-M (S-L) 42.5 R	04.02.2011	50.4	51.9
24	CEM I 42.5 R	07.01.2011	59.3	60.6	9	CEM II/A-M (S-L) 42.5 R	04.02.2011	54.3	52.5
40	CEM II/B-M (P-L) 32.5 R	11.01.2011	39.2	40.9	51	CEM IV/B (P) 32.5 R	04.02.2011	51.6	54.5
18	CEM I 42.5 R	11.01.2011	51.57	52.1	51	CEM II/A-P 42.5 R	04.02.2011	57.6	57
7	CEM IV/B (P) 32.5 R	11.01.2011	47.7	52.5	9	CEM I 42.5 R	04.02.2011	58.8	58.7
40	CEM II/A-M (P-L) 42.5 R	11.01.2011	56.1	57.7	9	CEM II/A-M (S-L) 52.5 N	04.02.2011	60	59.9
40	CEM I 42.5 R	11.01.2011	59	58	51	CEM I 42.5 R	04.02.2011	61.7	60.8
7	CEM I 42.5 R	11.01.2011	55.6	59.8	51	CEM I 52.5 N	04.02.2011	61.8	61
26	CEM I 42.5 R	11.01.2011	59	60	44	CEM II/B-M (P-L) 32.5 R	08.02.2011	38	38.8
23	CEM II/B-M (S-L) 32.5 N	12.01.2011	32.8	30	44	CEM II/B-M (P-L) 32.5 N	08.02.2011	37.3	39.2
13	CEM II/B-M (P-L) 32.5 R	12.01.2011	37.2	38.3	44	CEM II/A-M (P-L) 42.5 R	08.02.2011	49.8	52.1
57	CEM II/B-L 32.5 R	12.01.2011	43.8	47.1	44	CEM I 42.5 R	08.02.2011	52.2	52.6
13	CEM I 42.5 R	12.01.2011	50.6	51.6	38	CEM IV/B (P) 32.5 N	09.02.2011	38.6	36.4
4	CEM I 42.5 R	12.01.2011	58	59.6	28	CEM IV/B (P) 32.5 R	09.02.2011	40.4	41.6
56	CEM II/A-LL 42.5 R	13.01.2011	56.4	54.7	42	CEM III/A 32.5 N	09.02.2011	37.6	43
46	CEM II/A-M (P-S) 42.5 R	13.01.2011	56.5	58.9	38	CEM II/A-M (P-LL) 42.5 R	09.02.2011	50.6	48.1
62	CEM II/B-M (P-L) 32.5 R	17.01.2011	39.3	40.5	42	CEM III/A 42.5 N	09.02.2011	48.7	50
62	CEM I 42.5 R	17.01.2011	51.6	53.7	28	CEM I 42.5 R	09.02.2011	48.5	50.6
62	CEM II/A-M (P-L) 42.5 R	17.01.2011	53.3	55.6	38	CEM I 42.5 R	09.02.2011	54	51.3
55	CEM II/B-M (W-L) 32.5 R	18.01.2011	43.6	41.1	28	CEM II/A-M (P-L) 42.5 R	09.02.2011	49.6	52
20	CEM III/B 32.5 N	18.01.2011	41.5	44.3	50	CEM IV/B (P) 32.5 R	10.02.2011	39.4	40.8
10	CEM II/A-LL 42.5 R	18.01.2011	49.3	50.3	49	CEM IV/B (P-W) 32.5 R	10.02.2011	41.7	42.4
10	CEM II/B-LL 42.5 N	18.01.2011	48.3	50.8	50	CEM II/A-M (P-L) 42.5 R	10.02.2011	47.2	44.7
55	CEM II/A-LL 42.5 R	18.01.2011	53.2	51.2	50	CEM I 42.5 R	10.02.2011	52.3	51
10	CEM II/B-LL 32.5 R	18.01.2011	47.6	51.3	50	CEM II/A-L 42.5 R	10.02.2011	51.8	52
55	CEM I 42.5 R	18.01.2011	56.7	54.9	49	CEM I 42.5 R	10.02.2011	52.1	52.6
10	CEM I 42.5 R	18.01.2011	54.3	55.7	49	CEM II/A-M (P-L) 42.5 R	10.02.2011	53.2	53.2
8	CEM II/B-M (P-LL) 32.5 R	19.01.2011	40.8	40.4	31	CEM II/B-LL 32.5 R	14.02.2011	41	43.5
8	CEM II/A-M (P-LL) 42.5 R	19.01.2011	52.5	54.5	31	CEM I 42.5 R	14.02.2011	61.2	60.1
8	CEM I 42.5 R	19.01.2011	57.2	56.1	6	CEM V/A (S-P) 32.5 N	15.02.2011	34.1	33.1

Code of The Manufacturer	Type of Cement	The Date of Sampling	Standard Compressive Strength Result of Manufacturer (MPa)	Standard Compressive Strength Result of Notified Body (MPa)
6	CEM IV/B (P) 32.5 N	15.02.2011	35.4	35.4
46	CEM V/A (S-P) 32.5 N	15.02.2011	42	41.5
59	CEM V/A (S-P) 32.5 R	15.02.2011	46	45.7
46	CEM II/B-P 32.5 R	15.02.2011	46.5	47.9
46	CEM I 42.5 R	15.02.2011	56	57.8
56	CEM II/B-M (P-LL) 32.5 R	16.02.2011	34.6	34
23	CEM II/B-M (S-L) 32.5 N	16.02.2011	35.7	34.1
4	CEM IV/B (P) 32.5 N	16.02.2011	38.8	37.8
59	CEM II/A-M (P-LL) 42.5 R	16.02.2011	52.5	52.2
59	CEM I 42.5 R	16.02.2011	55.2	54.9
56	CEM I 42.5 R	16.02.2011	55.9	56.1
23	CEM I 42.5 R	16.02.2011	59	58.4
30	CEM IV/B (P) 32.5 R	17.02.2011	36.8	36.6
57	CEM II/B-L 32.5 R	17.02.2011	40.7	37.2
39	CEM II/B-M (P-LL) 32.5 R	17.02.2011	39.1	41
58	CEM II/A-LL 42.5 N	17.02.2011	52.3	51.4
39	CEM II/A-M (P-LL) 42.5 R	17.02.2011	54	53.8
58	CEM I 42.5 R	17.02.2011	56.5	54.4
58	CEM II/A-LL 42.5 R	17.02.2011	57.9	55.8
30	CEM I 42.5 R	17.02.2011	57.2	57.3
57	CEM I 42.5 R	17.02.2011	59.6	60.5
51	CEM I 52.5 R	18.02.2011	68.8	66.1
52	CEM II/B-M (P-L) 32.5 R	22.02.2011	39.5	39.9
5	CEM II/B-M (P-LL) 32.5 R	22.02.2011	40.4	40.4
5	CEM I 42.5 R	22.02.2011	53.3	53.8
52	CEM I 42.5 R	22.02.2011	55.2	56.2
32	CEM IV/B (P) 32.5 N	23.02.2011	35	35.1
25	CEM IV/B (P-W) 32.5 R	23.02.2011	38.9	41.4
32	CEM II/A-P 42.5 R	23.02.2011	51.6	53.3
32	CEM I 42.5 R	23.02.2011	53.5	54.3
25	CEM I 42.5 R	23.02.2011	55.8	57.5
39	CEM I 42.5 R	23.02.2011	60.5	59.3
14	CEM IV/B (P-W) 32.5 R	24.02.2011	36.7	36.7
16	CEM II/A-M (P-L) 42.5 N	24.02.2011	46.5	47.1
14	CEM I 42.5 R	24.02.2011	51.8	51.5
14	CEM II/A-M (P-L) 42.5 R	24.02.2011	52.3	52.6
14	CEM II/A-M (P-L) 42.5 N	24.02.2011	51.9	53.2
16	CEM I 42.5 R	24.02.2011	53.9	53.6
14	CEM II/B-M (L-W) 42.5 R	24.02.2011	54.6	55.3
16	CEM II/A-LL 42.5 N	24.02.2011	53	55.6
2	CEM II/B-P 32.5 R	01.03.2011	40.2	39
24	CEM II/B-LL 32.5 N	01.03.2011	41.7	43.3
2	CEM II/A-P 42.5 R	01.03.2011	49.9	47.7
2	CEM I 42.5 R	01.03.2011	53.7	51.9
24	CEM II/A-LL 42.5 R	01.03.2011	54.9	55.4
53	CEM I 42.5 R	01.03.2011	55.7	55.7
24	CEM I 42.5 R	01.03.2011	58.2	58
24	CEM I 52.5 N	01.03.2011	58.6	58
53	CEM II/A-M (P-L) 42.5 R	01.03.2011	60.1	59.1
48	CEM II/B-P 32.5 R	02.03.2011	33.4	34.8
11	CEM IV/B (P) 32.5 N	02.03.2011	35.6	36.9
11	CEM IV/A (P) 42.5 N	02.03.2011	46.8	46.1
29	CEM II/B-L 42.5 R	02.03.2011	46	46.8
48	CEM II/A-P 42.5 R	02.03.2011	48.3	49.4
48	CEM I 42.5 N	02.03.2011	49.5	51.5
29	CEM I 42.5 R	02.03.2011	50.8	52.3
48	CEM I 42.5 R	02.03.2011	52.9	54.7
11	CEM I 42.5 R	02.03.2011	55.6	55.8
11	CEM II/A-LL 42.5 R	02.03.2011	56.5	56.2
1	CEM V/A (S-P-Q) 32.5 R	03.03.2011	38.2	39.5
37	CEM IV/B (P) 32.5 N	03.03.2011	37.7	40.2
21	CEM IV/B (P-V) 32.5 N	03.03.2011	40.7	41
22	CEM IV/B (P-V) 32.5 R	03.03.2011	41.5	42.7
1	CEM III/A 42.5 N	03.03.2011	44	44.9
22	CEM II/B-M (P-V) 42.5 N	03.03.2011	47.1	46.6
1	CEM II/B-M (P-Q-S) 42.5 N	03.03.2011	46.9	47.7
1	CEM I 42.5 R	03.03.2011	48.5	49.2
1	CEM II/B-LL 42.5 R	03.03.2011	46.6	50.6
21	CEM II/A-M (P-L) 42.5 R	03.03.2011	51.5	51.9
21	CEM I 42.5 R	03.03.2011	55.9	53.3
37	CEM II/A-M (P-LL) 42.5 N	03.03.2011	52.5	55.2
1	CEM I 52.5 R	03.03.2011	58	60.8
37	CEM I 52.5 N	03.03.2011	59.5	62.3
41	CEM V/A (P-S) 32.5 R	04.03.2011	37.4	38.1
27	CEM II/A-M (P-L) 42.5 N	04.03.2011	46.8	47.8
41	CEM III/A 42.5 N	04.03.2011	47.5	48.8
41	CEM II/B-M (P-S) 42.5 R	04.03.2011	49.8	50.3
27	CEM I 42.5 R	04.03.2011	52.5	51.3
13	CEM II/B-M (P-L) 32.5 R	10.03.2011	33.8	36.7
40	CEM II/B-M (P-L) 32.5 R	10.03.2011	40.7	40.4
13	CEM I 42.5 R	10.03.2011	45.9	47.9
40	CEM I 42.5 R	10.03.2011	54.4	53
62	CEM II/B-M (P-L) 32.5 R	13.03.2011	39.3	40.6
62	CEM I 42.5 R	13.03.2011	49.8	50.6
62	CEM II/A-M (P-L) 42.5 R	13.03.2011	52.3	54.5
18	CEM IV/B (P) 32.5 R	14.03.2011	36.53	34.5
18	CEM I 42.5 R	14.03.2011	54.09	52.5
55	CEM II/B-M (W-L) 32.5 R	15.03.2011	48	44.7
7	CEM IV/B (P) 32.5 R	15.03.2011	44.7	46.9
16	CEM II/A-M (P-L) 42.5 N	15.03.2011	47.5	49.7
55	CEM II/A-LL 42.5 R	15.03.2011	52.3	50.4
55	CEM I 42.5 R	15.03.2011	55.1	52.8
32	CEM II/A-P 42.5 R	15.03.2011	53.8	54.1
7	CEM I 42.5 R	15.03.2011	56.4	59
15	CEM IV/B (P) 32.5 N	16.03.2011	34.6	36
38	CEM II/A-M (P-LL) 42.5 N	16.03.2011	51.9	49.1
38	CEM I 42.5 R	16.03.2011	51.5	50.2
38	CEM II/A-M (P-LL) 42.5 R	16.03.2011	52.3	50.9
39	CEM I 42.5 R	16.03.2011	60.4	61.9
43	CEM II/B-M (P-L) 32.5 N	17.03.2011	35	38.4
8	CEM II/B-M (P-LL) 32.5 R	17.03.2011	41.1	41
43	CEM II/A-M (P-L) 42.5 R	17.03.2011	45.2	48.1
43	CEM I 42.5 R	17.03.2011	49.8	49
8	CEM II/A-M (P-LL) 42.5 R	17.03.2011	52.8	50
8	CEM I 42.5 R	17.03.2011	57.7	56.4
3	CEM IV/B (P) 32.5 N	18.03.2011	34.4	34.4
10	CEM II/B-LL 32.5 R	18.03.2011	32.6	34.9
10	CEM II/B-LL 42.5 N	18.03.2011	47.5	49.3
10	CEM II/A-LL 42.5 R	18.03.2011	48.3	51
3	CEM II/A-M (P-L) 42.5 N	18.03.2011	55.4	54
10	CEM I 42.5 R	18.03.2011	53.2	55.1
47	CEM IV/B (P) 32.5 N	22.03.2011	34.7	33.9
36	CEM IV/B (P) 32.5 R	22.03.2011	38.6	39.4
47	CEM II/A-M (P-LL) 42.5 R	22.03.2011	44.5	44.2
60	CEM II/B-M (P-LL) 32.5 R	22.03.2011	43.1	44.3
47	CEM I 42.5 N	22.03.2011	44.1	44.8
60	CEM II/A-M (P-LL) 42.5 N	22.03.2011	46	47.4
36	CEM II/A-M (P-LL) 42.5 R	22.03.2011	47.7	47.9
36	CEM I 42.5 N	22.03.2011	48.4	48.2
60	CEM I 42.5 N	22.03.2011	49.5	48.7
61	CEM II/B-LL 32.5 R	23.03.2011	39	39.4
57	CEM II/B-L 32.5 R	23.03.2011	40.2	43.1
57	CEM II/A-L 42.5 R	23.03.2011	49.4	52.3
61	CEM II/A-LL 42.5 R	23.03.2011	54.6	55.8
40	CEM II/A-M (P-L) 42.5 R	23.03.2011	58.2	57.8
26	CEM I 42.5 R	23.03.2011	60.4	59.7
45	CEM II/B-M (P-LL) 32.5 N	24.03.2011	36.8	36.1
63	CEM IV/B (P) 32.5 R	24.03.2011	38.3	40.1
45	CEM II/A-M (P-LL) 42.5 N	24.03.2011	49.9	49.2
63	CEM I 42.5 R	24.03.2011	49.9	52.3
45	CEM I 42.5 N	24.03.2011	55.9	53.9
34	CEM IV/B (P) 32.5 R	25.03.2011	35.1	36.6
34	CEM I 42.5 N	25.03.2011	50.7	53.5
34	CEM II/A-M (P-L) 42.5 N	25.03.2011	49.8	55.5
38	CEM IV/B (P) 32.5 N	04.04.2011	42	41.3
38	CEM II/A-M (P-LL) 42.5 N	04.04.2011	55.2	50.8
44	CEM II/B-M (P-L) 32.5 N	05.04.2011	34.8	35.5
44	CEM II/B-M (P-L) 32.5 R	05.04.2011	34.4	36
50	CEM IV/B (P) 32.5 R	05.04.2011	40.5	40
50	CEM II/A-M (P-L) 42.5 R	05.04.2011	49.1	47.7
50	CEM I 42.5 R	05.04.2011	50.1	48.2
50	CEM II/A-L 42.5 R	05.04.2011	51.6	50.3
44	CEM II/A-M (P-L) 42.5 R	05.04.2011	50.3	51.2
44	CEM I 42.5 R	05.04.2011	51.2	51.6
28	CEM IV/B (P) 32.5 R	06.04.2011	34.6	36.8
28	CEM I 42.5 R	06.04.2011	46.3	47.5

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28	CEM II/A-M (P-L) 42.5 R	06.04.2011	48.1	51.1
49	CEM IV/B (P-W) 32.5 R	07.04.2011	39.6	38.6
49	CEM I 42.5 R	07.04.2011	52.2	49
49	CEM II/A-M (P-L) 42.5 R	07.04.2011	52.8	50.5
19	CEM IV/B (P) 32.5 R	11.04.2011	35.1	35.9
19	CEM II/A-M (P-L) 42.5 R	11.04.2011	45	46.3
19	CEM I 42.5 N	11.04.2011	49	52.3
19	CEM I 42.5 R	11.04.2011	51.7	52.7
35	CEM III/A 32.5 N	12.04.2011	35.2	34.8
20	CEM III/B 32.5 N	12.04.2011	43.3	46.8
35	CEM II/A-S 42.5 R	12.04.2011	56.2	56.5
42	CEM III/A 32.5 N	13.04.2011	38.4	41.6
12	CEM I 42.5 R	13.04.2011	58.6	56.6
51	CEM IV/B (P) 32.5 R	18.04.2011	35.8	39.4
5	CEM II/B-M (P-LL) 32.5 R	18.04.2011	37.9	39.6
51	CEM I 42.5 R	18.04.2011	54.9	55.4
5	CEM I 42.5 R	18.04.2011	54.1	58
51	CEM I 52.5 N	18.04.2011	59.3	58.6
51	CEM II/A-P 42.5 R	18.04.2011	57.8	59.1
9	CEM V/A (P-S) 32.5 N	19.04.2011	37.4	35.3
6	CEM IV/B (P) 32.5 N	19.04.2011	35.7	35.5
6	CEM V/A (S-P) 32.5 N	19.04.2011	35.6	35.7
25	CEM IV/B (P-W) 32.5 R	19.04.2011	38.4	37.6
32	CEM IV/B (P) 32.5 N	19.04.2011	44.2	47
25	CEM I 42.5 R	19.04.2011	51.4	49.8
26	CEM I 42.5 R	19.04.2011	51.4	49.8
32	CEM II/A-P 42.5 R	19.04.2011	52.9	53.8
32	CEM I 42.5 R	19.04.2011	56.9	54
9	CEM II/B-M (S-L) 42.5 R	19.04.2011	53.5	55.9
9	CEM I 42.5 R	19.04.2011	55	58.4
9	CEM II/A-M (S-L) 52.5 N	19.04.2011	55.3	61
4	CEM IV/B (P) 32.5 N	20.04.2011	37.1	36.2
58	CEM II/A-LL 42.5 N	20.04.2011	47.5	44.7
16	CEM II/A-LL 42.5 N	20.04.2011	51.3	51.8
16	CEM I 42.5 R	20.04.2011	53.2	54.3
58	CEM II/A-LL 42.5 R	20.04.2011	57.3	56
58	CEM I 42.5 R	20.04.2011	56	56.3
57	CEM I 42.5 R	20.04.2011	56	59.3
23	CEM I 42.5 R	20.04.2011	55	60.3
30	CEM IV/B (P) 32.5 R	21.04.2011	37.5	38.5
14	CEM IV/B (P-W) 32.5 R	21.04.2011	39.9	40.6
42	CEM III/A 42.5 N	21.04.2011	43.9	40.9
14	CEM I 42.5 R	21.04.2011	51.3	51.4
14	CEM II/A-M (P-L) 42.5 N	21.04.2011	51.3	51.4
14	CEM II/A-M (P-L) 42.5 R	21.04.2011	51	52.2
14	CEM II/B-M (L-W) 42.5 R	21.04.2011	55.2	56.2
30	CEM I 42.5 R	21.04.2011	55.5	57.9
30	CEM II/A-M (P-L) 42.5 R	21.04.2011	57.5	58.1
31	CEM II/B-LL 32.5 R	25.04.2011	42.7	42.5
31	CEM I 42.5 R	25.04.2011	51.4	54.3
52	CEM II/B-M (P-L) 32.5 R	26.04.2011	37.6	38.5
46	CEM V/A (S-P) 32.5 N	26.04.2011	36.7	39.1
59	CEM V/A (S-P) 32.5 R	26.04.2011	40.4	39.7
46	CEM II/B-P 32.5 R	26.04.2011	42.7	47.8
59	CEM I 42.5 R	26.04.2011	51	50.1
59	CEM II/A-M (P-LL) 42.5 R	26.04.2011	49.7	51.6
52	CEM I 42.5 R	26.04.2011	52.5	54.5
46	CEM I 42.5 R	26.04.2011	50.9	55.5
39	CEM II/B-M (P-LL) 32.5 R	27.04.2011	37.3	40.8
56	CEM II/B-M (P-LL) 32.5 R	27.04.2011	45.6	45.7
39	CEM II/A-M (P-LL) 42.5 R	27.04.2011	51.3	52
56	CEM II/A-LL 42.5 R	27.04.2011	52.3	54.9
56	CEM I 42.5 R	27.04.2011	58.6	56.7
39	CEM I 42.5 R	27.04.2011	59.2	58.5
50	CEM IV/B (P) 32.5 R	02.05.2011	38.9	41.1
53	CEM IV/B (P) 32.5 R	02.05.2011	43.4	46.8
50	CEM II/A-L 42.5 R	02.05.2011	50.1	48.7
50	CEM II/A-M (P-L) 42.5 R	02.05.2011	49.7	49.8
50	CEM I 42.5 R	02.05.2011	51	50.2
27	CEM II/A-M (P-L) 42.5 N	02.05.2011	50.5	51.8
27	CEM I 42.5 R	02.05.2011	51.9	52.8
53	CEM II/A-M (P-L) 42.5 R	02.05.2011	57.6	57.5
53	CEM I 42.5 R	02.05.2011	58.1	58.8

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22	CEM IV/B (P-V) 32.5 R	03.05.2011	42.5	46.2
1	CEM II/B-M (P-Q-S) 42.5 N	03.05.2011	46.2	47.5
29	CEM II/B-L 42.5 R	03.05.2011	47.5	48.2
1	CEM II/B-LL 42.5 R	03.05.2011	47.2	48.9
22	CEM II/B-M (P-V) 42.5 N	03.05.2011	50.5	48.9
1	CEM III/A 42.5 N	03.05.2011	47.6	49.6
1	CEM I 42.5 R	03.05.2011	47.8	51.7
29	CEM I 42.5 R	03.05.2011	50	52
1	CEM I 52.5 R	03.05.2011	57	57
41	CEM V/A (P-S) 32.5 R	04.05.2011	34.6	34.6
37	CEM IV/B (P) 32.5 N	04.05.2011	36.9	38.3
21	CEM IV/B (P-V) 32.5 N	04.05.2011	40.8	41
41	CEM II/B-M (P-S) 42.5 R	04.05.2011	47.4	48.5
41	CEM III/A 42.5 N	04.05.2011	46.6	48.7
37	CEM II/A-M (P-LL) 42.5 N	04.05.2011	53.3	53
21	CEM I 42.5 R	04.05.2011	54.5	54.2
21	CEM II/A-M (P-L) 42.5 R	04.05.2011	54	54.4
37	CEM I 52.5 N	04.05.2011	62.5	60.5
11	CEM IV/B (P-V) 32.5 N	05.05.2011	37.7	41.5
2	CEM II/B-P 32.5 R	05.05.2011	43.4	41.9
2	CEM I 42.5 R	05.05.2011	53.1	52.3
11	CEM II/A-LL 42.5 R	05.05.2011	52.7	52.5
11	CEM IV/A (P-V) 42.5 R	05.05.2011	47.3	54.6
2	CEM II/A-P 42.5 R	05.05.2011	53.5	54.8
11	CEM I 42.5 R	05.05.2011	54.9	57.2
24	CEM I 42.5 R	05.05.2011	56.2	59.1
24	CEM II/B-LL 32.5 N	06.05.2011	38.5	35.9
1	CEM V/A (S-P-Q) 32.5 R	06.05.2011	37.2	36.5
48	CEM II/B-P 32.5 R	06.05.2011	36.8	36.9
48	CEM II/A-P 42.5 R	06.05.2011	48.3	48.4
48	CEM I 42.5 N	06.05.2011	48.3	51.5
48	CEM I 42.5 R	06.05.2011	54.2	52.6
24	CEM II/A-LL 42.5 R	06.05.2011	54.1	56.5
27	CEM IV/B (P) 32.5 N	07.05.2011	33	46.9
40	CEM II/B-M (P-L) 32.5 R	10.05.2011	36.2	38
13	CEM II/B-M (P-L) 32.5 R	10.05.2011	39.4	39
13	CEM I 42.5 R	10.05.2011	54.3	55.5
40	CEM II/A-M (P-L) 42.5 R	10.05.2011	57.6	59.8
40	CEM I 42.5 R	10.05.2011	56.6	60.4
26	CEM I 42.5 R	10.05.2011	60.4	61.2
42	CEM III/A 32.5 N	11.05.2011	35.6	32.6
12	CEM IV/B (P) 32.5 R	11.05.2011	37	36.4
42	CEM III/A 42.5 N	11.05.2011	43.4	40.4
12	CEM I 42.5 R	11.05.2011	58.6	56.1
35	CEM III/A 32.5 N	12.05.2011	36.2	36.4
38	CEM IV/B (P) 32.5 N	12.05.2011	37.7	37.1
20	CEM III/B 32.5 N	12.05.2011	42.7	43.5
38	CEM II/A-M (P-LL) 42.5 N	12.05.2011	51.1	51.5
38	CEM I 42.5 N	12.05.2011	52.4	52.8
35	CEM II/A-S 42.5 R	12.05.2011	58.4	61.1
19	CEM IV/B (P) 32.5 R	13.05.2011	36.5	38.2
19	CEM I 42.5 N	13.05.2011	47.5	50.5
19	CEM II/A-M (P-L) 42.5 R	13.05.2011	46.8	52.4
19	CEM I 42.5 R	13.05.2011	58.6	59.6
7	CEM I 42.5 R	15.05.2011	49.6	46.8
18	CEM IV/B (P) 32.5 R	16.05.2011	34.86	36.8
7	CEM IV/B (P) 32.5 R	16.05.2011	41.5	45.2
57	CEM II/A-L 42.5 R	16.05.2011	47	51.8
18	CEM I 42.5 R	16.05.2011	55.92	57.9
4	CEM I 42.5 R	18.05.2011	53	51.8
9	CEM II/B-M (S-L) 42.5 R	18.05.2011	53.4	54.4
9	CEM II/A-M (S-L) 42.5 R	18.05.2011	55.9	57.7
49	CEM IV/B (P-W) 32.5 R	23.05.2011	38.1	36.9
49	CEM I 42.5 R	23.05.2011	49.1	49.5
49	CEM II/A-M (P-L) 42.5 R	23.05.2011	52.1	54
28	CEM IV/B (P) 32.5 R	24.05.2011	39.5	41.9
34	CEM IV/B (P) 32.5 R	24.05.2011	44.6	45.5
34	CEM II/A-M (P-L) 42.5 N	24.05.2011	51.5	54
34	CEM I 42.5 N	24.05.2011	55	58
47	CEM IV/B (P) 32.5 N	25.05.2011	36.9	34.7
63	CEM IV/B (P) 32.5 R	25.05.2011	36.1	36.8
45	CEM II/B-M (P-LL) 32.5 N	25.05.2011	36.2	37.2
17	CEM II/B-M (P-LL) 32.5 N	25.05.2011	37.5	40.2

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47	CEM II/A-M (P-LL) 42.5 R	25.05.2011	42.9	44.2
63	CEM I 42.5 R	25.05.2011	46.9	47.2
47	CEM I 42.5 N	25.05.2011	46.5	48.4
17	CEM II/A-M (P-LL) 42.5 N	25.05.2011	48.4	51.4
45	CEM II/A-M (P-LL) 42.5 N	25.05.2011	51.4	51.9
45	CEM I 42.5 N	25.05.2011	55.6	57.4
60	CEM II/B-M (P-LL) 32.5 R	26.05.2011	40.8	42.1
60	CEM II/A-M (P-LL) 42.5 N	26.05.2011	49.5	52.8
60	CEM I 42.5 N	26.05.2011	56.7	58.8
36	CEM IV/B (P) 32.5 R	27.05.2011	38.5	41.2
36	CEM I 42.5 N	27.05.2011	45.2	48.6
36	CEM II/A-M (P-LL) 42.5 R	27.05.2011	47.3	50.9
28	CEM I 42.5 R	28.05.2011	49	52.3
28	CEM II/A-M (P-L) 42.5 R	28.05.2011	49.5	52.6
20	CEM III/B 32.5 N	01.06.2011	34.8	33.7
11	CEM IV/B (P-V) 32.5 N	01.06.2011	39.9	46.5
11	CEM IV/A (P-V) 42.5 R	01.06.2011	47.5	53.8
12	CEM IV/B (P) 32.5 R	02.06.2011	36.7	34.7
55	CEM I 42.5 R	02.06.2011	55.4	52.5
25	CEM IV/B (P-W) 32.5 R	03.06.2011	38	39.6
53	CEM IV/B (P) 32.5 R	03.06.2011	38.7	42.7
55	CEM II/B-M (W-L) 32.5 R	03.06.2011	47.6	44.5
25	CEM I 42.5 R	03.06.2011	53.5	53.2
55	CEM II/A-LL 42.5 R	05.06.2011	51.1	50.9
38	CEM IV/B (P) 32.5 N	06.06.2011	35.9	34.2
44	CEM II/B-M (P-L) 32.5 R	06.06.2011	34.2	35.2
44	CEM II/B-M (P-L) 32.5 N	06.06.2011	34.7	35.5
5	CEM II/B-M (P-LL) 32.5 R	06.06.2011	37.9	38.5
44	CEM II/A-M (P-L) 42.5 R	06.06.2011	49	50.1
44	CEM I 42.5 R	06.06.2011	49	50.4
5	CEM I 42.5 R	06.06.2011	50.1	52.9
38	CEM II/A-M (P-LL) 42.5 R	06.06.2011	51.5	53.5
38	CEM I 42.5 R	06.06.2011	53.3	54.2
38	CEM I 42.5 N	06.06.2011	55.3	54.4
38	CEM I 52.5 N	06.06.2011	55.2	58
15	CEM IV/B (P) 32.5 N	07.06.2011	35.4	36.2
51	CEM IV/B (P) 32.5 R	07.06.2011	33.1	36.6
9	CEM V/A (P-S) 32.5 N	07.06.2011	33.7	38.2
51	CEM I 42.5 R	07.06.2011	50.2	48.7
9	CEM II/B-M (S-L) 42.5 R	07.06.2011	56.1	55.6
51	CEM I 52.5 N	07.06.2011	58.4	56.6
9	CEM I 42.5 R	07.06.2011	56.5	56.8
9	CEM II/A-M (S-L) 42.5 R	07.06.2011	56.8	58.5
51	CEM II/A-P 42.5 R	07.06.2011	55.9	58.7
51	CEM I 52.5 R	07.06.2011	62.9	61.9
9	CEM II/A-M (S-L) 52.5 N	07.06.2011	59.9	62.1
6	CEM V/A (S-P) 32.5 N	08.06.2011	34	35
3	CEM IV/B (P) 32.5 N	08.06.2011	35.6	36.3
32	CEM IV/B (P) 32.5 N	08.06.2011	35.4	36.8
4	CEM IV/B (P) 32.5 N	08.06.2011	37.5	37.3
23	CEM II/B-M (S-L) 32.5 N	08.06.2011	41.6	42.1
3	CEM II/A-M (P-L) 42.5 N	08.06.2011	49.2	52.3
4	CEM I 42.5 R	08.06.2011	54.9	56.7
32	CEM I 42.5 R	08.06.2011	54.3	57.2
23	CEM I 42.5 R	08.06.2011	59	57.2
14	CEM IV/B (P-W) 32.5 R	09.06.2011	37.1	36.3
14	CEM II/A-M (P-L) 42.5 R	09.06.2011	47.6	43.4
58	CEM IV/B (P) 32.5 N	09.06.2011	44.3	43.7
14	CEM II/A-M (P-L) 42.5 N	09.06.2011	48	44.4
58	CEM II/A-LL 42.5 N	09.06.2011	48.2	45
57	CEM II/B-L 32.5 R	09.06.2011	43.8	47.3
16	CEM II/A-M (P-L) 42.5 N	09.06.2011	47.7	50.1
14	CEM II/B-M (L-W) 42.5 R	09.06.2011	51.6	51
14	CEM I 42.5 R	09.06.2011	51.5	51.6
58	CEM I 42.5 R	09.06.2011	53.5	54.6
16	CEM I 42.5 R	09.06.2011	55.3	55.6
58	CEM II/A-LL 42.5 R	09.06.2011	59.2	58.4
57	CEM I 42.5 R	09.06.2011	57.3	59.3
16	CEM II/A-LL 42.5 N	09.06.2011	54.1	59.9
30	CEM IV/B (P) 32.5 R	10.06.2011	37.7	37.7
30	CEM II/A-M (P-L) 42.5 R	10.06.2011	55.6	56.1
30	CEM I 42.5 R	10.06.2011	56.2	57.4
31	CEM II/B-LL 32.5 R	21.06.2011	38.5	39.7

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62	CEM II/B-M (P-L) 32.5 R	21.06.2011	37.6	39.8
46	CEM V/A (S-P) 32.5 N	21.06.2011	42.2	41.1
46	CEM II/B-P 32.5 R	21.06.2011	47.5	50
46	CEM I 42.5 R	21.06.2011	53.7	53.4
62	CEM I 42.5 R	21.06.2011	50.2	53.8
62	CEM II/A-M (P-L) 42.5 R	21.06.2011	52.5	55.2
31	CEM I 42.5 R	21.06.2011	57.3	55.2
10	CEM II/B-LL 32.5 R	22.06.2011	34.3	35.3
29	CEM III/A 32.5 R	22.06.2011	39	40.2
52	CEM II/B-M (P-L) 32.5 R	22.06.2011	34.4	40.8
56	CEM II/B-M (P-LL) 32.5 R	22.06.2011	40	42.5
10	CEM II/B-LL 42.5 N	22.06.2011	46.9	50.2
10	CEM II/A-LL 42.5 R	22.06.2011	49.2	51.5
56	CEM II/A-LL 42.5 R	22.06.2011	49.2	52.2
52	CEM I 42.5 R	22.06.2011	54.2	54.5
56	CEM I 42.5 R	22.06.2011	52.7	55.4
10	CEM I 42.5 R	22.06.2011	55.1	59
8	CEM II/B-M (P-LL) 32.5 R	23.06.2011	41.1	40.6
39	CEM II/B-M (P-LL) 32.5 R	23.06.2011	41.5	45.5
8	CEM I 42.5 R	23.06.2011	53.8	54.4
8	CEM II/A-M (P-LL) 42.5 R	23.06.2011	53.4	54.6
34	CEM III/A 42.5 N	23.06.2011	53.8	54.8
39	CEM II/A-M (P-LL) 42.5 R	23.06.2011	50.4	55.8
43	CEM II/B-M (P-L) 32.5 N	24.06.2011	34	31.4
59	CEM V/A (S-P) 32.5 R	24.06.2011	43.8	43.2
43	CEM II/A-M (P-L) 42.5 R	24.06.2011	45.7	45.6
43	CEM I 42.5 R	24.06.2011	50.2	51.1
59	CEM II/A-M (P-LL) 42.5 R	24.06.2011	55.2	54.4
59	CEM I 42.5 R	24.06.2011	54.2	54.8
53	CEM IV/B (P) 32.5 R	04.07.2011	41.6	43.4
53	CEM II/A-M (P-L) 42.5 R	04.07.2011	55.9	55.7
53	CEM I 42.5 R	04.07.2011	54	56.5
22	CEM IV/B (P-V) 32.5 R	05.07.2011	40.1	43.7
22	CEM II/B-M (P-V) 42.5 N	05.07.2011	47.3	50
27	CEM II/A-M (P-L) 42.5 N	05.07.2011	47.4	51.2
27	CEM I 42.5 R	05.07.2011	53.3	52.9
21	CEM IV/B (P-V) 32.5 N	06.07.2011	40.5	40.9
21	CEM II/A-M (P-L) 42.5 R	06.07.2011	48.7	52.1
21	CEM I 42.5 R	06.07.2011	55.7	57.5
24	CEM I 42.5 R	06.07.2011	54.3	60.2
11	CEM IV/B (P) 32.5 N	07.07.2011	34.1	38.9
11	CEM IV/A (P) 42.5 N	07.07.2011	45	50.3
11	CEM II/A-LL 42.5 R	07.07.2011	51.7	53.7
11	CEM I 42.5 R	07.07.2011	54.4	57.3
24	CEM II/B-LL 32.5 N	08.07.2011	38.3	41.2
24	CEM II/A-LL 42.5 R	08.07.2011	51.9	55.3
50	CEM IV/B (P) 32.5 R	11.07.2011	38.7	38.3
50	CEM II/A-M (P-L) 42.5 R	11.07.2011	48.9	46.9
50	CEM I 42.5 R	11.07.2011	50.4	47.9
50	CEM II/A-L 42.5 R	11.07.2011	51.3	49.7
1	CEM V/A (S-P-Q) 32.5 R	12.07.2011	36.9	35.7
13	CEM II/B-M (P-L) 32.5 R	12.07.2011	37.6	39.5
40	CEM II/B-M (P-L) 32.5 R	12.07.2011	41.6	40.9
1	CEM II/B-LL 42.5 R	12.07.2011	43.2	43.3
1	CEM II/B-M (P-Q-S) 42.5 N	12.07.2011	47.1	46.9
1	CEM III/A 42.5 N	12.07.2011	50.1	48.4
1	CEM I 42.5 R	12.07.2011	49.9	51.4
13	CEM I 42.5 R	12.07.2011	49.3	52.7
26	CEM I 42.5 R	12.07.2011	52.5	53.4
40	CEM I 42.5 R	12.07.2011	52.4	55.1
40	CEM II/A-M (P-L) 42.5 R	12.07.2011	59.2	61.3
1	CEM I 52.5 R	12.07.2011	59.3	62.3
41	CEM V/A (P-S) 32.5 R	13.07.2011	34.1	32.7
18	CEM IV/B (P) 32.5 R	13.07.2011	35.87	34.6
48	CEM II/B-P 32.5 R	13.07.2011	35.8	36.4
37	CEM IV/B (P) 32.5 N	13.07.2011	37.5	39.4
7	CEM IV/B (P) 32.5 R	13.07.2011	39.2	45.7
41	CEM III/A 42.5 N	13.07.2011	46.9	47.6
41	CEM II/B-M (P-S) 42.5 R	13.07.2011	47.5	48.8
48	CEM I 42.5 R	13.07.2011	51.8	52.7
37	CEM II/A-M (P-LL) 42.5 N	13.07.2011	52.1	55.1
18	CEM I 42.5 R	13.07.2011	53.03	58
7	CEM I 42.5 R	13.07.2011	50.2	58.5

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25	CEM I 42.5 R	14.10.2011	57	55.7
27	CEM IV/B (P) 32.5 N	17.10.2011	37.5	40
31	CEM II/B-LL 32.5 R	17.10.2011	38.6	41.3
46	CEM II/B-P 32.5 R	17.10.2011	41.7	44.3
46	CEM V/A (S-P) 32.5 N	17.10.2011	43.4	44.4
46	CEM I 42.5 R	17.10.2011	54.1	50.4
31	CEM I 42.5 R	17.10.2011	52.3	55.3
59	CEM V/A (S-P) 32.5 R	18.10.2011	40.8	38.6
52	CEM II/B-M (P-L) 32.5 R	18.10.2011	36.7	39.7
29	CEM III/A 32.5 R	18.10.2011	40.2	43
52	CEM I 42.5 R	18.10.2011	53.5	50.4
59	CEM II/A-M (P-LL) 42.5 R	18.10.2011	51.8	53.3
59	CEM I 42.5 R	18.10.2011	54	54.1
56	CEM II/B-M (P-LL) 32.5 R	19.10.2011	36.9	40.9
56	CEM I 42.5 R	19.10.2011	53.4	50
56	CEM II/A-LL 42.5 R	19.10.2011	48.7	52
39	CEM II/B-M (P-LL) 32.5 R	20.10.2011	45.1	45
39	CEM II/A-M (P-LL) 42.5 R	20.10.2011	54.1	54
39	CEM I 42.5 R	20.10.2011	57	58.2
34	CEM III/A 42.5 N	21.10.2011	56.2	56.4
33	CEM IV/B (P) 32.5 N	26.10.2011	36.7	40.1
33	CEM II/A-M (P-LL) 42.5 N	26.10.2011	52.3	55.4
33	CEM I 42.5 N	26.10.2011	53	56
54	CEM IV/B (P) 32.5 R	28.10.2011	37.6	37.7
54	CEM I 42.5 R	28.10.2011	49.2	51.9
35	CEM IV/B (V) 32.5 R	31.10.2011	39.2	39.5
27	CEM II/A-M (P-L) 42.5 N	31.10.2011	47.3	49.7
27	CEM I 42.5 R	31.10.2011	52.5	53.8
53	CEM IV/B (P) 32.5 R	01.11.2011	38.9	41.4
22	CEM IV/B (P-V) 32.5 R	01.11.2011	41.2	42.7
22	CEM II/B-M (P-V) 42.5 N	01.11.2011	48.4	49.7
53	CEM I 42.5 R	01.11.2011	58.7	58.8
53	CEM II/A-M (P-L) 42.5 R	01.11.2011	59.2	59.9
21	CEM IV/B (P-V) 32.5 N	02.11.2011	38.1	40.5
21	CEM II/A-M (P-L) 42.5 R	02.11.2011	50.8	51.1
21	CEM I 42.5 R	02.11.2011	56.3	56.6
11	CEM IV/B (P) 32.5 N	03.11.2011	36.3	40.3
11	CEM IV/A (P) 42.5 N	03.11.2011	49.7	51.7
11	CEM II/A-LL 42.5 R	03.11.2011	52.7	55.3
11	CEM I 42.5 R	03.11.2011	54	55.3
25	CEM II/B-M (L-W) 42.5 R	03.11.2011	56.2	56.7
24	CEM I 42.5 R	04.11.2011	55.2	57
24	CEM II/A-LL 42.5 R	04.11.2011	52.5	57.5
50	CEM IV/B (P) 32.5 R	14.11.2011	37.6	37.7
50	CEM II/A-M (P-L) 42.5 R	14.11.2011	48.2	47.6
7	CEM IV/B (P) 32.5 R	14.11.2011	42.1	49.7
50	CEM II/A-L 42.5 R	14.11.2011	48.7	50.4
50	CEM I 42.5 R	14.11.2011	49.9	51.9
7	CEM I 42.5 R	14.11.2011	50.3	59.3
18	CEM IV/B (P) 32.5 R	15.11.2011	34.21	34.2
1	CEM V/A (S-P-Q) 32.5 R	15.11.2011	36.7	35.3
40	CEM II/B-M (P-L) 32.5 R	15.11.2011	35.8	36.7
29	CEM III/A 32.5 R	15.11.2011	38.9	39.4
13	CEM II/B-M (P-L) 32.5 R	15.11.2011	42.4	45
1	CEM II/B-M (P-Q-S) 42.5 N	15.11.2011	48.3	50.2
29	CEM I 42.5 R	15.11.2011	48.3	51.1
1	CEM I 42.5 R	15.11.2011	51.1	51.7
1	CEM II/B-LL 42.5 R	15.11.2011	49.1	52.1
29	CEM II/B-L 42.5 R	15.11.2011	50.7	52.7
1	CEM III/A 42.5 N	15.11.2011	52.1	52.9
13	CEM I 42.5 R	15.11.2011	52.5	56.3
18	CEM I 42.5 R	15.11.2011	54.89	57.2
40	CEM I 42.5 R	15.11.2011	56.4	57.5
26	CEM I 42.5 R	15.11.2011	57.4	58.5
40	CEM II/A-M (P-L) 42.5 R	15.11.2011	58.5	58.9
1	CEM I 52.5 R	15.11.2011	57.3	59.8
42	CEM III/A 32.5 N	16.11.2011	40.4	39
12	CEM IV/B (P) 32.5 R	16.11.2011	38.2	39.2
41	CEM V/A (P-S) 32.5 R	16.11.2011	38.1	39.8
42	CEM III/A 42.5 N	16.11.2011	43.2	43.7
41	CEM III/A 42.5 N	16.11.2011	46.4	47.6
41	CEM II/B-M (P-S) 42.5 R	16.11.2011	48.8	50.3
12	CEM II/A-M (P-L) 42.5 R	16.11.2011	55.7	58.4

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12	CEM I 42.5 N	16.11.2011	56.4	58.4
12	CEM I 42.5 R	16.11.2011	57	58.8
20	CEM III/B 32.5 N	17.11.2011	34.3	33.9
35	CEM III/A 32.5 N	17.11.2011	35.2	34.4
2	CEM II/B-P 32.5 R	17.11.2011	39.6	38.8
19	CEM IV/B (P) 32.5 R	17.11.2011	37.7	39.1
19	CEM I 42.5 N	17.11.2011	47.4	47.9
2	CEM I 42.5 R	17.11.2011	48.6	49.8
2	CEM II/A-P 42.5 R	17.11.2011	49.6	50.5
19	CEM II/A-M (P-L) 42.5 R	17.11.2011	49.4	52.1
38	CEM I 52.5 N	17.11.2011	54.3	53.7
19	CEM I 42.5 R	17.11.2011	54.5	55.5
35	CEM II/B-S 42.5 R	17.11.2011	54.4	55.9
35	CEM II/A-S 42.5 R	17.11.2011	59.1	59.6
48	CEM II/B-P 32.5 R	18.11.2011	36.1	35.9
37	CEM IV/B (P) 32.5 N	18.11.2011	37.4	37.4
48	CEM II/A-P 42.5 R	18.11.2011	50.7	51.7
48	CEM I 42.5 N	18.11.2011	52.4	51.7
48	CEM I 42.5 R	18.11.2011	52.4	53
37	CEM II/A-M (P-LL) 42.5 N	18.11.2011	52.9	55.4
37	CEM I 52.5 N	18.11.2011	61.9	60.8
37	CEM I 42.5 R	18.11.2011	61.9	61.5
23	CEM II/A-S 42.5 R	19.11.2011	54.3	55.6
49	CEM IV/B (P-W) 32.5 R	21.11.2011	37.4	38.1
26	CEM IV/B(P) 32.5 N	21.11.2011	36.7	43.4
49	CEM I 42.5 R	21.11.2011	53.7	54.7
49	CEM II/A-M (P-L) 42.5 R	21.11.2011	53.4	56.4
28	CEM IV/B (P) 32.5 R	22.11.2011	37.1	38.5
60	CEM II/B-M (P-LL) 32.5 R	22.11.2011	41	43.3
28	CEM I 42.5 R	22.11.2011	50.7	52.8
33	CEM II/A-M (P-LL) 42.5 N	22.11.2011	56.4	53
28	CEM II/A-M (P-L) 42.5 R	22.11.2011	50.9	53.7
33	CEM I 42.5 N	22.11.2011	59.5	56.3
60	CEM II/A-M (P-LL) 42.5 N	22.11.2011	52.4	59.3
60	CEM I 42.5 N	22.11.2011	54.9	59.3
47	CEM IV/B (P) 32.5 N	23.11.2011	37.4	38.6
45	CEM II/B-M (P-LL) 32.5 N	23.11.2011	37.5	39.2
63	CEM IV/B (P) 32.5 R	23.11.2011	39.3	40.6
47	CEM II/B-M (P-S) 42.5 R	23.11.2011	46.2	48.6
47	CEM I 42.5 N	23.11.2011	45.3	49.3
47	CEM II/A-M (P-LL) 42.5 R	23.11.2011	46.4	49.9
45	CEM II/A-M (P-LL) 42.5 N	23.11.2011	48.5	49.9
63	CEM I 42.5 R	23.11.2011	48.3	50.6
45	CEM I 42.5 N	23.11.2011	49.2	51
36	CEM IV/B (P) 32.5 R	24.11.2011	37.3	40.1
61	CEM II/B-LL 32.5 R	24.11.2011	40.6	42.4
36	CEM II/A-M (P-LL) 42.5 R	24.11.2011	47.5	50.7
61	CEM II/A-LL 42.5 R	24.11.2011	51	52.6
36	CEM I 42.5 N	24.11.2011	50.4	54.2
34	CEM IV/B (P) 32.5 R	25.11.2011	39.1	40.6
34	CEM II/A-M (P-L) 42.5 N	25.11.2011	43.8	45.1
34	CEM I 42.5 N	25.11.2011	50	50.6
34	CEM III/A 42.5 N	25.11.2011	51.7	51
11	CEM IV/B (P-V) 32.5 N	30.11.2011	38.4	39.9
11	CEM IV/A (P-V) 42.5 R	30.11.2011	49.7	50.4
9	CEM V/A (P-S) 32.5 N	06.12.2011	34.6	37
51	CEM IV/B (P) 32.5 R	06.12.2011	33.7	38.1
9	CEM II/B-M (S-L) 42.5 R	06.12.2011	56.2	57
51	CEM II/A-P 42.5 R	06.12.2011	53.2	57.7
51	CEM I 52.5 N	06.12.2011	57.3	58.8
9	CEM I 42.5 R	06.12.2011	60.1	58.9
51	CEM I 42.5 R	06.12.2011	60.1	60.6
9	CEM II/A-M (S-L) 52.5 N	06.12.2011	63.6	64
6	CEM V/A (S-P) 32.5 N	07.12.2011	37.2	37.6
4	CEM IV/B (P) 32.5 N	07.12.2011	37.7	37.6
6	CEM IV/B (P) 32.5 N	07.12.2011	40.3	41.9
23	CEM II/B-M (S-L) 32.5 N	07.12.2011	44.7	43
23	CEM I 42.5 R	07.12.2011	57	55.6
58	CEM IV/B (P) 32.5 N	08.12.2011	34.7	35.7
57	CEM II/B-L 32.5 R	08.12.2011	39.3	42.7
58	CEM II/A-LL 42.5 N	08.12.2011	45.1	46.1
47	CEM II/B-M (P-S) 42.5 R	08.12.2011	47.2	51.6
58	CEM I 42.5 R	08.12.2011	58	57.9

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58	CEM II/A-LL 42.5 R	08.12.2011	57.2	60
57	CEM I 42.5 R	08.12.2011	59.1	62.2
30	CEM IV/B (P) 32.5 R	09.12.2011	38.3	40.9
30	CEM II/A-M (P-L) 42.5 R	09.12.2011	57	58.6
30	CEM I 42.5 R	09.12.2011	62.2	67.3
62	CEM II/B-M (P-L) 32.5 R	12.12.2011	38.1	39.4
62	CEM I 42.5 R	12.12.2011	50.9	55.2
62	CEM II/A-M (P-L) 42.5 R	12.12.2011	53.2	57.8
5	CEM II/B-M (P-LL) 32.5 R	13.12.2011	36.3	37.2
55	CEM II/B-M (W-L) 32.5 R	13.12.2011	38.9	38.6
10	CEM II/B-LL 32.5 R	13.12.2011	36.2	39.5
5	CEM I 42.5 R	13.12.2011	49.5	52.7
10	CEM II/B-LL 42.5 N	13.12.2011	51	54.8
10	CEM II/A-LL 42.5 R	13.12.2011	53.7	57.3
55	CEM I 42.5 R	13.12.2011	61.1	57.6
10	CEM I 42.5 R	13.12.2011	55.1	58.6
39	CEM II/B-M (P-LL) 32.5 R	14.12.2011	36.7	36.2
15	CEM IV/B (P) 32.5 N	14.12.2011	35.2	36.8
3	CEM IV/B (P) 32.5 N	14.12.2011	34.9	38.9
38	CEM IV/B (P) 32.5 N	14.12.2011	39.9	42.8
8	CEM II/B-M (P-LL) 32.5 R	14.12.2011	44.2	45
38	CEM II/A-M (P-LL) 42.5 R	14.12.2011	48	48.3
3	CEM II/A-M (P-L) 42.5 N	14.12.2011	47.5	51
39	CEM II/A-M (P-LL) 42.5 R	14.12.2011	50.6	51.5
38	CEM I 42.5 R	14.12.2011	49	52.1
55	CEM II/A-LL 42.5 R	14.12.2011	53.6	52.4
8	CEM II/B-M (P-LL) 42.5 N	14.12.2011	53.4	54.7
8	CEM II/A-M (P-LL) 42.5 R	14.12.2011	54.2	55.8
38	CEM I 52.5 N	14.12.2011	57	56.3
39	CEM I 42.5 R	14.12.2011	57.3	58.3
8	CEM I 42.5 R	14.12.2011	55.9	58.7
43	CEM II/B-M (P-L) 32.5 N	15.12.2011	37.5	38
44	CEM II/B-M (P-L) 32.5 N	15.12.2011	39.1	39.8
44	CEM II/B-M (P-L) 32.5 R	15.12.2011	40.7	40.8
43	CEM II/A-M (P-L) 42.5 R	15.12.2011	49	48.7
44	CEM II/A-M (P-L) 42.5 R	15.12.2011	49.2	49.1
44	CEM I 42.5 R	15.12.2011	47	49.6
43	CEM I 42.5 R	15.12.2011	55.5	53.6
59	CEM V/A (S-P) 32.5 R	16.12.2011	39	38.1
56	CEM II/B-M (P-LL) 32.5 R	16.12.2011	46.5	49.8
59	CEM II/A-M (P-LL) 42.5 R	16.12.2011	51.9	50.3
59	CEM I 42.5 R	16.12.2011	52.7	53.8
56	CEM II/A-LL 42.5 R	16.12.2011	50.1	55.1
56	CEM I 42.5 R	16.12.2011	56.6	59.8
12	CEM I 42.5 N	16.12.2011	59.2	59.8
52	CEM II/B-M (P-L) 32.5 R	17.12.2011	40.1	39.3
52	CEM I 42.5 R	17.12.2011	56.1	58.2
46	CEM V/A (S-P) 32.5 N	19.12.2011	39.3	39.4
46	CEM II/B-P 32.5 R	19.12.2011	39	41
31	CEM II/B-LL 32.5 R	19.12.2011	40.6	41.9
31	CEM I 42.5 R	19.12.2011	49.3	50.3
46	CEM I 42.5 R	19.12.2011	51.9	53.3
46	CEM II/A-M (P-S) 42.5 R	19.12.2011	52.5	56.5
32	CEM IV/B (P) 32.5 N	20.12.2011	33.7	34
16	CEM I 42.5 R	20.12.2011	50.8	52.4
16	CEM II/A-M (P-L) 42.5 N	20.12.2011	50.3	53.3
16	CEM II/A-LL 42.5 N	20.12.2011	50.6	53.4
32	CEM II/A-P 42.5 R	20.12.2011	56.3	55.7
32	CEM I 42.5 R	20.12.2011	54.9	57.3
25	CEM IV/B (P-W) 32.5 R	21.12.2011	39.7	38.5
14	CEM IV/B (P-W) 32.5 R	21.12.2011	39.8	41.1
14	CEM II/A-M (P-L) 42.5 R	21.12.2011	49	51.2
25	CEM I 42.5 R	21.12.2011	55.9	54.7
14	CEM I 42.5 R	21.12.2011	51.4	54.9
14	CEM II/B-M (L-W) 42.5 R	21.12.2011	55	56.6
24	CEM I 52.5 N	22.12.2011	60.4	64.5
9	CEM II/A-M (S-L) 42.5 R	29.12.2011	58.1	57.2
27	CEM IV/B (P) 32.5 N	02.01.2012	44.7	46.5
27	CEM II/A-M (P-L) 42.5 N	02.01.2012	50.5	52.5
27	CEM I 42.5 R	02.01.2012	55.8	55.6
21	CEM IV/B (P-V) 32.5 N	03.01.2012	39.1	41.4
53	CEM IV/B (P) 32.5 R	03.01.2012	43.2	45.9
21	CEM II/A-M (P-L) 42.5 R	03.01.2012	52.7	52.7

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21	CEM I 42.5 R	03.01.2012	59.5	56.3
53	CEM I 42.5 R	03.01.2012	57.2	58.6
53	CEM II/A-M (P-L) 42.5 R	03.01.2012	60.2	63.7
24	CEM II/A-LL 42.5 R	04.01.2012	55.9	60
11	CEM IV/B (P) 32.5 N	05.01.2012	39.4	40.7
22	CEM IV/B (P-V) 32.5 R	05.01.2012	44	45.3
22	CEM II/B-M (P-V) 42.5 N	05.01.2012	50.8	51
11	CEM II/A-LL 42.5 R	05.01.2012	52	51.9
11	CEM I 42.5 R	05.01.2012	52.2	52.3
11	CEM IV/A (P) 42.5 N	05.01.2012	50.4	53.2
24	CEM II/B-LL 32.5 N	06.01.2012	45.8	48.9
25	CEM II/B-M (L-W) 42.5 R	06.01.2012	58.8	58.8
24	CEM I 42.5 R	06.01.2012	56.2	61.6
50	CEM II/A-M (P-L) 42.5 R	09.01.2012	47.8	47
50	CEM IV/B (P) 32.5 R	09.01.2012	45	47.5
50	CEM II/A-L 42.5 R	09.01.2012	48.1	48.4
50	CEM I 42.5 R	09.01.2012	49.3	49.6
1	CEM V/A (S-P-Q) 32.5 R	10.01.2012	33.6	32.8
1	CEM II/B-M (P-Q-S) 42.5 N	10.01.2012	45.6	46.9
1	CEM III/A 42.5 N	10.01.2012	47.5	49.6
1	CEM II/B-LL 42.5 R	10.01.2012	48.4	49.9
29	CEM II/B-L 42.5 R	10.01.2012	50.5	51.7
29	CEM I 42.5 R	10.01.2012	50.6	52.8
1	CEM I 42.5 R	10.01.2012	49.6	53
1	CEM I 52.5 R	10.01.2012	58.1	59.2
41	CEM V/A (P-S) 32.5 R	11.01.2012	35.7	34
41	CEM II/B-M (P-S) 42.5 R	11.01.2012	46.4	46.1
41	CEM III/A 42.5 N	11.01.2012	48.7	47.4
2	CEM II/B-P 32.5 R	12.01.2012	37.7	36.6
48	CEM II/B-P 32.5 R	12.01.2012	37	36.7
2	CEM II/A-P 42.5 R	12.01.2012	49.5	47.8
48	CEM II/A-P 42.5 R	12.01.2012	48.3	49.3
2	CEM I 42.5 R	12.01.2012	49.3	50.9
48	CEM I 42.5 N	12.01.2012	50	50.9
48	CEM I 42.5 R	12.01.2012	50.7	51
60	CEM II/B-M (P-LL) 32.5 R	13.01.2012	38.4	38.3
37	CEM IV/B (P) 32.5 N	13.01.2012	37	39.6
60	CEM II/A-M (P-LL) 42.5 N	13.01.2012	50.2	51.2
60	CEM I 42.5 R	13.01.2012	52.3	54.4
37	CEM II/A-M (P-LL) 42.5 N	13.01.2012	54.1	57.6
37	CEM I 42.5 R	13.01.2012	59.5	61.5
37	CEM I 52.5 N	13.01.2012	59.5	62.1
33	CEM IV/B (P) 32.5 N	14.01.2012	36.5	38.4
29	CEM III/A 32.5 R	14.01.2012	37.5	38.7
54	CEM IV/B (P) 32.5 R	14.01.2012	44.5	45.3
54	CEM I 42.5 R	14.01.2012	47	46.2
33	CEM II/A-M (P-LL) 42.5 N	14.01.2012	49.9	49.7
33	CEM I 42.5 N	14.01.2012	59.6	58.3
47	CEM IV/B (P) 32.5 N	15.01.2012	36.6	36.3
47	CEM II/B-M (P-S) 42.5 R	15.01.2012	46.9	46.7
47	CEM I 42.5 N	15.01.2012	50.5	52.6
61	CEM II/B-LL 32.5 R	18.01.2012	41.5	42.7
61	CEM II/A-LL 42.5 R	18.01.2012	53.1	52.2
61	CEM I 42.5 R	18.01.2012	55.4	59.6
18	CEM IV/B (P) 32.5 R	23.01.2012	35.26	35.5
7	CEM IV/B (P) 32.5 R	23.01.2012	44.1	50.3
7	CEM I 42.5 R	23.01.2012	53.1	57.2
18	CEM I 42.5 R	23.01.2012	56.8	59.1
4	CEM IV/B (P) 32.5 N	24.01.2012	37.5	35.9
19	CEM IV/B (P) 32.5 R	24.01.2012	34.9	36.6
9	CEM V/A (P-S) 32.5 N	24.01.2012	35.5	37.8
51	CEM IV/B (P) 32.5 R	24.01.2012	36.3	40
19	CEM II/A-M (P-L) 42.5 R	24.01.2012	47.9	50.4
47	CEM I 42.5 R	24.01.2012	47.9	50.6
19	CEM I 42.5 N	24.01.2012	49.4	52
9	CEM II/B-M (S-L) 42.5 R	24.01.2012	55.9	56.3
9	CEM II/A-M (S-L) 42.5 R	24.01.2012	53	56.4
19	CEM I 42.5 R	24.01.2012	54.6	56.5
51	CEM I 42.5 R	24.01.2012	57.9	58.3
9	CEM I 42.5 R	24.01.2012	61.2	59
51	CEM II/A-P 42.5 R	24.01.2012	58.2	60.6
51	CEM I 52.5 N	24.01.2012	60.5	60.9
9	CEM II/A-M (S-L) 52.5 N	24.01.2012	62.8	63.2

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30	CEM IV/B (P) 32.5 R	25.01.2012	35.3	36.1
20	CEM III/B 32.5 N	25.01.2012	35.1	36.4
35	CEM III/A 32.5 N	25.01.2012	37.5	38.1
57	CEM II/B-L 32.5 R	25.01.2012	41.5	39.6
58	CEM IV/B (P) 32.5 N	25.01.2012	42.2	43.2
20	CEM III/B 42.5 N	25.01.2012	44.5	45.5
20	CEM III/A 42.5 N	25.01.2012	45.7	45.8
58	CEM II/A-LL 42.5 N BEYAZ	25.01.2012	46.3	48.5
58	CEM I 42.5 R	25.01.2012	56.2	54.6
35	CEM II/B-S 42.5 R	25.01.2012	54.4	57
58	CEM II/A-LL 42.5 R	25.01.2012	56.2	57.3
30	CEM II/A-M (P-L) 42.5 R	25.01.2012	55.1	59.1
57	CEM I 42.5 R	25.01.2012	59	59.2
35	CEM II/A-S 42.5 R	25.01.2012	58.9	61
30	CEM I 42.5 R	25.01.2012	57.7	62.3
12	CEM IV/B (P) 32.5 R	26.01.2012	37	36.3
64	CEM IV/B (P) 32.5 N	26.01.2012	35.8	39.2
23	CEM II/B-M (S-L) 32.5 N	26.01.2012	40.5	40.8
23	CEM II/A-S 42.5 R	26.01.2012	56	56.4
12	CEM I 42.5 N	26.01.2012	57.3	56.4
12	CEM I 42.5 R	26.01.2012	55.9	57.7
23	CEM I 42.5 R	26.01.2012	57.7	58.1
59	CEM IV/B (P) 32.5 R	27.01.2012	36	35.9
42	CEM III/A 32.5 N	27.01.2012	42.4	42.6
42	CEM III/A 42.5 N	27.01.2012	48.2	49.3
13	CEM II/B-M (P-L) 32.5 R	31.01.2012	40.9	44.3
13	CEM I 42.5 R	31.01.2012	50.4	52.6
23	CEM II/A-S 42.5 R	03.02.2012	59.1	60
51	CEM I 52.5 R	03.02.2012	63.3	63.5
26	CEM I 42.5 R	04.02.2012	50.6	53.4
49	CEM IV/B (P-W) 32.5 R	06.02.2012	39.2	38.6
44	CEM II/B-M (P-L) 32.5 N	06.02.2012	40.2	41.1
44	CEM II/B-M (P-L) 32.5 R	06.02.2012	40.9	43.2
44	CEM II/A-M (P-L) 42.5 R	06.02.2012	48.7	49.7
44	CEM I 42.5 R	06.02.2012	50.8	53.5
38	CEM IV/B (P) 32.5 N	07.02.2012	35.9	36
28	CEM IV/B (P) 32.5 R	07.02.2012	38.4	39.3
38	CEM II/A-M (P-LL) 42.5 N	07.02.2012	52.6	51.4
28	CEM I 42.5 R	07.02.2012	51.8	52
38	CEM II/A-M (P-LL) 42.5 R	07.02.2012	53.8	52
38	CEM I 42.5 R	07.02.2012	53.7	52.6
28	CEM II/A-M (P-L) 42.5 R	07.02.2012	52.9	54.4
15	CEM IV/B (P) 32.5 N	08.02.2012	36.1	37.3
36	CEM IV/B (P) 32.5 R	08.02.2012	34.4	37.5
3	CEM IV/B (P) 32.5 N	08.02.2012	36.3	38
34	CEM IV/B (P) 32.5 R	08.02.2012	38.8	38.5
45	CEM II/B-M (P-LL) 32.5 N	08.02.2012	37.6	39
63	CEM IV/B (P) 32.5 R	08.02.2012	39	40
36	CEM II/A-M (P-LL) 42.5 R	08.02.2012	44.4	47
63	CEM I 42.5 R	08.02.2012	45.3	47.7
36	CEM I 42.5 N	08.02.2012	44.1	48.3
34	CEM II/A-M (P-L) 42.5 N	08.02.2012	49.1	50.4
45	CEM II/A-M (P-LL) 42.5 N	08.02.2012	51	52.4
34	CEM I 42.5 N	08.02.2012	51	53.6
45	CEM I 42.5 N	08.02.2012	53	54
3	CEM II/A-M (P-L) 42.5 N	08.02.2012	51.2	54.3
33	CEM IV/B (P) 32.5 N	09.02.2012	38	39.6
49	CEM II/A-M (P-L) 42.5 R	09.02.2012	45.9	45.7
32	CEM IV/B (P) 32.5 N	14.02.2012	36.8	37.4
32	CEM II/A-P 42.5 R	14.02.2012	50.6	51.2
32	CEM I 42.5 R	14.02.2012	52.5	54.6
16	CEM IV/B (P) 32.5 N	15.02.2012	35.6	37.5
40	CEM II/B-M (P-L) 32.5 R	15.02.2012	43.9	44.9
16	CEM II/A-M (P-L) 42.5 N	15.02.2012	51.6	52.4
16	CEM I 42.5 R	15.02.2012	55.7	54.6
16	CEM II/A-LL 42.5 N	15.02.2012	56.5	56.3
40	CEM I 42.5 R	15.02.2012	56.6	56.5
40	CEM II/A-M (P-L) 42.5 R	15.02.2012	56.3	58.7
25	CEM IV/B (P-W) 32.5 R	16.02.2012	36.3	35.4
14	CEM IV/B (P-W) 32.5 R	16.02.2012	39.2	39.9
14	CEM I 42.5 R	16.02.2012	49	49.4
14	CEM II/A-M (P-L) 42.5 R	16.02.2012	49	49.5
25	CEM I 42.5 R	16.02.2012	52.8	51.2

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25	CEM II/B-M (L-W) 42.5 R	16.02.2012	56.1	54.4
14	CEM II/B-M (L-W) 42.5 R	16.02.2012	53.9	55.7
5	CEM II/B-M (P-LL) 32.5 R	17.02.2012	43.4	43.6
29	CEM II/A-V 42.5 R	17.02.2012	50.5	52.8
5	CEM I 42.5 R	17.02.2012	53.4	57.3
31	CEM II/B-LL 32.5 R	20.02.2012	38.5	39.6
46	CEM V/A (S-P) 32.5 N	20.02.2012	41	40.4
46	CEM II/B-P 32.5 R	20.02.2012	43.6	43.4
31	CEM I 42.5 R	20.02.2012	50.5	53.3
46	CEM I 42.5 R	20.02.2012	55.8	56.3
52	CEM II/B-M (P-L) 32.5 R	21.02.2012	38	38.6
59	CEM III/A 42.5 N	21.02.2012	47.9	46.1
59	CEM V/A (S-P) 32.5 R	21.02.2012	48.2	46.1
52	CEM I 42.5 R	21.02.2012	54.1	54
59	CEM II/A-M (P-LL) 42.5 R	21.02.2012	53.8	54.1
56	CEM II/B-M (P-LL) 32.5 R	22.02.2012	33.7	36.7
56	CEM II/A-LL 42.5 R	22.02.2012	46.8	50.5
59	CEM I 42.5 R	22.02.2012	53.9	56.1
56	CEM I 42.5 R	22.02.2012	55.6	60.6
43	CEM II/B-M (P-L) 32.5 N	24.02.2012	35.5	35.9
8	CEM II/B-M (P-LL) 32.5 R	24.02.2012	43.5	41.9
8	CEM II/B-M (P-LL) 42.5 N	24.02.2012	43.8	44.7
8	CEM II/A-M (P-LL) 42.5 R	24.02.2012	50	50.3
8	CEM IV/A (P) 42.5 N	24.02.2012	52	51.4
43	CEM II/A-M (P-L) 42.5 R	24.02.2012	51.3	53.2
8	CEM I 42.5 R	24.02.2012	53.1	53.4
43	CEM I 42.5 R	24.02.2012	55.7	55.9
10	CEM II/B-LL 32.5 R	25.02.2012	35.5	37.2
39	CEM II/B-M (P-LL) 32.5 R	25.02.2012	42.4	44.3
10	CEM II/B-LL 42.5 N	25.02.2012	48.3	50.3
10	CEM II/A-LL 42.5 R	25.02.2012	50.8	51.4
39	CEM II/A-M (P-LL) 42.5 R	25.02.2012	55	59.3
10	CEM I 42.5 R	25.02.2012	59.6	59.6
39	CEM I 42.5 R	25.02.2012	56.6	60
62	CEM II/B-M (P-L) 32.5 R	27.02.2012	37	39.4
55	CEM II/A-LL 42.5 R	27.02.2012	56.1	53.4
62	CEM I 42.5 R	27.02.2012	51.2	56.4
62	CEM II/A-M (P-L) 42.5 R	27.02.2012	54.9	57.8
55	CEM I 42.5 R	27.02.2012	62.3	59.9
37	CEM IV/B (P) 32.5 N	28.02.2012	38.3	39.5
55	CEM II/B-M (W-L) 32.5 R	28.02.2012	45.3	43.2
37	CEM I 42.5 R	28.02.2012	60.8	60.2
37	CEM I 52.5 N	28.02.2012	60.8	61.2
48	CEM II/B-P 32.5 R	29.02.2012	39.6	40.8
37	CEM II/B-M (P-LL) 32.5 R	29.02.2012	41.3	43.4
48	CEM I 42.5 N	29.02.2012	44.5	44.1
48	CEM I 42.5 R	29.02.2012	49.3	49.4
48	CEM II/A-P 42.5 R	29.02.2012	49	50
37	CEM II/A-M (P-LL) 42.5 N	29.02.2012	53.5	56.5
41	CEM V/A (P-S) 32.5 R	01.03.2012	36.7	37.5
41	CEM III/A 42.5 N	01.03.2012	44.3	45.7
41	CEM II/B-M (P-S) 42.5 R	01.03.2012	53.9	52.5
1	CEM V/A (S-P-Q) 32.5 R	02.03.2012	37	36.4
29	CEM III/A 32.5 R	02.03.2012	41.4	42.6
1	CEM II/B-M (P-Q-S) 42.5 N	02.03.2012	46.8	48.3
1	CEM I 42.5 R	02.03.2012	50.3	51.3
29	CEM II/B-L 42.5 R	02.03.2012	51.2	51.7
1	CEM III/A 42.5 N	02.03.2012	50.6	52
1	CEM II/B-LL 42.5 R	02.03.2012	48.3	52.1
29	CEM I 42.5 R	02.03.2012	53.2	54.1
1	CEM I 52.5 R	02.03.2012	58.1	59.1
51	CEM IV/B (P) 32.5 R	05.03.2012	37.1	38.3
50	CEM IV/B (P) 32.5 R	05.03.2012	42.2	43.6
50	CEM I 42.5 R	05.03.2012	45.7	44.1
50	CEM II/A-L 42.5 R	05.03.2012	47.8	46.8
50	CEM II/A-M (P-L) 42.5 R	05.03.2012	48.5	51
51	CEM II/A-P 42.5 R	05.03.2012	57.9	58.2
51	CEM I 42.5 R	05.03.2012	61.3	58.8
51	CEM I 52.5 N	05.03.2012	60	62.4
51	CEM I 52.5 R	05.03.2012	63.3	62.6
9	CEM V/A (P-S) 32.5 N	06.03.2012	34.3	37.9
64	CEM IV/B (P) 32.5 N	06.03.2012	37.5	38.5
9	CEM II/B-M (S-L) 42.5 R	06.03.2012	57	55.8

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9	CEM II/A-M (S-L) 42.5 R	06.03.2012	56.6	56.3
9	CEM I 42.5 R	06.03.2012	59.9	57.3
9	CEM II/A-M (S-L) 52.5 N	06.03.2012	61.3	62.5
2	CEM II/B-P 32.5 R	07.03.2012	33.7	32.7
4	CEM IV/B (P) 32.5 N	07.03.2012	37	37.3
57	CEM II/B-L 32.5 R	07.03.2012	42.5	39.9
57	CEM II/B-L 42.5 N	07.03.2012	48	47.2
57	CEM II/A-L 42.5 R	07.03.2012	50.2	47.3
2	CEM I 42.5 R	07.03.2012	49.3	49.8
2	CEM II/A-P 42.5 R	07.03.2012	50	50
57	CEM I 42.5 R	07.03.2012	59.8	59.6
57	CEM I 52.5 R	07.03.2012	62	60.9
60	CEM II/B-M (P-LL) 32.5 R	08.03.2012	36.7	39.3
30	CEM IV/B (P) 32.5 R	08.03.2012	38.6	41.1
58	CEM IV/B (P) 32.5 N	08.03.2012	42	42
58	CEM II/A-LL 42.5 N BEYAZ	08.03.2012	46.2	46.4
60	CEM II/A-M (P-LL) 42.5 N	08.03.2012	49.2	52
58	CEM I 42.5 R	08.03.2012	54.2	53.3
58	CEM II/A-LL 42.5 R	08.03.2012	52.5	53.4
60	CEM I 42.5 R	08.03.2012	51.5	54.2
30	CEM II/A-M (P-L) 42.5 R	08.03.2012	58.3	60.3
30	CEM I 42.5 R	08.03.2012	58	62
23	CEM II/B-M (S-L) 32.5 N	09.03.2012	36.6	34.8
33	CEM IV/B (P) 32.5 N	09.03.2012	43.6	44.9
33	CEM II/A-M (P-LL) 42.5 N	09.03.2012	49	50.4
33	CEM I 42.5 N	09.03.2012	52.3	50.7
23	CEM I 42.5 R	09.03.2012	55	56.1
23	CEM II/A-S 42.5 R	09.03.2012	56.5	59.3
47	CEM IV/B (P) 32.5 N	10.03.2012	35	34.4
47	CEM II/B-M (P-S) 42.5 R	10.03.2012	44.1	45.3
47	CEM II/A-M (P-LL) 42.5 R	10.03.2012	44.9	48.2
47	CEM I 42.5 N	10.03.2012	47.4	50.9
47	CEM I 42.5 R	10.03.2012	47.6	51.1
66	CEM IV/B (P-V) 32.5 R	13.03.2012	35.9	38.1
42	CEM III/A 32.5 N	14.03.2012	37.4	39.5
18	CEM IV/B (P) 32.5 R	15.03.2012	34.8	35.6
12	CEM IV/B (P) 32.5 R	15.03.2012	39.1	37.3
42	CEM III/A 42.5 N	15.03.2012	47	47.5
18	CEM I 42.5 R	15.03.2012	56.2	56.9
12	CEM I 42.5 R	15.03.2012	57.6	57.6
7	CEM I 42.5 R	15.03.2012	56.4	58
7	CEM IV/B (P) 32.5 R	15.03.2012	52.4	59.7
20	CEM III/B 32.5 N	16.03.2012	33.7	35
35	CEM III/A 32.5 N	16.03.2012	40.8	39.6
13	CEM II/B-M (P-L) 32.5 R	16.03.2012	37.8	40.2
36	CEM II/B-M (P-LL) 32.5 R	16.03.2012	38.2	43.5
19	CEM IV/B (P) 32.5 R	16.03.2012	42.4	44.4
20	CEM III/A 42.5 N	16.03.2012	44.9	47.4
19	CEM I 42.5 N	16.03.2012	50.3	49.7
19	CEM II/A-M (P-L) 42.5 R	16.03.2012	48.8	51.1
26	CEM I 42.5 R	16.03.2012	51.5	52.8
35	CEM II/B-S 42.5 R	16.03.2012	54.3	54.2
19	CEM I 42.5 R	16.03.2012	54.5	55.1
13	CEM I 42.5 R	16.03.2012	51.6	55.2
35	CEM II/A-S 42.5 R	16.03.2012	58.7	57.9
27	CEM IV/B (P) 32.5 N	20.03.2012	42.6	43.9
53	CEM IV/B (P) 32.5 R	20.03.2012	39.4	44.2
22	CEM II/B-M (P-V) 42.5 N	20.03.2012	49.3	47.9
27	CEM II/A-M (P-L) 42.5 N	20.03.2012	52.9	51.9
27	CEM I 42.5 R	20.03.2012	56.1	54.4
53	CEM I 42.5 R	20.03.2012	55.5	56.8
53	CEM II/A-M (P-L) 42.5 R	20.03.2012	57.2	58.1
21	CEM IV/B (P-V) 32.5 N	21.03.2012	38.2	36.7
40	CEM II/B-M (P-L) 32.5 R	21.03.2012	36.4	37
22	CEM IV/B (P-V) 32.5 R	21.03.2012	40.8	39.6
2	CEM II/B-M (P-LL) 32.5 R	21.03.2012	40.3	42
21	CEM II/A-M (P-L) 42.5 R	21.03.2012	51.7	49.4
40	CEM I 42.5 R	21.03.2012	59	57.7
40	CEM II/A-M (P-L) 42.5 R	21.03.2012	58.2	58
21	CEM I 42.5 R	21.03.2012	61.8	59.1
11	CEM IV/B (P) 32.5 N	22.03.2012	41.4	41.7
11	CEM IV/A (P) 42.5 N	22.03.2012	49.8	45.5
11	CEM II/A-LL 42.5 R	22.03.2012	51.2	49.9

Code of The Manufacturer	Type of Cement	The Date of Sampling	Standard Compressive Strength Result of Manufacturer (MPa)	Standard Compressive Strength Result of Notified Body (MPa)
11	CEM I 42.5 R	22.03.2012	52.9	52.5
61	CEM I 42.5 R	22.03.2012	57.1	56.6
24	CEM II/B-LL 32.5 N	23.03.2012	41	38.4
24	CEM I 42.5 R	23.03.2012	59.5	57.4
24	CEM II/A-LL 42.5 R	23.03.2012	59.1	58.6
24	CEM I 52.5 N	23.03.2012	62.1	61.7
25	CEM II/B-M (L-W) 42.5 R	26.03.2012	53.2	54.3
5	CEM I 52.5 N	30.03.2012	60.5	63.7
44	CEM II/B-M (P-L) 32.5 N	04.04.2012	33	34.9
44	CEM II/B-M (P-L) 32.5 R	04.04.2012	33.2	35
44	CEM II/A-M (P-L) 42.5 R	04.04.2012	48.7	50.1
44	CEM I 42.5 R	04.04.2012	46.5	50.9
15	CEM IV/B (P) 32.5 N	05.04.2012	35.4	34.8
3	CEM IV/B (P) 32.5 N	05.04.2012	38.1	38.5
38	CEM IV/B (P) 32.5 N	05.04.2012	40.4	40.2
38	CEM I 42.5 R	05.04.2012	52.7	50.9
38	CEM II/A-M (P-LL) 42.5 R	05.04.2012	54	51.6
38	CEM I 42.5 N	05.04.2012	53.8	51.7
38	CEM II/A-M (P-LL) 42.5 N	05.04.2012	54.8	52.2
3	CEM II/A-M (P-L) 42.5 N	05.04.2012	51.2	53.1
49	CEM IV/B (P-W) 32.5 R	09.04.2012	35.1	35.5
49	CEM I 42.5 R	09.04.2012	52.8	47.5
49	CEM II/A-M (P-L) 42.5 R	09.04.2012	50.7	51.6
31	CEM II/B-LL 32.5 R	10.04.2012	38.2	39
28	CEM IV/B (P) 32.5 R	10.04.2012	39.6	40.3
28	CEM I 42.5 R	10.04.2012	49	52.8
31	CEM I 42.5 R	10.04.2012	50	52.9
28	CEM II/A-M (P-L) 42.5 R	10.04.2012	51.5	52.9
59	CEM IV/B (P) 32.5 R	11.04.2012	34.9	35
34	CEM IV/B (P) 32.5 R	11.04.2012	39.6	38.4
59	CEM III/A 42.5 N	11.04.2012	43	41.6
52	CEM II/B-M (P-L) 32.5 R	11.04.2012	40.3	42.2
59	CEM I 42.5 R	11.04.2012	51.2	50.9
34	CEM III/A 42.5 N	11.04.2012	52.6	53
34	CEM II/A-M (P-L) 42.5 N	11.04.2012	54.9	54.3
34	CEM I 42.5 N	11.04.2012	53.6	55.3
52	CEM I 42.5 R	11.04.2012	54.8	57.3
36	CEM IV/B (P) 32.5 R	12.04.2012	32.6	34.7
63	CEM IV/B (P) 32.5 R	12.04.2012	36	36.7
56	CEM II/B-M (P-LL) 32.5 R	12.04.2012	38.4	41.6
36	CEM I 42.5 N	12.04.2012	42.6	43.5
63	CEM I 42.5 R	12.04.2012	46.4	46.9
36	CEM II/A-M (P-LL) 42.5 R	12.04.2012	42.9	48.6
56	CEM II/A-LL 42.5 R	12.04.2012	45.8	48.9
59	CEM II/A-M (P-LL) 42.5 R	12.04.2012	53.2	53
56	CEM II/A-M (P-LL) 42.5 R	12.04.2012	53.5	54.2
38	CEM I 52.5 N	12.04.2012	56.5	55.3
56	CEM I 42.5 R	12.04.2012	54.6	59.1
56	CEM I 52.5 N	12.04.2012	56.4	59.5
61	CEM II/B-LL 32.5 R	13.04.2012	39.8	37.4
39	CEM II/B-M (P-LL) 32.5 R	13.04.2012	37.4	41.4
46	CEM IV/B (P) 32.5 N	13.04.2012	39	42
46	CEM V/A (S-P) 32.5 N	13.04.2012	40.3	42.2
46	CEM II/B-P 32.5 R	13.04.2012	42.1	42.7
61	CEM I 42.5 R	13.04.2012	51	47.6
17	CEM II/A-M (P-LL) 42.5 N	13.04.2012	47.5	47.7
61	CEM II/A-LL 42.5 R	13.04.2012	50	48.7
46	CEM I 42.5 R	13.04.2012	50.5	49.9
39	CEM II/A-M (P-LL) 42.5 R	13.04.2012	50.6	53.3
39	CEM I 42.5 R	13.04.2012	56.9	60
45	CEM II/B-M (P-LL) 32.5 N	14.04.2012	40.2	40.7
45	CEM II/A-M (P-LL) 42.5 N	14.04.2012	50.9	53.3
45	CEM I 42.5 N	14.04.2012	52.4	55.3
62	CEM II/B-M (P-L) 32.5 R	16.04.2012	37	39.8
62	CEM II/A-M (P-L) 42.5 R	16.04.2012	49.5	52.7
62	CEM I 42.5 R	16.04.2012	51.5	54.4
5	CEM II/B-M (P-LL) 32.5 R	17.04.2012	35.3	35.5
55	CEM II/B-M (W-L) 32.5 R	17.04.2012	39.9	42.2
10	CEM II/B-LL 32.5 R	17.04.2012	43.2	44.2
55	CEM II/A-LL 42.5 R	17.04.2012	52.4	49.1
10	CEM II/B-LL 42.5 N	17.04.2012	51.4	51.7
29	CEM II/A-V 42.5 R	17.04.2012	50.7	53.9
10	CEM II/A-LL 42.5 R	17.04.2012	51.2	54.5

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5	CEM I 42.5 R	17.04.2012	53	56.1
10	CEM I 42.5 R	17.04.2012	57.7	59.3
8	CEM II/B-M (P-LL) 32.5 R	18.04.2012	36.1	33.6
32	CEM IV/B (P) 32.5 N	18.04.2012	37.2	36.3
37	CEM II/B-M (P-LL) 32.5 R	18.04.2012	37.9	40.6
8	CEM II/B-M (P-LL) 42.5 N	18.04.2012	45.8	42.8
17	CEM II/B-M (P-LL) 32.5 N	18.04.2012	47.2	46.9
8	CEM IV/A (P) 42.5 N	18.04.2012	49.6	47.7
16	CEM II/A-M (P-L) 42.5 N	18.04.2012	46.5	49
8	CEM II/A-M (P-LL) 42.5 R	18.04.2012	51.2	51.1
8	CEM I 42.5 R	18.04.2012	53.6	52
16	CEM I 42.5 R	18.04.2012	52.6	52.3
32	CEM I 42.5 R	18.04.2012	52.4	53.3
32	CEM II/A-P 42.5 R	18.04.2012	55	54.4
16	CEM II/A-LL 42.5 N	18.04.2012	54.5	55.9
16	CEM IV/B (P) 32.5 N	19.04.2012	35.8	37.2
43	CEM II/B-M (P-L) 32.5 N	19.04.2012	36.3	37.6
14	CEM IV/B (P-W) 32.5 R	19.04.2012	38.2	39.7
25	CEM IV/B (P-W) 32.5 R	19.04.2012	38.3	40.3
54	CEM IV/B (P) 32.5 R	19.04.2012	43.2	43
14	CEM II/A-M (P-L) 42.5 R	19.04.2012	47.9	45.7
47	CEM II/B-M (P-S) 42.5 R	19.04.2012	45.7	49
47	CEM I 42.5 R	19.04.2012	48.7	50.3
43	CEM II/A-M (P-L) 42.5 R	19.04.2012	49.2	50.8
14	CEM I 42.5 R	19.04.2012	50.2	51
25	CEM I 42.5 R	19.04.2012	51.8	51.7
14	CEM II/B-M (L-W) 42.5 R	19.04.2012	53.3	54.1
43	CEM I 42.5 R	19.04.2012	56.5	55.8
55	CEM I 42.5 R	19.04.2012	58	58
20	CEM III/B 42.5 N	25.04.2012	49	48.4
12	CEM I 42.5 N	25.04.2012	53.2	49.9
4	CEM I 42.5 R	27.04.2012	50.1	49.7
40	CEM II/B-M (P-L) 32.5 R	08.05.2012	34.3	36.4
4	CEM IV/B (P) 32.5 N	08.05.2012	35	37.4
13	CEM II/B-M (P-L) 32.5 R	08.05.2012	38.3	38.9
59	CEM IV/B (P) 32.5 R	08.05.2012	42.5	39.4
51	CEM IV/B (P) 32.5 R	08.05.2012	40.8	43.6
26	CEM IV/B (P) 32.5 N	08.05.2012	44.9	46.6
59	CEM III/A 42.5 N	08.05.2012	49.3	47.1
4	CEM I 42.5 R	08.05.2012	50.8	49.9
13	CEM I 42.5 R	08.05.2012	52.3	52.7
40	CEM II/A-M (P-L) 42.5 R	08.05.2012	57.4	55.7
40	CEM I 42.5 R	08.05.2012	57.6	57
51	CEM I 42.5 R	08.05.2012	58.7	59
51	CEM II/A-P 42.5 R	08.05.2012	57.9	60.3
51	CEM I 52.5 N	08.05.2012	59.9	60.5
26	CEM I 42.5 R	08.05.2012	58.3	60.8
51	CEM I 52.5 R	08.05.2012	63.5	64.7
18	CEM IV/B (P) 32.5 R	09.05.2012	33.72	33.2
30	CEM IV/B (P) 32.5 R	09.05.2012	35.6	36.7
9	CEM V/A (P-S) 32.5 N	09.05.2012	35.9	39.3
7	CEM IV/B (P) 32.5 R	09.05.2012	42.5	44.4
18	CEM I 42.5 R	09.05.2012	52.6	52
8	CEM IV/A (P) 42.5 N	09.05.2012	51.2	53.1
9	CEM II/B-M (S-L) 42.5 R	09.05.2012	57.3	55.1
7	CEM I 42.5 R	09.05.2012	51.4	55.7
9	CEM II/A-M (S-L) 42.5 R	09.05.2012	55	57.1
9	CEM I 42.5 R	09.05.2012	58.4	59.2
30	CEM II/A-M (P-L) 42.5 R	09.05.2012	60.1	60.3
30	CEM I 42.5 R	09.05.2012	60.5	60.9
9	CEM II/A-M (S-L) 52.5 N	09.05.2012	60.2	61
66	CEM IV/B (P-V) 32.5 R	10.05.2012	38.5	37.7
64	CEM IV/B (P) 32.5 N	10.05.2012	38.7	39
57	CEM II/B-L 32.5 R	10.05.2012	41.9	41.6
57	CEM II/B-L 42.5 N	10.05.2012	43.5	43.3
58	CEM II/A-LL 42.5 N	10.05.2012	44.7	45.2
57	CEM II/A-L 42.5 R	10.05.2012	46.6	45.6
58	CEM IV/B (P) 32.5 N	10.05.2012	46.5	51.2
57	CEM I 42.5 R	10.05.2012	57	55.9
58	CEM II/A-LL 42.5 R	10.05.2012	52.9	56.4
58	CEM I 42.5 R	10.05.2012	55.9	57.3
57	CEM I 52.5 R	10.05.2012	60.2	58.3
23	CEM II/B-M (S-L) 32.5 N	11.05.2012	43.9	45.1
23	CEM I 42.5 R	11.05.2012	56.9	58
20	CEM III/B 32.5 N	15.05.2012	33.5	35.7
35	CEM IV/B (V) 32.5 R	15.05.2012	41.3	40.3
22	CEM IV/B (P-V) 32.5 R	15.05.2012	38	40.6
19	CEM IV/B (P) 32.5 R	15.05.2012	40.6	41.9
20	CEM III/B 42.5 N	15.05.2012	43.4	43.4
20	CEM III/A 42.5 N	15.05.2012	47.4	48.7
22	CEM II/B-M (P-V) 42.5 N	15.05.2012	49	48.9
19	CEM II/A-M (P-L) 42.5 R	15.05.2012	46.7	49.8
19	CEM I 42.5 N	15.05.2012	53.1	54.2
35	CEM II/A-S 42.5 R	15.05.2012	57.8	54.4
19	CEM I 42.5 R	15.05.2012	55.4	57.4
42	CEM III/A 32.5 N	16.05.2012	44.3	45.3
42	CEM III/A 42.5 N	16.05.2012	49.8	50.1
12	CEM IV/B (P) 32.5 R	17.05.2012	36.8	36.8
21	CEM IV/B (P-V) 32.5 N	17.05.2012	40.1	40.7
21	CEM II/A-M (P-L) 42.5 R	17.05.2012	48.6	49.6
12	CEM I 42.5 R	17.05.2012	55.6	54.4
12	CEM I 42.5 N	17.05.2012	56.1	54.5
21	CEM I 42.5 R	17.05.2012	59	60.5
5	CEM I 52.5 N	18.05.2012	64.2	63.6
27	CEM IV/B (P) 32.5 N	21.05.2012	38.8	41.7
27	CEM II/A-M (P-L) 42.5 N	21.05.2012	48.7	51.1
27	CEM I 42.5 R	21.05.2012	54.2	58.8
53	CEM IV/B (P) 32.5 R	22.05.2012	39	42.2
49	CEM I 42.5 R	22.05.2012	50.6	48.8
53	CEM II/A-M (P-L) 42.5 R	22.05.2012	52.4	54.3
53	CEM I 42.5 R	22.05.2012	57.1	56.8
36	CEM II/B-M (P-LL) 32.5 R	23.05.2012	36.5	36.4
11	CEM IV/B (P) 32.5 N	24.05.2012	36.8	38.3
11	CEM IV/A (P) 42.5 N	24.05.2012	49.4	48.8
11	CEM II/A-LL 42.5 R	24.05.2012	51.3	49.5
11	CEM I 42.5 R	24.05.2012	52.2	50.8
61	CEM I 42.5 R	24.05.2012	51.5	55.1
24	CEM II/B-LL 32.5 N	25.05.2012	39.6	39.5
34	CEM II/B-M (P-L) 42.5 N	25.05.2012	58	53.7
24	CEM II/A-LL 42.5 R	25.05.2012	55.4	55.6
24	CEM I 42.5 R	25.05.2012	54.6	56.5
34	CEM III/A 42.5 N	25.05.2012	61.5	56.7
1	CEM V/A (S-P-Q) 32.5 R	29.05.2012	38.2	37.7
29	CEM III/A 32.5 R	29.05.2012	39.2	39.7
1	CEM II/B-M (P-Q-S) 42.5 N	29.05.2012	46	46.6
1	CEM II/B-LL 42.5 R	29.05.2012	45.2	47.5
1	CEM I 42.5 R	29.05.2012	47.4	48.9
1	CEM III/A 42.5 N	29.05.2012	48.1	49.3
29	CEM I 42.5 R	29.05.2012	52.8	52.5
29	CEM II/A-V 42.5 R	29.05.2012	51.6	53.7
29	CEM II/B-L 42.5 R	29.05.2012	52.2	54.6
1	CEM I 52.5 R	29.05.2012	56	58.5
37	CEM II/B-M (P-LL) 32.5 R	30.05.2012	36.7	35.7
41	CEM V/A (P-S) 32.5 R	30.05.2012	36.6	36.9
41	CEM II/B-M (P-S) 42.5 R	30.05.2012	45.8	46.2
41	CEM III/A 42.5 N	30.05.2012	49.2	50.3
37	CEM II/A-M (P-LL) 42.5 N	30.05.2012	53	53.1
37	CEM I 52.5 N	30.05.2012	58.3	57.7
37	CEM I 42.5 R	30.05.2012	58.7	58.5
48	CEM II/B-P 32.5 R	31.05.2012	36.9	35.5
2	CEM II/B-P 32.5 R	31.05.2012	40.7	40
60	CEM II/B-M (P-LL) 32.5 R	31.05.2012	41.2	40.6
48	CEM II/A-P 42.5 R	31.05.2012	49.6	49.1
60	CEM II/A-M (P-LL) 42.5 N	31.05.2012	51	49.4
48	CEM I 42.5 R	31.05.2012	51.3	50
48	CEM I 42.5 N	31.05.2012	51.6	51.1
60	CEM I 42.5 R	31.05.2012	52.5	51.6
2	CEM I 42.5 R	31.05.2012	53.9	51.6
2	CEM II/A-P 42.5 R	31.05.2012	51.9	54.6
47	CEM IV/B (P) 32.5 N	01.06.2012	34.6	34.3
33	CEM IV/B (P) 32.5 N	01.06.2012	35.3	36.6
47	CEM I 42.5 R	01.06.2012	46.5	44.9
47	CEM I 42.5 N	01.06.2012	45.8	45
47	CEM II/B-M (P-S) 42.5 R	01.06.2012	44.4	47.1
33	CEM II/A-M (P-LL) 42.5 N	01.06.2012	47.9	47.5
57	CEM II/A-L 42.5 R	01.06.2012	49.8	48.2

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33	CEM I 42.5 N	01.06.2012	57.7	56.5
57	CEM I 52.5 R	01.06.2012	58.8	57.9
54	CEM IV/B (P) 32.5 R	02.06.2012	37	37.3
5	CEM II/B-M (P-LL) 32.5 R	04.06.2012	35.9	35.6
50	CEM IV/B (P) 32.5 R	04.06.2012	39.6	39.5
50	CEM II/A-L 42.5 R	04.06.2012	47.8	46.8
50	CEM II/A-M (P-L) 42.5 R	04.06.2012	47.5	47.4
50	CEM I 42.5 R	04.06.2012	51.8	49
5	CEM I 42.5 R	04.06.2012	51	49.8
7	CEM II/A-LL 42.5 R	04.06.2012	54.9	57.9
5	CEM I 52.5 N	04.06.2012	60.2	61
32	CEM IV/B (P) 32.5 N	05.06.2012	35.5	34.3
16	CEM IV/B (P) 32.5 N	05.06.2012	38.6	39.4
26	CEM IV/B (P) 32.5 N	05.06.2012	38.8	42.1
32	CEM II/A-P 42.5 R	05.06.2012	49.5	49.8
16	CEM II/A-M (P-L) 42.5 N	05.06.2012	49.3	49.9
16	CEM I 42.5 R	05.06.2012	54.8	50.3
32	CEM I 42.5 R	05.06.2012	52	53.9
16	CEM II/A-LL 42.5 N	05.06.2012	56.6	57
35	CEM IV/B (V) 32.5 R	07.06.2012	38.5	33.8
44	CEM II/B-M (P-L) 32.5 N	11.06.2012	36.6	37.9
38	CEM IV/B (P) 32.5 N	12.06.2012	36.8	36.1
44	CEM II/B-M (P-L) 32.5 R	12.06.2012	36.2	37.8
44	CEM I 42.5 R	12.06.2012	47.5	48.8
44	CEM II/A-M (P-L) 42.5 R	12.06.2012	46.7	49.7
38	CEM II/A-M (P-LL) 42.5 R	12.06.2012	48.5	50.9
38	CEM I 42.5 N	12.06.2012	51.2	52.9
38	CEM I 42.5 R	12.06.2012	51.2	53.8
15	CEM IV/B (P) 32.5 N	13.06.2012	35.9	35.6
3	CEM IV/B (P) 32.5 N	14.06.2012	37.5	37.9
3	CEM II/A-M (P-L) 42.5 N	14.06.2012	52.2	50.6
25	CEM IV/B (P-W) 32.5 R	15.06.2012	33.7	33.2
14	CEM IV/B (P-W) 32.5 R	15.06.2012	35.5	35.2
25	CEM I 42.5 R	15.06.2012	47.6	47.7
14	CEM II/A-M (P-L) 42.5 N	15.06.2012	49.8	48.3
14	CEM II/A-M (P-L) 42.5 R	15.06.2012	49.5	48.9
25	CEM II/B-M (L-W) 42.5 R	15.06.2012	51.5	52.5
14	CEM I 42.5 R	15.06.2012	52.1	52.8
14	CEM II/B-M (L-W) 42.5 R	15.06.2012	52.1	55
49	CEM IV/B (P-W) 32.5 R	18.06.2012	39.6	37.9
62	CEM II/B-M (P-L) 32.5 R	18.06.2012	37.6	39
49	CEM I 42.5 R	18.06.2012	43.7	40.9
49	CEM II/A-M (P-L) 42.5 R	18.06.2012	49.2	47.6
62	CEM I 42.5 R	18.06.2012	48.7	51.9
62	CEM II/A-M (P-L) 42.5 R	18.06.2012	50.8	54.4
55	CEM II/B-M (W-L) 32.5 R	19.06.2012	37.2	35
10	CEM II/B-LL 32.5 R	19.06.2012	37.7	37.2
31	CEM II/B-LL 32.5 R	19.06.2012	39.6	38.5
46	CEM V/A (S-P) 32.5 N	19.06.2012	40.8	39.8
46	CEM IV/B (P) 32.5 N	19.06.2012	40.1	41.2
46	CEM II/B-P 32.5 R	19.06.2012	41	42.4
28	CEM IV/B (P) 32.5 R	19.06.2012	40.4	42.5
55	CEM II/A-LL 42.5 R	19.06.2012	48.2	47.5
46	CEM I 42.5 R	19.06.2012	53	48.5
28	CEM I 42.5 R	19.06.2012	48.3	49.6
31	CEM I 42.5 R	19.06.2012	50.2	50.7
10	CEM II/A-LL 42.5 R	19.06.2012	53.3	50.9
28	CEM II/A-M (P-L) 42.5 R	19.06.2012	50.2	51.3
10	CEM II/B-LL 42.5 N	19.06.2012	52.8	51.3
55	CEM I 42.5 R	19.06.2012	55.9	53.1
10	CEM I 42.5 R	19.06.2012	58.5	56.5
34	CEM IV/B (P) 32.5 R	20.06.2012	36.8	34.2
63	CEM IV/B (P) 32.5 R	20.06.2012	35.5	35.8
39	CEM II/B-M (P-LL) 32.5 R	20.06.2012	37.5	36.2
52	CEM II/B-M (P-L) 32.5 R	20.06.2012	38.9	40.4
8	CEM II/B-M (P-LL) 32.5 R	20.06.2012	43.6	41.8
8	CEM IV/A (P) 42.5 N	20.06.2012	50.8	48.7
34	CEM I 42.5 N	20.06.2012	52.8	49
8	CEM II/B-M (P-LL) 42.5 N	20.06.2012	49.8	49.2
63	CEM I 42.5 R	20.06.2012	48	49.9
34	CEM II/A-M (P-L) 42.5 N	20.06.2012	53.6	49.9
8	CEM II/A-M (P-LL) 42.5 R	20.06.2012	50.8	50.5
52	CEM I 42.5 R	20.06.2012	50.7	51.7

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39	CEM II/A-M (P-LL) 42.5 R	20.06.2012	53.4	52.6
34	CEM II/B-M (P-L) 42.5 N	20.06.2012	55.6	53
34	CEM III/A 42.5 N	20.06.2012	58.2	54.6
39	CEM I 42.5 R	20.06.2012	56.8	58
8	CEM I 42.5 R	20.06.2012	61.3	61.7
66	CEM IV/B (P-V) 32.5 R	21.06.2012	35.4	34.9
43	CEM II/B-M (P-L) 32.5 N	21.06.2012	38.6	37.2
61	CEM II/B-LL 32.5 R	21.06.2012	39	39.5
59	CEM IV/B (P) 32.5 R	21.06.2012	42.1	40.3
61	CEM II/A-LL 42.5 R	21.06.2012	45.2	42.5
17	CEM II/A-M (P-LL) 42.5 N	21.06.2012	43.7	43.2
43	CEM II/A-M (P-L) 42.5 R	21.06.2012	46.7	44.4
59	CEM III/A 42.5 N	21.06.2012	48.4	47.6
56	CEM II/B-M (P-LL) 32.5 R	21.06.2012	46	48.7
56	CEM II/A-LL 42.5 R	21.06.2012	50.6	51.2
59	CEM II/A-M (P-LL) 42.5 R	21.06.2012	53.4	51.4
43	CEM I 42.5 R	21.06.2012	56.2	51.8
59	CEM I 42.5 R	21.06.2012	55.9	53.6
56	CEM I 52.5 N	21.06.2012	57.4	56.9
56	CEM I 42.5 R	21.06.2012	56.5	57.4
56	CEM II/A-M (P-LL) 42.5 R	21.06.2012	56	57.6
45	CEM II/B-M (P-LL) 32.5 N	22.06.2012	37.9	39.5
45	CEM II/A-M (P-LL) 42.5 N	22.06.2012	48.3	50.2
45	CEM I 42.5 N	22.06.2012	50.5	50.9
36	CEM II/B-M (P-LL) 32.5 R	23.06.2012	34.7	32.5
36	CEM II/A-M (P-LL) 42.5 R	23.06.2012	46.8	44.4
36	CEM I 42.5 N	23.06.2012	45.8	45.3
2	CEM II/B-M (P-LL) 32.5 R	27.06.2012	37.1	36.9
29	CEM II/A-V 42.5 R	27.06.2012	50.9	52.3
37	CEM II/B-M (P-LL) 32.5 R	28.06.2012	34.6	35.6
30	CEM IV/B (P) 32.5 R	04.07.2012	32.7	32
57	CEM II/B-L 32.5 R	04.07.2012	36.5	34.7
58	CEM IV/B (P) 32.5 N	04.07.2012	38.3	38.1
58	CEM II/A-LL 42.5 N	04.07.2012	45.9	45.5
58	CEM II/A-LL 42.5 R	04.07.2012	55.1	52.1
30	CEM II/A-M (P-L) 42.5 R	04.07.2012	55.2	57
57	CEM I 42.5 R	04.07.2012	56.3	57
30	CEM I 42.5 R	04.07.2012	57.1	57.1
58	CEM I 42.5 R	04.07.2012	59.2	57.3
57	CEM I 52.5 R	04.07.2012	59	58.2
4	CEM IV/B (P) 32.5 N	05.07.2012	36.6	36
4	CEM I 42.5 R	05.07.2012	50.2	49.3
51	CEM IV/B (P) 32.5 R	09.07.2012	37.8	35.7
51	CEM I 42.5 R	09.07.2012	55.6	55.6
51	CEM I 52.5 N	09.07.2012	56	55.9
51	CEM II/A-P 42.5 R	09.07.2012	55.4	56.3
35	CEM IV/B (V) 32.5 R	10.07.2012	37.8	33.6
20	CEM III/B 32.5 N	10.07.2012	36.2	35.5
64	CEM IV/B (P) 32.5 N	10.07.2012	37.9	36
19	CEM IV/B (P) 32.5 R	10.07.2012	36.2	39.8
9	CEM V/A (P-S) 32.5 N	10.07.2012	36.3	40.3
61	CEM II/B-LL 42.5 N	10.07.2012	46.7	43.8
19	CEM I 42.5 N	10.07.2012	46.7	46
20	CEM III/A 42.5 N	10.07.2012	47.1	47
19	CEM II/A-M (P-L) 42.5 R	10.07.2012	48.6	48.4
20	CEM III/B 42.5 N	10.07.2012	48.8	49.5
35	CEM II/B-S 42.5 R	10.07.2012	53.2	49.9
19	CEM I 42.5 R	10.07.2012	53.6	52
9	CEM II/B-M (S-L) 42.5 R	10.07.2012	53.2	53.8
9	CEM I 42.5 R	10.07.2012	55.5	53.8
9	CEM II/A-M (S-L) 42.5 R	10.07.2012	54.1	54.5
35	CEM II/A-S 42.5 R	10.07.2012	57.5	55
9	CEM II/A-M (S-L) 52.5 N	10.07.2012	60.1	59.8
18	CEM IV/B (P) 32.5 R	11.07.2012	33.85	33.4
42	CEM III/A 32.5 N	11.07.2012	40.9	41.2
7	CEM IV/B (P) 32.5 R	11.07.2012	44	43.3
42	CEM III/A 42.5 N	11.07.2012	44.4	44.8
7	CEM I 42.5 R	11.07.2012	55.4	53.5
18	CEM I 42.5 R	11.07.2012	52.94	55.9
26	CEM IV/B (P) 32.5 N	12.07.2012	33.5	33.3
23	CEM II/B-M (S-L) 32.5 N	12.07.2012	37.8	36.6
40	CEM II/B-M (P-L) 32.5 R	12.07.2012	41.4	38.8
13	CEM II/B-M (P-L) 32.5 R	12.07.2012	41.5	40.9

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40	CEM I 42.5 R	12.07.2012	52.8	51.1
40	CEM II/A-M (P-L) 42.5 R	12.07.2012	53.9	52.9
13	CEM I 42.5 R	12.07.2012	53.1	53.7
23	CEM I 42.5 R	12.07.2012	58.3	55.7
26	CEM I 42.5 R	12.07.2012	57.5	57.4
23	CEM II/A-S 42.5 R	12.07.2012	60	58.3
57	CEM II/B-L 42.5 N	13.07.2012	46.4	46.2
50	CEM IV/B (P) 32.5 R	16.07.2012	32.6	31.3
50	CEM II/A-M (P-L) 42.5 R	16.07.2012	46.2	44.5
50	CEM II/A-L 42.5 R	16.07.2012	45.6	45.2
50	CEM I 42.5 R	16.07.2012	48	48.1
1	CEM V/A (S-P-Q) 32.5 R	17.07.2012	34.8	33.4
46	CEM IV/B (P) 32.5 N	17.07.2012	37.4	37
29	CEM III/A 32.5 R	17.07.2012	45.3	42.9
1	CEM II/B-M (P-Q-S) 42.5 N	17.07.2012	47.5	46
1	CEM II/B-LL 42.5 R	17.07.2012	49.1	49.4
1	CEM III/A 42.5 N	17.07.2012	48.7	49.5
29	CEM II/B-L 42.5 R	17.07.2012	52.2	50.8
1	CEM I 42.5 R	17.07.2012	51.6	51.5
29	CEM I 42.5 R	17.07.2012	53.2	52.4
1	CEM I 52.5 R	17.07.2012	56.6	56
48	CEM II/B-P 32.5 R	18.07.2012	34.8	32.7
41	CEM V/A (P-S) 32.5 R	18.07.2012	35.1	35.4
41	CEM III/A 42.5 N	18.07.2012	44.9	45.7
41	CEM II/B-M (P-S) 42.5 R	18.07.2012	47.4	47.3
48	CEM I 42.5 R	18.07.2012	49.6	48
48	CEM II/A-P 42.5 R	18.07.2012	51	49.5
56	CEM II/A-M (P-LL) 42.5 R	18.07.2012	54.6	52.9
56	CEM I 52.5 N	18.07.2012	56	54.6
2	CEM II/B-P 32.5 R	19.07.2012	35.9	34.1
66	CEM IV/B (P-V) 32.5 R	19.07.2012	35.3	35
60	CEM II/B-M (P-LL) 32.5 R	19.07.2012	38.6	37
2	CEM II/B-M (P-LL) 32.5 R	19.07.2012	37.1	37.8
60	CEM II/A-M (P-LL) 42.5 N	19.07.2012	47.2	44.6
2	CEM II/A-P 42.5 R	19.07.2012	48.6	48.3
37	CEM II/A-M (P-LL) 42.5 N	19.07.2012	52.7	51.8
60	CEM I 42.5 R	19.07.2012	53.3	52.1
2	CEM I 42.5 R	19.07.2012	51.9	52.8
37	CEM I 52.5 N	19.07.2012	58.1	55.3
37	CEM I 42.5 R	19.07.2012	58.1	56.4
36	CEM II/B-M (P-LL) 32.5 R	20.07.2012	37.3	34.9
54	CEM IV/B (P) 32.5 R	20.07.2012	40.5	42.8
33	CEM IV/B (P) 32.5 N	20.07.2012	44.5	48.7
33	CEM II/A-M (P-LL) 42.5 N	20.07.2012	48.9	49.2
34	CEM II/B-M (P-L) 42.5 N	20.07.2012	52.3	49.2
33	CEM I 42.5 N	20.07.2012	59.5	56.2
47	CEM IV/B (P) 32.5 N	21.07.2012	37.1	36.9
47	CEM I 42.5 N	21.07.2012	44.1	45.9
47	CEM II/B-M (P-S) 42.5 R	21.07.2012	44.1	47
53	CEM IV/B (P) 32.5 R	24.07.2012	42.3	38.8
53	CEM II/A-M (P-L) 42.5 R	24.07.2012	50.3	48.4
53	CEM I 42.5 R	24.07.2012	55.8	52.8
22	CEM IV/B (P-V) 32.5 R	25.07.2012	39.8	38.7
27	CEM IV/B (P) 32.5 N	25.07.2012	44.9	45.2
22	CEM II/B-M (P-V) 42.5 N	25.07.2012	46.9	47.7
27	CEM II/A-M (P-L) 42.5 N	25.07.2012	52	50.3
27	CEM I 42.5 R	25.07.2012	57.2	54.5
21	CEM IV/B (P-V) 32.5 N	27.07.2012	39.8	34.2
11	CEM IV/B (P) 32.5 N	27.07.2012	38.3	35.3
24	CEM II/B-LL 32.5 N	27.07.2012	40.8	40.8
11	CEM II/A-LL 42.5 R	27.07.2012	51	47.2
11	CEM IV/A (P) 42.5 N	27.07.2012	49.5	47.9
21	CEM II/A-M (P-L) 42.5 R	27.07.2012	50.5	49.8
11	CEM I 42.5 R	27.07.2012	55	51.7
24	CEM II/A-LL 42.5 R	27.07.2012	55.9	54.9
21	CEM I 42.5 R	27.07.2012	57.3	56.9
24	CEM I 52.5 N	27.07.2012	59.7	58.2
24	CEM I 42.5 R	27.07.2012	59.3	58.8
5	CEM II/B-M (P-LL) 32.5 R	30.07.2012	33.9	35
44	CEM II/B-M (P-L) 32.5 R	30.07.2012	38	38.9
44	CEM II/B-M (P-L) 32.5 N	30.07.2012	39.1	39.8
44	CEM II/A-M (P-L) 42.5 R	30.07.2012	47.2	48.1
44	CEM I 42.5 R	30.07.2012	48.6	49

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5	CEM I 42.5 R	30.07.2012	50.4	50.2
5	CEM I 52.5 N	30.07.2012	62.7	63.9
32	CEM IV/B (P) 32.5 N	31.07.2012	34.8	33.7
16	CEM IV/B (P) 32.5 N	31.07.2012	35.7	35.1
38	CEM IV/B (P) 32.5 N	31.07.2012	39.2	38.7
16	CEM II/A-M (P-L) 42.5 N	31.07.2012	51.4	48.7
16	CEM I 42.5 R	31.07.2012	53.3	49.4
32	CEM I 42.5 R	31.07.2012	49.8	50.7
38	CEM I 42.5 R	31.07.2012	50.6	50.9
32	CEM II/A-P 42.5 R	31.07.2012	50.6	51.5
38	CEM II/A-M (P-LL) 42.5 R	31.07.2012	50	52.2
16	CEM II/A-LL 42.5 N	31.07.2012	56	54.5
15	CEM IV/B (P) 32.5 N	01.08.2012	33.9	33.3
3	CEM IV/B (P) 32.5 N	01.08.2012	36.1	36
3	CEM II/A-M (P-L) 42.5 N	01.08.2012	52.2	51.9
14	CEM IV/B (P-W) 32.5 R	03.08.2012	39.9	38.1
25	CEM IV/B (P-W) 32.5 R	03.08.2012	40.4	41
25	CEM I 42.5 R	03.08.2012	44.6	43.8
42	CEM II/B-S 42.5 N	03.08.2012	44.5	45.6
14	CEM II/A-M (P-L) 42.5 N	03.08.2012	48.8	48.1
14	CEM II/A-M (P-L) 42.5 R	03.08.2012	49.2	48.1
25	CEM II/B-M (L-W) 42.5 R	03.08.2012	48.9	49.9
14	CEM I 42.5 R	03.08.2012	53	51.8
14	CEM II/B-M (L-W) 42.5 R	03.08.2012	54.8	54
49	CEM IV/B (P-W) 32.5 R	06.08.2012	36.1	35.8
49	CEM I 42.5 R	06.08.2012	46.1	49.1
49	CEM II/A-M (P-L) 42.5 R	06.08.2012	49.4	52.5
34	CEM IV/B (P) 32.5 R	07.08.2012	33	29.6
28	CEM IV/B (P) 32.5 R	07.08.2012	36.4	38.4
62	CEM II/B-M (P-L) 32.5 R	07.08.2012	38.1	38.4
46	CEM IV/B (P) 32.5 N	07.08.2012	35.9	39.1
31	CEM II/B-LL 32.5 R	07.08.2012	40.5	39.1
46	CEM V/A (S-P) 32.5 N	07.08.2012	39	42.1
34	CEM III/A 42.5 N	07.08.2012	49.3	46.5
28	CEM I 42.5 R	07.08.2012	47.7	48.8
34	CEM II/A-M (P-L) 42.5 N	07.08.2012	50.6	49.3
31	CEM I 42.5 R	07.08.2012	54.2	50.8
62	CEM I 42.5 R	07.08.2012	50.6	53.5
62	CEM II/A-M (P-L) 42.5 R	07.08.2012	51.1	53.5
28	CEM II/A-M (P-L) 42.5 R	07.08.2012	52.1	53.7
34	CEM I 42.5 N	07.08.2012	56.4	53.8
46	CEM I 42.5 R	07.08.2012	51.1	56.1
39	CEM II/B-M (P-LL) 32.5 R	08.08.2012	36.3	35.9
17	CEM II/B-M (P-LL) 32.5 N	08.08.2012	39.1	37.8
55	CEM II/B-M (W-L) 32.5 R	08.08.2012	38.9	38.4
63	CEM IV/B (P) 32.5 R	08.08.2012	38	38.8
10	CEM II/B-LL 32.5 R	08.08.2012	38.9	39.7
61	CEM II/B-LL 32.5 R	08.08.2012	39.9	39.8
63	CEM I 42.5 R	08.08.2012	46.3	47.2
17	CEM II/A-M (P-LL) 42.5 N	08.08.2012	50.4	48
55	CEM II/A-LL 42.5 R	08.08.2012	52.3	48.4
10	CEM II/B-LL 42.5 N	08.08.2012	49.8	50.3
39	CEM II/A-M (P-LL) 42.5 R	08.08.2012	53	52.8
61	CEM II/A-LL 42.5 R	08.08.2012	52	52.9
10	CEM II/A-LL 42.5 R	08.08.2012	51.5	53.9
55	CEM I 42.5 R	08.08.2012	57.9	55.1
39	CEM I 42.5 R	08.08.2012	55.1	55.6
10	CEM I 42.5 R	08.08.2012	55.5	56
61	CEM I 42.5 R	08.08.2012	56.2	58
8	CEM II/B-M (P-LL) 32.5 R	09.08.2012	38.2	39.8
45	CEM II/B-M (P-LL) 32.5 N	09.08.2012	39.3	42
56	CEM II/B-M (P-LL) 32.5 R	09.08.2012	41.9	42.2
8	CEM II/B-M (P-LL) 42.5 N	09.08.2012	44.5	44.4
36	CEM I 42.5 N	09.08.2012	46.8	44.4
59	CEM II/A-M (P-LL) 42.5 R	09.08.2012	49.7	46.2
8	CEM IV/A (P) 42.5 N	09.08.2012	44.8	47
36	CEM II/A-M (P-LL) 42.5 R	09.08.2012	48.7	47.8
45	CEM II/A-M (P-LL) 42.5 N	09.08.2012	49.6	49
59	CEM I 42.5 R	09.08.2012	51.6	49.1
8	CEM II/A-M (P-LL) 42.5 R	09.08.2012	49.6	49.3
56	CEM II/A-LL 42.5 R	09.08.2012	53.2	52.5
45	CEM I 42.5 N	09.08.2012	53.3	53
8	CEM I 42.5 R	09.08.2012	54.7	54.3

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56	CEM I 42.5 R	09.08.2012	54.6	54.5
56	CEM I 52.5 N	09.08.2012	56.7	54.5
56	CEM II/A-M (P-LL) 42.5 R	09.08.2012	55.7	54.8
43	CEM II/B-M (P-L) 32.5 N	10.08.2012	37.5	36.2
52	CEM II/B-M (P-L) 32.5 R	10.08.2012	39.2	37.8
59	CEM IV/B (P) 32.5 R	10.08.2012	40.8	38.5
59	CEM III/A 42.5 N	10.08.2012	46.8	47.5
43	CEM I 42.5 R	10.08.2012	52	49.7
43	CEM II/A-M (P-L) 42.5 R	10.08.2012	50.5	50.2
52	CEM I 42.5 R	10.08.2012	52.3	51.2
29	CEM II/A-V 42.5 R	13.08.2012	54.4	54.7
2	CEM II/B-M (P-LL) 32.5 R	14.08.2012	40.5	40.1
57	CEM II/B-L 42.5 N	14.08.2012	47.3	47.3
57	CEM II/A-L 42.5 R	14.08.2012	55.5	53.4
47	CEM II/A-M (P-LL) 42.5 R	15.08.2012	46.6	46.7
47	CEM I 42.5 R	15.08.2012	44.6	47.8
37	CEM II/B-M (P-LL) 32.5 R	16.08.2012	34.7	35
7	CEM II/A-LL 42.5 R	17.08.2012	54.9	53.5
65	CEM IV/B (P) 32.5 R	29.08.2012	40.1	36.5
2	CEM I 42.5 N	05.09.2012	49.4	47.4
18	CEM IV/B (P) 32.5 R	06.09.2012	34.3	31.7
7	CEM IV/B (P) 32.5 R	06.09.2012	41.7	42.3
18	CEM I 42.5 R	06.09.2012	54.1	53.3
7	CEM II/A-LL 42.5 R	06.09.2012	56.4	57.9
7	CEM I 42.5 R	06.09.2012	58	60.8
54	CEM IV/B (P) 32.5 R	07.09.2012	35.3	33.9
40	CEM II/B-M (P-L) 32.5 R	07.09.2012	36.5	35.5
13	CEM II/B-M (P-L) 32.5 R	07.09.2012	37.2	38.6
26	CEM IV/B (P) 32.5 N	07.09.2012	37.1	40.8
54	CEM I 42.5 R	07.09.2012	50.7	50.3
40	CEM II/A-M (P-L) 42.5 R	07.09.2012	56.8	53.5
40	CEM I 42.5 R	07.09.2012	55.8	54
13	CEM I 42.5 R	07.09.2012	54.6	55.8
26	CEM I 42.5 R	07.09.2012	58	58.1
51	CEM IV/B (P) 32.5 R	11.09.2012	40.1	43
51	CEM I 42.5 R	11.09.2012	58.4	56
51	CEM II/A-P 42.5 R	11.09.2012	55.2	56.3
51	CEM I 52.5 N	11.09.2012	59.7	58.9
64	CEM IV/B (P) 32.5 N	12.09.2012	35	33.1
23	CEM II/B-M (S-L) 32.5 N	12.09.2012	36.3	34
9	CEM V/A (P-S) 32.5 N	12.09.2012	35.8	40.3
9	CEM I 42.5 R	12.09.2012	58.8	54.9
23	CEM I 42.5 R	12.09.2012	57.9	55.8
9	CEM II/A-M (S-L) 42.5 R	12.09.2012	56.3	59.7
9	CEM II/A-M (S-L) 52.5 N	12.09.2012	61.1	61
9	CEM II/B-M (S-L) 42.5 R	12.09.2012	60.4	61.3
57	CEM II/B-L 32.5 R	13.09.2012	36	33.9
4	CEM IV/B (P) 32.5 N	13.09.2012	39	38.1
57	CEM II/B-L 42.5 N	13.09.2012	47.1	40.8
58	CEM II/A-LL 42.5 N BEYAZ	13.09.2012	47.7	46.6
58	CEM IV/B (P) 32.5 N	13.09.2012	46.1	47.8
4	CEM I 42.5 R	13.09.2012	49.5	48.6
58	CEM II/A-LL 42.5 R	13.09.2012	53.2	51.1
57	CEM I 52.5 R	13.09.2012	58.7	56.3
58	CEM I 42.5 R	13.09.2012	58	56.4
57	CEM I 42.5 R	13.09.2012	58.3	57.1
30	CEM IV/B (P) 32.5 R	14.09.2012	41.2	40.5
30	CEM II/A-M (P-L) 42.5 R	14.09.2012	57.2	58.1
30	CEM I 42.5 R	14.09.2012	58.3	59.1
19	CEM IV/B (P) 32.5 R	18.09.2012	35.3	36.2
29	CEM III/A 32.5 R	18.09.2012	41.4	40.9
50	CEM IV/B (P) 32.5 R	18.09.2012	40.8	42.8
19	CEM II/A-M (P-L) 42.5 R	18.09.2012	48.7	50.1
50	CEM II/A-L 42.5 R	18.09.2012	50.2	50.1
50	CEM II/A-M (P-L) 42.5 R	18.09.2012	49.4	50.2
19	CEM I 42.5 N	18.09.2012	46.5	50.3
29	CEM II/A-V 42.5 R	18.09.2012	51.6	51.8
29	CEM I 42.5 R	18.09.2012	51.7	52.3
50	CEM I 42.5 R	18.09.2012	51.6	53.1
19	CEM I 42.5 R	18.09.2012	53.1	54.6
29	CEM II/B-L 42.5 R	18.09.2012	55.1	54.9
20	CEM III/B 32.5 N	19.09.2012	34.9	31.4
1	CEM V/A (S-P-Q) 32.5 R	19.09.2012	36	33.9

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35	CEM IV/B (V) 32.5 R	19.09.2012	35	35.2
55	CEM II/B-LL 32.5 R	19.09.2012	36.5	36.6
1	CEM II/B-LL 42.5 R	19.09.2012	46.1	45.8
1	CEM II/B-M (P-Q-S) 42.5 N	19.09.2012	47.6	46.2
20	CEM III/A 42.5 N	19.09.2012	46.3	46.6
35	CEM II/B-S 42.5 R	19.09.2012	51.6	48
1	CEM I 42.5 R	19.09.2012	51.6	49.5
1	CEM III/A 42.5 N	19.09.2012	51.8	50.5
35	CEM II/A-S 42.5 R	19.09.2012	56.8	53.8
1	CEM I 52.5 R	19.09.2012	56.5	55.5
12	CEM IV/B (P) 32.5 R	20.09.2012	38.5	36.7
41	CEM V/A (P-S) 32.5 R	20.09.2012	37.7	37
42	CEM III/A 32.5 N	20.09.2012	37.7	38.5
41	CEM II/B-M (P-S) 42.5 R	20.09.2012	47.5	44.6
41	CEM III/A 42.5 N	20.09.2012	49.1	47
42	CEM III/A 42.5 N	20.09.2012	45.9	47.9
12	CEM II/A-M (P-L) 42.5 R	20.09.2012	52.1	52.2
12	CEM I 42.5 R	20.09.2012	53.3	52.7
12	CEM I 42.5 N	20.09.2012	53.2	52.9
53	CEM IV/B (P) 32.5 R	24.09.2012	35.1	33.1
27	CEM IV/B (P) 32.5 N	24.09.2012	37.3	36
27	CEM II/A-M (P-L) 42.5 N	24.09.2012	52.1	52.5
53	CEM II/A-M (P-L) 42.5 R	24.09.2012	54.4	53
27	CEM I 42.5 R	24.09.2012	54.2	53.5
53	CEM I 42.5 R	24.09.2012	57.8	55.7
21	CEM IV/B (P-V) 32.5 N	25.09.2012	41.3	32.8
22	CEM IV/B (P-V) 32.5 R	25.09.2012	39.4	34
22	CEM II/B-M (P-V) 42.5 N	25.09.2012	47.9	47.3
21	CEM II/A-M (P-L) 42.5 R	25.09.2012	50.3	52.4
21	CEM I 42.5 R	25.09.2012	56	56.6
11	CEM IV/B (P) 32.5 N	26.09.2012	36	32.6
37	CEM II/B-M (P-LL) 32.5 R	26.09.2012	35.8	35.6
11	CEM IV/A (P) 42.5 N	26.09.2012	47.2	45.9
11	CEM I 42.5 R	26.09.2012	49.7	47.4
2	CEM I 42.5 R	26.09.2012	49	51.3
11	CEM II/A-LL 42.5 R	26.09.2012	51.7	52.2
2	CEM II/A-P 42.5 R	26.09.2012	51.8	52.8
37	CEM II/A-M (P-LL) 42.5 N	26.09.2012	51.8	53.1
37	CEM I 52.5 N	26.09.2012	57.9	57
37	CEM I 42.5 R	26.09.2012	57.9	58.2
47	CEM IV/B (P) 32.5 N	27.09.2012	35.6	35.5
24	CEM II/B-LL 32.5 N	27.09.2012	39.8	37.4
54	CEM IV/B (P) 32.5 R	27.09.2012	38	38.8
33	CEM IV/B (P) 32.5 N	27.09.2012	38.5	42.3
47	CEM II/B-M (P-S) 42.5 R	27.09.2012	46	47.2
47	CEM I 42.5 R	27.09.2012	48.2	48.2
47	CEM I 42.5 N	27.09.2012	47.6	48.3
33	CEM II/A-M (P-LL) 42.5 N	27.09.2012	48.4	50.2
54	CEM I 42.5 R	27.09.2012	49.8	51.6
24	CEM II/A-LL 42.5 R	27.09.2012	56.6	55.4
33	CEM I 42.5 N	27.09.2012	55.9	55.9
24	CEM I 42.5 R	27.09.2012	57.7	55.9
48	CEM II/B-P 32.5 R	28.09.2012	33.6	32.5
60	CEM II/B-M (P-LL) 32.5 R	28.09.2012	41.9	41.1
48	CEM I 42.5 R	28.09.2012	48.2	48.4
48	CEM II/A-P 42.5 R	28.09.2012	47.6	48.7
60	CEM II/A-M (P-LL) 42.5 N	28.09.2012	49.9	49.4
60	CEM I 42.5 R	28.09.2012	55.1	51.8
61	CEM I 42.5 R	28.09.2012	55.1	53.9
31	CEM II/B-LL 32.5 R	01.10.2012	38.4	37.3
31	CEM I 42.5 R	01.10.2012	54.1	53.1
32	CEM IV/B (P) 32.5 N	02.10.2012	34.1	28.7
46	CEM IV/B (P) 32.5 N	02.10.2012	36.1	34.1
38	CEM IV/B (P) 32.5 N	02.10.2012	36.9	34.6
46	CEM V/A (S-P) 32.5 N	02.10.2012	38.9	37.2
44	CEM II/B-M (P-L) 32.5 R	02.10.2012	38.7	38.3
5	CEM II/B-M (P-LL) 32.5 R	02.10.2012	39.6	38.7
44	CEM II/B-M (P-L) 32.5 N	02.10.2012	38.5	39.2
59	CEM IV/B (P) 32.5 R	02.10.2012	42.7	39.6
52	CEM II/B-M (P-L) 32.5 R	02.10.2012	40.2	40.7
38	CEM I 42.5 N	02.10.2012	50.8	47.8
59	CEM III/A 42.5 N	02.10.2012	50.7	48.9
44	CEM II/A-M (P-L) 42.5 R	02.10.2012	48	49.4

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38	CEM I 42.5 R	02.10.2012	49.8	49.4
44	CEM I 42.5 R	02.10.2012	49.1	49.5
32	CEM I 42.5 R	02.10.2012	48.3	49.6
46	CEM I 42.5 R	02.10.2012	50.1	49.9
32	CEM II/A-P 42.5 R	02.10.2012	50.1	50.3
38	CEM II/A-M (P-LL) 42.5 R	02.10.2012	52.2	50.5
5	CEM I 42.5 R	02.10.2012	53.5	51.3
46	CEM II/A-LL 42.5 R	02.10.2012	51.1	51.8
52	CEM I 42.5 R	02.10.2012	54.5	53.5
59	CEM I 42.5 R	02.10.2012	55	54.2
59	CEM II/A-M (P-LL) 42.5 R	02.10.2012	55.6	56.1
5	CEM I 52.5 N	02.10.2012	60.5	61.6
15	CEM IV/B (P) 32.5 N	03.10.2012	34.8	34.7
16	CEM IV/B (P) 32.5 N	03.10.2012	34.7	35.1
56	CEM II/B-M (P-LL) 32.5 R	03.10.2012	36.4	36.7
3	CEM IV/B (P) 32.5 N	03.10.2012	39	39
16	CEM II/A-M (P-L) 42.5 N	03.10.2012	44.8	44.9
16	CEM I 42.5 R	03.10.2012	52	51.1
16	CEM II/A-LL 42.5 N	03.10.2012	51.4	53.1
56	CEM I 42.5 R	03.10.2012	57.4	54.5
3	CEM II/A-M (P-L) 42.5 N	03.10.2012	54.3	55.7
56	CEM II/A-LL 42.5 R	03.10.2012	55.1	55.9
56	CEM II/A-M (P-LL) 42.5 R	03.10.2012	54.5	57.1
56	CEM I 52.5 N	03.10.2012	57.4	57.8
66	CEM IV/B (P-V) 32.5 R	04.10.2012	38.4	39
39	CEM II/B-M (P-LL) 32.5 R	04.10.2012	44.9	45.6
39	CEM II/A-M (P-LL) 42.5 R	04.10.2012	52.8	52.3
39	CEM I 42.5 R	04.10.2012	54.3	53.9
55	CEM II/B-M (W-L) 32.5 R	05.10.2012	36.3	34.1
25	CEM I 42.5 R	05.10.2012	51.1	49.2
55	CEM II/A-LL 42.5 R	05.10.2012	49.3	49.4
25	CEM II/B-M (L-W) 42.5 R	05.10.2012	52.4	52.6
55	CEM I 42.5 R	05.10.2012	59.5	55
14	CEM IV/B (P-W) 32.5 R	06.10.2012	40	41.2
14	CEM II/A-M (P-L) 42.5 R	06.10.2012	48.5	46.6
14	CEM II/A-M (P-L) 42.5 N	06.10.2012	48	46.8
14	CEM I 42.5 R	06.10.2012	51.5	49.7
14	CEM II/B-M (L-W) 42.5 R	06.10.2012	53.4	53.3
25	CEM IV/B (P-W) 32.5 R	08.10.2012	35.6	34.7
25	CEM II/A-M (P-L) 42.5 R	08.10.2012	54.2	53.4
62	CEM II/B-M (P-L) 32.5 R	09.10.2012	34.3	36.5
62	CEM I 42.5 R	09.10.2012	49.9	52.7
62	CEM II/A-M (P-L) 42.5 R	09.10.2012	52	54.9
4	CEM IV/B (P) 32.5 R	10.10.2012	39.1	37.2
10	CEM II/B-LL 32.5 R	10.10.2012	40.4	40.7
8	CEM II/B-M (P-LL) 42.5 N	10.10.2012	46.8	43.7
8	CEM II/B-M (P-LL) 32.5 R	10.10.2012	46.4	44.6
8	CEM II/A-M (P-LL) 42.5 R	10.10.2012	49	47.6
8	CEM IV/A (P) 42.5 N	10.10.2012	51.8	50.2
10	CEM II/B-LL 42.5 N	10.10.2012	50.8	51.8
8	CEM I 42.5 R	10.10.2012	54.1	53.4
10	CEM I 42.5 R	10.10.2012	54.8	56.4
10	CEM II/A-LL 42.5 R	10.10.2012	55.1	57.5
43	CEM II/B-M (P-L) 32.5 N	11.10.2012	40	38.8
57	CEM II/B-L 42.5 N	11.10.2012	44.7	43.4
43	CEM I 42.5 R	11.10.2012	49.1	44.2
43	CEM II/A-M (P-L) 42.5 R	11.10.2012	49	47.3
7	CEM II/A-LL 42.5 R	11.10.2012	50.5	52.8
57	CEM I 52.5 R	11.10.2012	59.5	58.4
42	CEM II/B-S 42.5 N	12.10.2012	45.4	44.4
49	CEM IV/B (P-W) 32.5 R	15.10.2012	35.2	35.9
49	CEM II/A-M (P-L) 42.5 R	15.10.2012	50	47.7
49	CEM I 42.5 R	15.10.2012	54	48.3
28	CEM IV/B (P) 32.5 R	16.10.2012	35.5	35.5
34	CEM II/A-M (P-L) 42.5 N	16.10.2012	44	41.3
34	CEM II/B-M (P-L) 42.5 N	16.10.2012	48.3	44.8
28	CEM I 42.5 R	16.10.2012	46	47.3
34	CEM I 42.5 N	16.10.2012	52.4	49.6
28	CEM II/A-M (P-L) 42.5 R	16.10.2012	50	50.7
36	CEM II/B-M (P-LL) 32.5 R	17.10.2012	35.4	35
63	CEM IV/B (P) 32.5 R	17.10.2012	39.2	38.4
34	CEM IV/B (P) 32.5 R	17.10.2012	45.4	42.7
36	CEM I 42.5 N	17.10.2012	46.9	47

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36	CEM II/A-M (P-LL) 42.5 R	17.10.2012	50.8	49.7
63	CEM I 42.5 R	17.10.2012	51.1	50.6
61	CEM II/B-LL 32.5 R	18.10.2012	41.5	37.8
17	CEM II/B-M (P-LL) 32.5 N	18.10.2012	38.8	38
17	CEM II/A-M (P-LL) 42.5 N	18.10.2012	46.3	44.5
2	CEM I 42.5 N	18.10.2012	49.3	47.5
61	CEM II/A-LL 42.5 R	18.10.2012	52.5	49.3
61	CEM I 42.5 R	18.10.2012	56.6	52.1
45	CEM II/B-M (P-LL) 32.5 N	19.10.2012	39.1	38.1
45	CEM II/A-M (P-LL) 42.5 N	19.10.2012	48.3	47.6
45	CEM I 42.5 N	19.10.2012	53	52.7
42	CEM III/A 32.5 N	05.11.2012	37.5	35.9
53	CEM IV/B (P) 32.5 R	05.11.2012	36.2	37.9
27	CEM IV/B (P) 32.5 N	05.11.2012	44.8	40.3
26	CEM IV/B (P) 32.5 N	05.11.2012	41.5	41.4
42	CEM II/B-S 42.5 N	05.11.2012	46.1	42.5
27	CEM I 42.5 R	05.11.2012	51.8	51.4
27	CEM II/A-M (P-L) 42.5 N	05.11.2012	54.9	52.3
53	CEM I 42.5 R	05.11.2012	56.2	54.3
26	CEM I 42.5 R	05.11.2012	57.6	55.6
53	CEM II/A-M (P-L) 42.5 R	05.11.2012	57.4	56.4
22	CEM IV/B (P-V) 32.5 R	06.11.2012	36.5	31
40	CEM II/B-M (P-L) 32.5 R	06.11.2012	34.8	33.4
12	CEM IV/B (P) 32.5 R	06.11.2012	35.9	35.3
11	CEM IV/B (P) 32.5 N	06.11.2012	35.9	36.6
13	CEM II/B-M (P-L) 32.5 R	06.11.2012	38.4	39.6
11	CEM IV/A (P) 42.5 N	06.11.2012	46	44.4
22	CEM II/B-M (P-V) 42.5 N	06.11.2012	49.1	44.7
11	CEM II/A-LL 42.5 R	06.11.2012	49.1	48.1
11	CEM I 42.5 R	06.11.2012	48.7	48.3
13	CEM I 42.5 R	06.11.2012	50.2	51.4
40	CEM I 42.5 R	06.11.2012	54.1	51.5
40	CEM II/A-M (P-L) 42.5 R	06.11.2012	56.3	52
12	CEM II/A-M (P-L) 42.5 R	06.11.2012	54.5	55.4
12	CEM I 42.5 R	06.11.2012	56.8	57.6
19	CEM IV/B (P) 32.5 R	07.11.2012	38	33.9
55	CEM II/B-LL 32.5 R	07.11.2012	35.4	34.6
20	CEM III/B 32.5 N	07.11.2012	36.1	36.8
7	CEM IV/B (P) 32.5 R	07.11.2012	42.6	43.7
20	CEM III/A 42.5 N	07.11.2012	50.8	48.2
19	CEM I 42.5 N	07.11.2012	50.2	49.8
19	CEM II/A-M (P-L) 42.5 R	07.11.2012	49.8	50.8
7	CEM I 42.5 R	07.11.2012	52.6	51.5
24	CEM II/A-LL 42.5 R	07.11.2012	51.6	52.4
19	CEM I 42.5 R	07.11.2012	56	55.2
24	CEM I 52.5 N	07.11.2012	56.8	57.6
21	CEM IV/B (P-V) 32.5 N	08.11.2012	39.1	30
18	CEM IV/B (P) 32.5 R	08.11.2012	35.71	35.4
24	CEM II/B-LL 32.5 N	08.11.2012	41.6	39.9
21	CEM II/A-M (P-L) 42.5 R	08.11.2012	50.4	48.7
18	CEM I 42.5 R	08.11.2012	55.49	53.9
21	CEM I 42.5 R	08.11.2012	57.9	57
24	CEM I 42.5 R	08.11.2012	56.8	57.3
51	CEM IV/B (P) 32.5 R	12.11.2012	35.8	37.7
51	CEM II/A-P 42.5 R	12.11.2012	51.5	52.9
51	CEM I 42.5 R	12.11.2012	55.6	54
51	CEM I 52.5 N	12.11.2012	58.5	54.4
64	CEM IV/B (P) 32.5 N	13.11.2012	33.9	30.9
38	CEM IV/B (P) 32.5 N	13.11.2012	37.4	33.6
3	CEM IV/B (P) 32.5 N	13.11.2012	35.9	35
15	CEM IV/B (P) 32.5 N	13.11.2012	36.5	35.3
44	CEM II/B-M (P-L) 32.5 N	13.11.2012	35.6	35.9
44	CEM II/B-M (P-L) 32.5 R	13.11.2012	35.6	36.2
9	CEM V/A (P-S) 32.5 N	13.11.2012	34.1	36.8
44	CEM II/A-M (P-L) 42.5 R	13.11.2012	46	47.3
3	CEM II/A-M (P-L) 42.5 N	13.11.2012	50.6	48.2
38	CEM II/A-M (P-LL) 42.5 R	13.11.2012	48.3	49.3
44	CEM I 42.5 R	13.11.2012	49.3	49.9
38	CEM I 42.5 R	13.11.2012	52	50.1
9	CEM II/A-M (S-L) 42.5 R	13.11.2012	52.9	50.7
9	CEM I 42.5 R	13.11.2012	54.2	52.6
9	CEM II/B-M (S-L) 42.5 R	13.11.2012	55.8	55.1
9	CEM II/A-M (S-L) 52.5 N	13.11.2012	61	58.7

Code of The Manufacturer	Type of Cement	The Date of Sampling	Standard Compressive Strength Result of Manufacturer (MPa)	Standard Compressive Strength Result of Notified Body (MPa)
4	CEM IV/B (P) 32.5 N	14.11.2012	38.4	32.9
57	CEM II/B-L 32.5 R	14.11.2012	39.1	37.6
23	CEM II/B-M (S-L) 32.5 N	14.11.2012	42.8	39.1
23	CEM I 42.5 R	14.11.2012	54.9	50.7
57	CEM II/A-L 42.5 R	14.11.2012	49.2	51.1
4	CEM I 42.5 R	14.11.2012	51.4	51.7
26	CEM II/A-M (P-L) 42.5 R	14.11.2012	55.1	55.5
57	CEM I 42.5 R	14.11.2012	58.8	56.7
57	CEM I 52.5 R	14.11.2012	57.5	57
58	CEM IV/B (P) 32.5 N	15.11.2012	34.3	33.4
46	CEM IV/B (P) 32.5 N	15.11.2012	35.8	33.4
46	CEM II/A-LL 42.5 R	15.11.2012	47.5	49.8
58	CEM II/A-LL 42.5 R	15.11.2012	54.8	53
58	CEM I 42.5 R	15.11.2012	58.1	55
30	CEM IV/B (P) 32.5 R	16.11.2012	39.4	37
57	CEM II/B-L 42.5 N	16.11.2012	43.2	40.4
30	CEM I 42.5 R	16.11.2012	58.4	56.2
30	CEM II/A-M (P-L) 42.5 R	16.11.2012	57.3	58.7
25	CEM II/A-M (P-L) 42.5 R	21.11.2012	52.7	49.8
12	CEM II/A-M (P-L) 42.5 R	21.11.2012	54.5	49.9
50	CEM IV/B (P) 32.5 R	26.11.2012	38.8	37.9
50	CEM II/A-M (P-L) 42.5 R	26.11.2012	48.8	46.7
50	CEM I 42.5 R	26.11.2012	49.6	48.3
50	CEM II/A-L 42.5 R	26.11.2012	49.2	48.4
1	CEM V/A (S-P-Q) 32.5 R	27.11.2012	34.5	34
29	CEM III/A 32.5 R	27.11.2012	41.9	38.6
1	CEM II/B-LL 42.5 R	27.11.2012	44.7	44.7
1	CEM II/B-M (P-Q-S) 42.5 N	27.11.2012	47.4	47.5
1	CEM III/A 42.5 N	27.11.2012	49.1	48.2
1	CEM I 42.5 R	27.11.2012	51.1	48.7
29	CEM II/A-V 42.5 R	27.11.2012	50.5	49
29	CEM II/B-L 42.5 R	27.11.2012	50.1	50.3
29	CEM I 42.5 R	27.11.2012	53.2	53.5
1	CEM I 52.5 R	27.11.2012	58.2	56.8
48	CEM II/B-P 32.5 R	28.11.2012	36.6	36.4
41	CEM V/A (P-S) 32.5 R	28.11.2012	37.8	38.6
48	CEM I 42.5 R	28.11.2012	47.3	46.8
41	CEM II/B-M (P-S) 42.5 R	28.11.2012	45.3	47
38	CEM I 42.5 N	28.11.2012	50.1	47.1
41	CEM III/A 42.5 N	28.11.2012	46.4	48
38	CEM I 52.5 N	28.11.2012	53.5	50.8
48	CEM II/A-P 42.5 R	28.11.2012	49.2	51.4
2	CEM II/B-M (P-LL) 32.5 R	29.11.2012	33.7	33.7
37	CEM II/B-M (P-LL) 32.5 R	29.11.2012	35.9	35.1
60	CEM II/B-M (P-LL) 32.5 R	29.11.2012	38.1	38.7
2	CEM II/A-P 42.5 R	29.11.2012	44.9	45.5
2	CEM I 42.5 N	29.11.2012	45.1	46.6
2	CEM I 42.5 R	29.11.2012	48.4	49
60	CEM II/A-M (P-LL) 42.5 N	29.11.2012	50	49.5
37	CEM II/A-M (P-LL) 42.5 N	29.11.2012	51.8	51
37	CEM I 42.5 R	29.11.2012	54.9	52
37	CEM I 52.5 N	29.11.2012	54.9	52.6
60	CEM I 42.5 R	29.11.2012	53.9	54.1
54	CEM IV/B (P) 32.5 R	30.11.2012	35.8	33.6
33	CEM IV/B (P) 32.5 N	30.11.2012	41.6	39.3
54	CEM I 42.5 R	30.11.2012	53	49.8
33	CEM II/A-M (P-LL) 42.5 N	30.11.2012	53.3	52.5
33	CEM I 42.5 N	30.11.2012	59.9	56
47	CEM IV/B (P) 32.5 N	01.12.2012	34.3	34.5
47	CEM I 42.5 N	01.12.2012	44	44.5
47	CEM II/B-M (P-S) 42.5 R	01.12.2012	44.5	44.6
47	CEM II/A-M (P-LL) 42.5 R	01.12.2012	46.2	44.7
47	CEM I 42.5 R	01.12.2012	44.5	44.9
7	CEM II/A-LL 42.5 R	05.12.2012	50.8	49.8
49	CEM IV/B (P-W) 32.5 R	10.12.2012	36.2	36.3
28	CEM IV/B (P) 32.5 R	10.12.2012	38.4	38.8
49	CEM II/A-M (P-L) 42.5 R	10.12.2012	47.4	47.6
28	CEM I 42.5 R	10.12.2012	48.6	47.6
49	CEM I 42.5 R	10.12.2012	50.6	47.6
28	CEM II/A-M (P-L) 42.5 R	10.12.2012	51.2	50.9
31	CEM II/B-LL 32.5 R	11.12.2012	36.8	35.3
62	CEM II/B-M (P-L) 32.5 R	11.12.2012	39.9	41.3
2	CEM I 42.5 N	11.12.2012	46	45.6

Code of The Manufacturer	Type of Cement	The Date of Sampling	Standard Compressive Strength Result of Manufacturer (MPa)	Standard Compressive Strength Result of Notified Body (MPa)
62	CEM I 42.5 R	11.12.2012	50.6	50.1
31	CEM I 42.5 R	11.12.2012	54.1	50.3
62	CEM II/A-M (P-L) 42.5 R	11.12.2012	54.2	53.4
46	CEM IV/B (P) 32.5 N	12.12.2012	37.1	37.1
55	CEM II/B-M (W-L) 32.5 R	12.12.2012	42.5	38.3
55	CEM II/A-LL 42.5 R	12.12.2012	48.9	43.7
55	CEM I 42.5 R	12.12.2012	55	52
46	CEM II/A-LL 42.5 R	12.12.2012	48.1	54.7
46	CEM I 42.5 R	12.12.2012	52.5	56.7
63	CEM IV/B (P) 32.5 R	13.12.2012	40.7	37
59	CEM IV/B (P) 32.5 R	13.12.2012	42.4	38.6
8	CEM II/B-M (P-LL) 32.5 R	13.12.2012	40.8	38.9
52	CEM II/B-M (P-L) 32.5 R	13.12.2012	41.7	40.6
61	CEM II/B-LL 32.5 R	13.12.2012	41.7	41.5
34	CEM IV/B (P) 32.5 R	13.12.2012	47.8	44.1
59	CEM III/A 42.5 N	13.12.2012	46.1	45.4
59	CEM II/A-M (P-LL) 42.5 R	13.12.2012	48.3	47.3
34	CEM I 42.5 N	13.12.2012	52.2	47.4
59	CEM I 42.5 R	13.12.2012	50.7	48.1
63	CEM I 42.5 R	13.12.2012	52.9	48.8
34	CEM II/A-M (P-L) 42.5 N	13.12.2012	53.9	49.2
8	CEM II/B-M (P-LL) 42.5 N	13.12.2012	49.1	49.4
8	CEM II/A-M (P-LL) 42.5 R	13.12.2012	52.6	49.5
8	CEM IV/A (P) 42.5 N	13.12.2012	51.3	49.7
61	CEM II/A-LL 42.5 R	13.12.2012	51.3	50.7
34	CEM II/B-M (P-L) 42.5 N	13.12.2012	53.9	50.9
52	CEM I 42.5 R	13.12.2012	52.8	53.4
61	CEM I 42.5 R	13.12.2012	57.8	56
8	CEM I 42.5 R	13.12.2012	58.5	57
56	CEM II/B-M (P-LL) 32.5 R	14.12.2012	41	39.7
10	CEM II/B-LL 32.5 R	14.12.2012	40.5	39.9
10	CEM II/B-LL 42.5 N	14.12.2012	52.4	52.1
10	CEM II/A-LL 42.5 R	14.12.2012	52.4	54
56	CEM II/A-LL 42.5 R	14.12.2012	55.2	54.5
56	CEM II/A-M (P-LL) 42.5 R	14.12.2012	55.2	54.7
56	CEM I 42.5 R	14.12.2012	56.4	55
10	CEM I 42.5 R	14.12.2012	57.7	56.8
66	CEM IV/B (P-V) 32.5 R	15.12.2012	36.9	36.3
5	CEM II/B-M (P-LL) 32.5 R	18.12.2012	35.3	33.4
11	CEM IV/A (P-V) 42.5 R	18.12.2012	46.3	45.3
5	CEM I 42.5 R	18.12.2012	51	51
5	CEM I 52.5 N	18.12.2012	54.1	53.9
32	CEM IV/B (P) 32.5 N	19.12.2012	36.1	32.7
32	CEM II/A-P 42.5 R	19.12.2012	52.9	48.9
32	CEM I 42.5 R	19.12.2012	52.3	49.4
16	CEM IV/B (P) 32.5 N	20.12.2012	34.1	31.3
25	CEM IV/B (P-W) 32.5 R	20.12.2012	38.2	35.8
25	CEM I 42.5 R	20.12.2012	53.3	48.2
16	CEM II/A-M (P-L) 42.5 N	20.12.2012	49.1	48.4
25	CEM II/A-M (P-L) 42.5 R	20.12.2012	53.6	48.8
25	CEM II/B-M (L-W) 42.5 R	20.12.2012	53.6	48.8
16	CEM I 42.5 R	20.12.2012	53	50.1
16	CEM II/A-LL 42.5 N	20.12.2012	55.6	50.4
14	CEM IV/B (P-W) 32.5 R	21.12.2012	38.1	36.8
14	CEM II/A-M (P-L) 42.5 R	21.12.2012	50.5	49.2
14	CEM I 42.5 R	21.12.2012	51.1	49.4
14	CEM II/A-M (P-L) 42.5 N	21.12.2012	50.2	49.6
14	CEM II/B-M (L-W) 42.5 R	21.12.2012	53.6	49.7
42	CEM II/B-S 42.5 N	25.12.2012	48.8	47.2
38	CEM I 52.5 N	26.12.2012	53.1	50.3
26	CEM II/A-M (P-L) 42.5 R	26.12.2012	55.9	55
12	CEM IV/B (P) 32.5 R	02.01.2013	34.4	29.5
40	CEM II/B-M (P-L) 32.5 R	02.01.2013	38	36
13	CEM II/B-M (P-L) 32.5 R	02.01.2013	38.9	37.4
13	CEM II/B-M (P-L) 32.5 R	02.01.2013	38.9	37.4
42	CEM III/A 32.5 N	02.01.2013	40.5	41.3
26	CEM IV/B (P) 32.5 N	02.01.2013	43.5	41.4
13	CEM I 42.5 R	02.01.2013	48.1	47.8
13	CEM I 42.5 R	02.01.2013	48.1	47.8
40	CEM II/A-M (P-L) 42.5 R	02.01.2013	52.7	50.3
40	CEM I 42.5 R	02.01.2013	54.3	51.5
12	CEM I 42.5 R	02.01.2013	58.1	53.1
26	CEM I 42.5 R	02.01.2013	61	58.6

Code of The Manufacturer	Type of Cement	The Date of Sampling	Standard Compressive Strength Result of Manufacturer (MPa)	Standard Compressive Strength Result of Notified Body (MPa)	Code of The Manufacturer	Type of Cement	The Date of Sampling	Standard Compressive Strength Result of Manufacturer (MPa)	Standard Compressive Strength Result of Notified Body (MPa)
20	CEM III/B 32.5 N	03.01.2013	38.5	38.5	60	CEM I 42.5 N	18.01.2013	52.5	51.4
18	CEM IV/B (P) 32.5 R	04.01.2013	40.8	38.9	60	CEM II/A-M (P-LL) 42.5 N	18.01.2013	52	56.1
19	CEM IV/B (P) 32.5 R	04.01.2013	37.8	39.2	54	CEM IV/B (P) 32.5 R	19.01.2013	37	37.7
19	CEM I 42.5 N	04.01.2013	48.2	47.5	54	CEM I 42.5 R	19.01.2013	47.9	45.2
19	CEM II/A-M (P-L) 42.5 R	04.01.2013	52.1	49.9	51	CEM IV/B (P) 32.5 R	22.01.2013	35.5	36.4
7	CEM II/A-LL 42.5 R	04.01.2013	53.4	52.6	51	CEM II/A-P 42.5 R	22.01.2013	44.8	45.4
7	CEM II/A-LL 42.5 R	04.01.2013	53.4	52.6	51	CEM I 52.5 N	22.01.2013	55.8	55.5
18	CEM I 42.5 R	04.01.2013	55.43	53.5	51	CEM I 42.5 R	22.01.2013	60.7	57.9
7	CEM I 42.5 R	04.01.2013	56.1	57.1	58	CEM IV/B (P) 32.5 N	23.01.2013	38.7	38.1
7	CEM I 42.5 R	04.01.2013	56.1	57.1	57	CEM II/B-L 32.5 R	23.01.2013	39.7	39.8
19	CEM I 42.5 R	04.01.2013	55.9	58.5	57	CEM I 42.5 R	23.01.2013	52.7	49.5
22	CEM IV/B (P-V) 32.5 R	07.01.2013	39.5	35.9	57	CEM II/B-L 42.5 N	23.01.2013	48.4	50.3
27	CEM IV/B (P) 32.5 N	07.01.2013	40.4	38.3	57	CEM I 52.5 R	23.01.2013	57	54
22	CEM II/B-M (P-V) 42.5 N	07.01.2013	47.5	46.2	58	CEM II/A-LL 42.5 R	23.01.2013	57	55.7
27	CEM II/A-M (P-L) 42.5 N	07.01.2013	54.5	54.3	58	CEM I 42.5 R	23.01.2013	57.4	56.2
27	CEM I 42.5 R	07.01.2013	54.8	58.7	9	CEM II/B-M (S-L) 42.5 R	23.01.2013	56.1	57.8
21	CEM IV/B (P-V) 32.5 N	08.01.2013	36.6	33	9	CEM II/A-M (S-L) 52.5 N	23.01.2013	59.4	60.6
11	CEM IV/B (P) 32.5 N	08.01.2013	35.7	34.7	64	CEM IV/B (P) 32.5 N	24.01.2013	35.6	33.9
11	CEM IV/B (P-V) 32.5 N	08.01.2013	36	35.6	30	CEM IV/B (P) 32.5 R	24.01.2013	39.2	38.2
23	CEM II/B-M (P-L) 32.5 R	08.01.2013	39.3	36.9	30	CEM II/A-M (P-L) 42.5 R	24.01.2013	55.1	55.5
53	CEM IV/B (P) 32.5 R	08.01.2013	42.8	39.8	30	CEM I 42.5 R	24.01.2013	57.9	56.9
11	CEM IV/A (P-V) 42.5 R	08.01.2013	47.6	43.8	23	CEM II/B-M (S-L) 32.5 N	25.01.2013	34.4	34.1
11	CEM IV/A (P) 42.5 N	08.01.2013	47.7	44.4	65	CEM IV/B (P) 32.5 R	25.01.2013	38.7	38
11	CEM II/A-LL 42.5 R	08.01.2013	49.6	46.7	4	CEM IV/B (P) 32.5 R	25.01.2013	38.9	38.1
53	CEM II/A-M (P-L) 42.5 R	08.01.2013	54.9	49.7	4	CEM I 42.5 R	25.01.2013	50.3	47.9
21	CEM II/A-M (P-L) 42.5 R	08.01.2013	50.3	49.8	23	CEM I 42.5 R	25.01.2013	55.3	51.3
11	CEM I 42.5 R	08.01.2013	53.4	52.3	44	CEM II/B-M (P-L) 32.5 R	29.01.2013	36.3	37.7
21	CEM I 42.5 R	08.01.2013	54.8	53.6	44	CEM II/B-M (P-L) 32.5 N	29.01.2013	36.2	38
53	CEM I 42.5 R	08.01.2013	58.7	55.3	44	CEM II/A-M (P-L) 42.5 R	29.01.2013	45.8	47.5
46	CEM II/A-LL 42.5 R	08.01.2013	54	56.4	44	CEM I 42.5 R	29.01.2013	49.8	49
55	CEM II/B-M (W-L) 32.5 R	10.01.2013	41.7	37.8	38	CEM IV/B (P) 32.5 N	30.01.2013	35.2	32.5
24	CEM II/B-LL 32.5 N	10.01.2013	39.7	38.2	15	CEM IV/B (P) 32.5 N	30.01.2013	38.2	38.2
55	CEM II/A-LL 42.5 R	10.01.2013	50.2	46.9	38	CEM II/A-M (P-LL) 42.5 R	30.01.2013	48.8	46.2
55	CEM I 42.5 R	10.01.2013	54.7	51.9	38	CEM I 42.5 R	30.01.2013	48.8	49.3
24	CEM II/A-LL 42.5 R	10.01.2013	57	53.8	3	CEM IV/B (P) 32.5 N	01.02.2013	40.8	38.8
24	CEM I 52.5 N	10.01.2013	58.2	56.9	3	CEM II/A-M (P-L) 42.5 N	01.02.2013	54.3	52.8
24	CEM I 42.5 R	10.01.2013	58.8	58.2	46	CEM IV/B (P) 32.5 N	11.02.2013	37.7	37
25	CEM II/A-M (P-L) 42.5 R	11.01.2013	52.3	50.4	31	CEM II/B-LL 32.5 R	11.02.2013	39.5	37.1
50	CEM IV/B (P) 32.5 R	14.01.2013	36.7	34.5	31	CEM I 42.5 R	11.02.2013	52.3	49
50	CEM II/A-M (P-L) 42.5 R	14.01.2013	45.1	42.6	46	CEM I 42.5 R	11.02.2013	57.3	54.6
50	CEM II/A-L 42.5 R	14.01.2013	47.9	44.8	52	CEM II/B-M (P-L) 32.5 R	12.02.2013	41.4	40.6
50	CEM I 42.5 R	14.01.2013	48.4	46.1	59	CEM IV/B (P) 32.5 R	12.02.2013	44.9	42.8
1	CEM V/A (S-P-Q) 32.5 R	15.01.2013	37.3	34.2	59	CEM III/A 42.5 N	12.02.2013	48.1	47.3
29	CEM III/A 32.5 R	15.01.2013	39.2	38.1	52	CEM I 42.5 R	12.02.2013	54.1	51.8
1	CEM III/A 42.5 N	15.01.2013	48.8	45.7	59	CEM I 42.5 R	12.02.2013	54	53.2
1	CEM II/B-M (P-Q-S) 42.5 N	15.01.2013	50	46	59	CEM II/A-M (P-LL) 42.5 R	12.02.2013	54.6	53.7
29	CEM II/A-V 42.5 R	15.01.2013	49.4	47.8	48	CEM I 52.5 R	12.02.2013	58.1	56
1	CEM I 42.5 R	15.01.2013	52	48.2	4	CEM IV/B (P) 32.5 R	13.02.2013	37.8	37.8
29	CEM II/B-L 42.5 R	15.01.2013	50.4	50	65	CEM IV/B (P) 32.5 R	13.02.2013	37.9	37.9
29	CEM I 42.5 R	15.01.2013	52.2	51.7	56	CEM II/B-M (P-LL) 32.5 R	13.02.2013	39.8	38.3
1	CEM II/B-LL 42.5 R	15.01.2013	52.9	51.9	56	CEM I 42.5 R	13.02.2013	58.6	53.3
1	CEM I 52.5 R	15.01.2013	58.1	56.4	56	CEM II/A-LL 42.5 R	13.02.2013	55.9	54.3
41	CEM V/A (P-S) 32.5 R	16.01.2013	35.8	35	56	CEM II/A-M (P-LL) 42.5 R	13.02.2013	55.8	54.7
37	CEM II/B-M (P-LL) 32.5 R	16.01.2013	36.3	35.6	39	CEM II/B-M (P-LL) 32.5 R	14.02.2013	43.8	42.2
48	CEM II/B-P 32.5 R	16.01.2013	39.6	36.1	57	CEM II/A-L 42.5 R	14.02.2013	50.7	47.3
41	CEM II/B-M (P-S) 42.5 R	16.01.2013	44.6	43.8	8	CEM II/B-M (P-LL) 42.5 N	14.02.2013	51.4	49.5
48	CEM II/A-P 42.5 R	16.01.2013	48.1	46.3	8	CEM II/A-M (P-LL) 42.5 R	14.02.2013	52.2	50.3
41	CEM III/A 42.5 N	16.01.2013	47.4	48.1	39	CEM II/A-M (P-LL) 42.5 R	14.02.2013	52.6	50.9
48	CEM I 42.5 R	16.01.2013	50.9	49.9	8	CEM II/B-M (P-LL) 32.5 R	14.02.2013	50.8	52.5
37	CEM II/A-M (P-LL) 42.5 N	16.01.2013	52.6	51.2	8	CEM I 42.5 R	14.02.2013	60.1	57.6
37	CEM I 52.5 N	16.01.2013	56.3	53.6	39	CEM I 42.5 R	14.02.2013	59.8	58.7
37	CEM I 42.5 R	16.01.2013	56.3	54.3	43	CEM II/B-M (P-L) 32.5 N	15.02.2013	38.8	38.8
48	CEM II/B-M (P-L) 32.5 R	17.01.2013	38.8	35.8	9	CEM V/A (P-S) 32.5 N	15.02.2013	37	38.9
2	CEM II/B-M (P-LL) 32.5 R	17.01.2013	37.7	39.2	43	CEM II/A-M (P-L) 42.5 R	15.02.2013	48.2	46.5
48	CEM II/A-M (P-L) 42.5 R	17.01.2013	50.3	46.5	43	CEM I 42.5 R	15.02.2013	50	50.3
2	CEM II/A-P 42.5 R	17.01.2013	48.5	48.6	9	CEM II/A-M (S-L) 42.5 R	15.02.2013	53.7	53.3
2	CEM I 42.5 R	17.01.2013	51	50.8	9	CEM I 42.5 R	15.02.2013	54.8	53.8
47	CEM IV/B (P) 32.5 N	18.01.2013	36	33.2	10	CEM II/B-LL 32.5 R	16.02.2013	35.2	36.3
7	CEM IV/B (P) 32.5 R	18.01.2013	39.1	38.6	10	CEM II/B-LL 42.5 N	16.02.2013	45.1	47.7
60	CEM II/B-M (P-LL) 32.5 R	18.01.2013	39.7	38.9	10	CEM II/A-LL 42.5 R	16.02.2013	50.3	52.6
47	CEM II/B-M (P-S) 42.5 R	18.01.2013	44.1	44.1	10	CEM I 42.5 R	16.02.2013	53.6	54.8
47	CEM I 42.5 R	18.01.2013	46.5	45.9	5	CEM II/B-M (P-LL) 32.5 R	19.02.2013	35.6	35.6
47	CEM I 42.5 N	18.01.2013	46.1	46.3	5	CEM I 42.5 R	19.02.2013	48.9	52.5

Code of The Manufacturer	Type of Cement	The Date of Sampling	Standard Compressive Strength Result of Manufacturer (MPa)	Standard Compressive Strength Result of Notified Body (MPa)
5	CEM I 52.5 N	19.02.2013	63.8	64.9
32	CEM IV/B (P) 32.5 N	20.02.2013	36.7	36.1
62	CEM II/B-M (P-L) 32.5 R	20.02.2013	43	43.7
32	CEM I 42.5 R- SR5	20.02.2013	48.2	47.9
62	CEM I 42.5 R	20.02.2013	54	50.6
62	CEM II/A-M (P-L) 42.5 R	20.02.2013	55.4	50.9
32	CEM I 42.5 R	20.02.2013	51.7	52
32	CEM II/A-M (P-LL) 42.5 R	20.02.2013	51	52.7
32	CEM II/A-P 42.5 R	20.02.2013	51.1	52.9
16	CEM IV/B (P) 32.5 N	21.02.2013	35.7	36.3
14	CEM IV/B (P-W) 32.5 R	21.02.2013	38.1	40.2
14	CEM II/A-M (P-L) 42.5 N	21.02.2013	48.1	48.3
14	CEM II/A-M (P-L) 42.5 R	21.02.2013	47.7	48.6
16	CEM I 42.5 R- SR5	21.02.2013	50.7	49.1
16	CEM II/A-M (P-L) 42.5 N	21.02.2013	47.9	50.1
16	CEM I 42.5 R	21.02.2013	51.6	51.5
14	CEM I 42.5 R	21.02.2013	52.2	53.3
14	CEM II/B-M (L-W) 42.5 R	21.02.2013	52.4	54.2
16	CEM II/A-LL 42.5 N	21.02.2013	52.1	54.9
25	CEM IV/B (P-W) 32.5 R	22.02.2013	38.6	36.8
25	CEM I 42.5 R	22.02.2013	53.7	49.3
25	CEM II/B-M (L-W) 42.5 R	22.02.2013	56.5	53.5
49	CEM IV/B (P-W) 32.5 R	26.02.2013	36.4	36.1
49	CEM II/A-M (P-L) 42.5 R	26.02.2013	49.3	47
50	CEM I 42.5 R- SR5	26.02.2013	50.4	48.4
28	CEM IV/B (P) 32.5 R	27.02.2013	34.3	35.8
34	CEM IV/B (P) 32.5 R	27.02.2013	38.3	38.3
28	CEM I 42.5 R	27.02.2013	46.4	47.6
34	CEM II/B-M (P-L) 42.5 N	27.02.2013	47.2	50
34	CEM II/A-M (P-L) 42.5 N	27.02.2013	50.8	50
28	CEM II/A-M (P-L) 42.5 R	27.02.2013	47.8	50.4
34	CEM I 42.5 N	27.02.2013	53.5	51.7
44	CEM I 42.5 R- SR5	27.02.2013	50.1	52.4
36	CEM II/B-M (P-LL) 32.5 R	28.02.2013	36.7	34.8
63	CEM IV/B (P) 32.5 R	28.02.2013	40.5	41.6
36	CEM II/A-M (P-LL) 42.5 R	28.02.2013	47.8	47
36	CEM I 42.5 N	28.02.2013	50	47.3
63	CEM I 42.5 R	28.02.2013	48.5	49.8
61	CEM II/B-LL 32.5 R	01.03.2013	36.1	36.3
61	CEM II/A-LL 42.5 R	01.03.2013	52.4	50.3
61	CEM I 42.5 R	01.03.2013	58.5	57.6
18	CEM IV/B (P) 32.5 R	05.03.2013	34.83	36.1
7	CEM IV/B (P) 32.5 R	05.03.2013	41.1	42.6
53	CEM IV/B (P) 32.5 R	05.03.2013	46.6	44.4
18	CEM I 42.5 R	05.03.2013	53.1	51.2
53	CEM II/A-M (P-L) 42.5 R	05.03.2013	56.1	53.5
7	CEM I 42.5 R	05.03.2013	56.8	54.9
7	CEM II/A-LL 42.5 R	05.03.2013	55.2	55.3
53	CEM I 42.5 R	05.03.2013	59.4	58.2
19	CEM IV/B (P) 32.5 R	06.03.2013	34.9	36.1
20	CEM III/B 32.5 N	06.03.2013	36.1	36.5
21	CEM IV/B (P-V) 32.5 N	06.03.2013	41.7	41.2
22	CEM IV/B (P-V) 32.5 R	06.03.2013	44.4	42.3
22	CEM II/B-M (P-V) 42.5 N	06.03.2013	45.5	44.4
19	CEM I 42.5 N	06.03.2013	44.4	45.2
19	CEM II/A-M (P-L) 42.5 R	06.03.2013	45.7	48.3
21	CEM II/A-M (P-L) 42.5 R	06.03.2013	52.4	50.4
19	CEM I 42.5 R	06.03.2013	51.4	53.1
21	CEM I 42.5 R	06.03.2013	54.7	55.2
12	CEM IV/B (P) 32.5 R	07.03.2013	33.7	31.7
11	CEM IV/B (P) 32.5 N	07.03.2013	36.9	37.1
11	CEM IV/B (P-V) 32.5 N	07.03.2013	36.5	37.4
24	CEM II/B-LL 32.5 N	07.03.2013	42.6	40.6
11	CEM IV/A (P) 42.5 N	07.03.2013	46.1	45.1
11	CEM IV/A (P-V) 42.5 R	07.03.2013	46	45.3
11	CEM II/A-LL 42.5 R	07.03.2013	50.5	49.6
11	CEM I 42.5 R	07.03.2013	52.1	51
12	CEM I 42.5 R	07.03.2013	53.2	51.5
12	CEM I 42.5 N	07.03.2013	51.5	52.1
24	CEM I 42.5 R	07.03.2013	56.7	57.5
24	CEM II/A-LL 42.5 R	07.03.2013	58	58.1
42	CEM III/A 32.5 N	08.03.2013	38.4	32.6
27	CEM IV/B (P) 32.5 N	08.03.2013	35.1	33.7
25	CEM II/A-M (P-L) 42.5 R	08.03.2013	51.5	49.4
27	CEM I 42.5 R- SR5	08.03.2013	50.6	49.9
27	CEM I 42.5 R	08.03.2013	52.5	50.9
27	CEM II/A-M (P-L) 42.5 N	09.03.2013	50.4	48.9
50	CEM IV/B (P) 32.5 R	18.03.2013	38.8	40.4
50	CEM II/A-M (P-L) 42.5 R	18.03.2013	47.3	46
50	CEM II/A-L 42.5 R	18.03.2013	47.7	46.1
50	CEM I 42.5 R	18.03.2013	48.4	48.2
50	CEM I 42.5 R- SR5	18.03.2013	48.6	48.2
29	CEM III/A 32.5 R	19.03.2013	35.9	37.5
48	CEM II/B-M (P-L) 32.5 R	19.03.2013	39	38.2
51	CEM IV/B (P) 32.5 R	19.03.2013	35.8	39.2
48	CEM II/A-P 42.5 R	19.03.2013	51.3	51.4
48	CEM II/A-M (P-L) 42.5 R	19.03.2013	50.3	51.9
9	CEM V/A (P-S) 32.5 N	19.03.2013	46.8	52
48	CEM I 42.5 R	19.03.2013	53.9	52.9
9	CEM II/B-M (S-L) 42.5 R	19.03.2013	53.2	53.8
29	CEM II/B-L 42.5 R	19.03.2013	50.7	54.9
51	CEM I 42.5 R	19.03.2013	55.9	55.8
29	CEM I 42.5 R	19.03.2013	51.9	56.1
29	CEM II/A-V 42.5 R	19.03.2013	52.9	56.2
51	CEM I 42.5 R- SR5	19.03.2013	55.2	56.4
9	CEM I 42.5 R	19.03.2013	57.1	57.5
51	CEM II/A-P 42.5 R	19.03.2013	54.2	59
51	CEM I 52.5 N	19.03.2013	56.7	59
9	CEM II/A-M (S-L) 42.5 R	19.03.2013	56.2	59.6
9	CEM II/A-M (S-L) 52.5 N	19.03.2013	61.6	63.4
1	CEM V/A (S-P-Q) 32.5 R	20.03.2013	36.9	36.9
2	CEM II/B-M (P-LL) 32.5 R	20.03.2013	34.5	37
23	CEM II/B-M (S-L) 32.5 N	20.03.2013	36.9	37.6
37	CEM II/B-M (P-LL) 32.5 R	20.03.2013	35.6	37.7
64	CEM IV/B (P) 32.5 N	20.03.2013	38.6	38.9
4	CEM IV/B (P) 32.5 R	20.03.2013	38.7	40.8
65	CEM IV/B (P) 32.5 R	20.03.2013	39.4	41.5
1	CEM III/A 42.5 N	20.03.2013	43.1	41.7
1	CEM II/B-M (P-Q-S) 42.5 N	20.03.2013	47	47.6
2	CEM I 42.5 N	20.03.2013	45.7	48.9
1	CEM I 42.5 R	20.03.2013	48.3	49.3
2	CEM I 42.5 R	20.03.2013	49.3	50.5
1	CEM II/B-LL 42.5 R	20.03.2013	49.3	50.6
4	CEM I 42.5 R	20.03.2013	49	51
37	CEM II/A-M (P-LL) 42.5 N	20.03.2013	49	51.3
2	CEM II/A-P 42.5 R	20.03.2013	50.3	52.7
23	CEM I 42.5 R	20.03.2013	54.7	52.8
37	CEM I 52.5 N	20.03.2013	53.7	55.6
37	CEM I 42.5 R	20.03.2013	53.7	55.9
1	CEM I 52.5 R	20.03.2013	57	55.9
57	CEM II/B-L 32.5 R	21.03.2013	34	34.3
41	CEM III/A 42.5 N	21.03.2013	40.4	36.5
41	CEM V/A (P-S) 32.5 R	21.03.2013	35.6	37.6
58	CEM IV/B (P) 32.5 N	21.03.2013	39.3	39.7
30	CEM IV/B (P) 32.5 R	21.03.2013	36.5	39.8
47	CEM IV/B (P) 32.5 N	21.03.2013	37.1	40.1
47	CEM IV/B (P) 32.5 N-LH/SR	21.03.2013	37.1	40.1
47	CEM I 42.5 R- SR3	21.03.2013	43.9	44.2
54	CEM IV/B (P) 32.5 R	21.03.2013	47.4	45.2
57	CEM II/B-L 42.5 N	21.03.2013	44.6	45.4
41	CEM II/B-M (P-S) 42.5 R	21.03.2013	45.5	47.1
54	CEM I 42.5 R	21.03.2013	47.4	49
47	CEM II/A-M (P-LL) 42.5 R	21.03.2013	46.4	49.8
47	CEM II/B-M (P-S) 42.5 R	21.03.2013	45	50.2
47	CEM I 42.5 R	21.03.2013	47.2	50.7
47	CEM I 42.5 N	21.03.2013	47.6	51.9
57	CEM I 42.5 R	21.03.2013	53.2	53
57	CEM I 52.5 R	21.03.2013	55.1	53.3
58	CEM I 42.5 R	21.03.2013	56.7	55
30	CEM II/A-M (P-L) 42.5 R	21.03.2013	54.9	58.4
58	CEM II/A-LL 42.5 R	21.03.2013	59.5	59.4
30	CEM I 42.5 R	21.03.2013	58.5	60.6
60	CEM II/B-M (P-LL) 32.5 R	22.03.2013	36.2	37.8
60	CEM II/A-M (P-LL) 42.5 N	22.03.2013	53.7	54.7
60	CEM I 42.5 N	22.03.2013	56.2	56.7
44	CEM II/B-M (P-L) 32.5 R	26.03.2013	33.1	35.8

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44	CEM II/B-M (P-L) 32.5 N	26.03.2013	33	36.2
44	CEM II/A-M (P-L) 42.5 R	26.03.2013	44	46.3
32	CEM I 42.5 R- SR5	26.03.2013	49.7	50.8
16	CEM I 42.5 R- SR5	26.03.2013	53.6	52
42	CEM II/B-S 42.5 N	26.03.2013	50.8	52.6
44	CEM I 42.5 R	26.03.2013	50.6	54.8
44	CEM I 42.5 R- SR5	26.03.2013	50.5	56
40	CEM II/B-M (P-L) 32.5 R	27.03.2013	34	34.7
26	CEM IV/B (P) 32.5 N	27.03.2013	36.4	36
15	CEM IV/B (P) 32.5 N	27.03.2013	35.6	38.4
40	CEM I 42.5 R	27.03.2013	48.6	48.9
40	CEM II/A-M (P-L) 42.5 R	27.03.2013	52.9	52.3
26	CEM II/A-M (P-L) 42.5 R	27.03.2013	53.8	54.6
26	CEM II/A-M (P-L) 42.5 R	27.03.2013	53.8	54.6
26	CEM I 42.5 R	27.03.2013	54.3	57.9
38	CEM IV/B (P) 32.5 N	28.03.2013	39.4	42.5
13	CEM II/B-M (P-L) 32.5 R	28.03.2013	42.2	44.1
38	CEM II/A-M (P-LL) 42.5 R	28.03.2013	47.7	48.6
38	CEM I 42.5 R	28.03.2013	48.5	50.8
13	CEM I 42.5 N- SR5	28.03.2013	49.5	51
13	CEM I 42.5 R	28.03.2013	50.8	51.8
3	CEM IV/B (P) 32.5 N	29.03.2013	40.3	39.7
49	CEM I 42.5 R	29.03.2013	54.7	52.2
3	CEM II/A-M (P-L) 42.5 N	29.03.2013	51	53
28	CEM IV/B (P) 32.5 R	02.04.2013	36.4	39
28	CEM I 42.5 R	02.04.2013	47.1	47.6
28	CEM II/A-M (P-L) 42.5 R	02.04.2013	49.5	51.6
61	CEM II/B-LL 32.5 R	03.04.2013	33.5	34.6
34	CEM IV/B (P) 32.5 R	03.04.2013	37.1	38.1
63	CEM IV/B (P) 32.5 R	03.04.2013	42.7	45.6
34	CEM II/A-M (P-L) 42.5 N	03.04.2013	48	45.8
61	CEM II/A-LL 42.5 R	03.04.2013	49.6	49.7
63	CEM II/A-M (P-L) 42.5 R	03.04.2013	48.3	50.7
34	CEM II/B-M (P-L) 42.5 N	03.04.2013	50.9	51.3
63	CEM I 42.5 R	03.04.2013	48.6	51.8
34	CEM I 42.5 N	03.04.2013	52.7	53.8
61	CEM I 42.5 R	03.04.2013	57.9	58.1
36	CEM II/B-M (P-LL) 32.5 R	04.04.2013	38.9	38.3
36	CEM I 42.5 N	04.04.2013	48.4	47.7
36	CEM II/A-M (P-LL) 42.5 R	04.04.2013	49.4	50.1
49	CEM IV/B (P-W) 32.5 R	05.04.2013	38.1	39
49	CEM I 42.5 R	05.04.2013	54.5	52.6
49	CEM II/A-M (P-L) 42.5 R	05.04.2013	51.8	53.2
62	CEM II/B-M (P-L) 32.5 R	08.04.2013	38.2	38.7
62	CEM II/A-M (P-L) 42.5 R	08.04.2013	54.5	53.1
62	CEM I 42.5 R	08.04.2013	54.6	53.4
31	CEM II/B-LL 32.5 R	09.04.2013	35.2	34.3
55	CEM II/B-M (W-L) 32.5 R	09.04.2013	38.9	37.1
10	CEM II/B-LL 32.5 R	09.04.2013	36.6	39.3
46	CEM IV/B (P) 32.5 N	09.04.2013	43.1	42
31	CEM I 42.5 R	09.04.2013	49.9	49.2
55	CEM II/A-LL 42.5 R	09.04.2013	51.7	49.3
10	CEM II/B-LL 42.5 N	09.04.2013	45.1	49.7
55	CEM I 42.5 R	09.04.2013	55.2	54
46	CEM I 42.5 R	09.04.2013	54.8	54.2
46	CEM II/A-LL 42.5 R	09.04.2013	52.7	54.3
10	CEM II/A-LL 42.5 R	09.04.2013	50.9	54.9
10	CEM I 42.5 R	09.04.2013	58	60.4
52	CEM II/B-M (P-L) 32.5 R	10.04.2013	41	41.3
59	CEM IV/B (P) 32.5 R	10.04.2013	41.5	41.6
8	CEM II/B-M (P-LL) 32.5 R	10.04.2013	42.3	42
8	CEM II/B-M (P-LL) 42.5 N	10.04.2013	48.8	48.3
67	CEM I 42.5 N	10.04.2013	46.86	50.3
52	CEM I 42.5 R	10.04.2013	53.1	51.7
8	CEM II/A-M (P-LL) 42.5 R	10.04.2013	54.5	55.3
59	CEM II/A-M (P-LL) 42.5 R	10.04.2013	53.2	55.7
59	CEM I 42.5 R	10.04.2013	56	57.4
8	CEM I 42.5 R	10.04.2013	57.8	58.5
43	CEM II/B-M (P-L) 32.5 N	11.04.2013	34.5	33.2
56	CEM II/B-M (P-LL) 32.5 R	11.04.2013	33.1	34.6
39	CEM II/B-M (P-LL) 32.5 R	11.04.2013	38.8	40.1
43	CEM II/A-M (P-L) 42.5 R	11.04.2013	47.5	48.4
43	CEM I 42.5 R	11.04.2013	50.3	51.8
56	CEM I 42.5 R	11.04.2013	54.9	54
56	CEM II/A-LL 42.5 R	11.04.2013	54.3	54.1
56	CEM II/A-M (P-LL) 42.5 R	11.04.2013	53.5	55.1
39	CEM II/A-M (P-LL) 42.5 R	11.04.2013	55.6	55.9
39	CEM I 42.5 R	11.04.2013	61.6	61.7
59	CEM III/A 42.5 N	12.04.2013	47	47
32	CEM IV/B (P) 32.5 N	16.04.2013	34.3	35.2
5	CEM II/B-M (P-LL) 32.5 R	16.04.2013	38.8	37
32	CEM I 42.5 R- SR5	16.04.2013	48.5	49.7
5	CEM I 42.5 R	16.04.2013	53.6	51.4
62	CEM II/A-L 42.5 R	16.04.2013	56.5	54
32	CEM II/A-P 42.5 R	16.04.2013	53.3	54.1
32	CEM I 42.5 R	16.04.2013	51.6	54.9
5	CEM I 52.5 N	16.04.2013	64.3	61.5
25	CEM IV/B (P-W) 32.5 R	17.04.2013	35	35.7
16	CEM IV/B (P) 32.5 N	17.04.2013	38.2	39.3
50	CEM I 42.5 R- SR5	17.04.2013	43.8	43.2
25	CEM II/A-M (P-L) 42.5 R	17.04.2013	52.9	50.1
16	CEM I 42.5 R	17.04.2013	53.1	51.6
16	CEM I 42.5 R- SR5	17.04.2013	52.3	53.1
25	CEM II/B-M (L-W) 42.5 R	17.04.2013	56.2	54.8
25	CEM I 42.5 R	17.04.2013	58.7	54.8
48	CEM II/B-M (P-L) 32.5 R	18.04.2013	35	34.6
14	CEM IV/B (P-W) 32.5 R	18.04.2013	38.9	40.4
41	CEM III/A 32.5 N	18.04.2013	46.6	47.9
14	CEM II/A-M (P-L) 42.5 R	18.04.2013	49.1	48.1
14	CEM II/A-M (P-L) 42.5 N	18.04.2013	48.7	48.9
14	CEM II/B-M (L-W) 42.5 R	18.04.2013	50.4	52.1
14	CEM I 42.5 R	18.04.2013	53.9	54
2	CEM I 42.5 N	19.04.2013	47.8	47.6
44	CEM I 42.5 R- SR5	19.04.2013	52.8	51.8
13	CEM I 42.5 N- SR5	24.04.2013	51.1	52.8
42	CEM II/B-S 42.5 N	25.04.2013	50.4	49.7
51	CEM I 42.5 R- SR5	26.04.2013	59.3	57.2
50	CEM IV/B (P) 32.5 R	06.05.2013	36.2	37.4
50	CEM II/A-L 42.5 R	06.05.2013	43.7	44.4
50	CEM I 42.5 R	06.05.2013	44.4	45.1
50	CEM II/A-M (P-L) 42.5 R	06.05.2013	48.8	50.2
27	CEM IV/B (P) 32.5 N	07.05.2013	35.2	35.2
53	CEM IV/B (P) 32.5 R	07.05.2013	35.7	36
48	CEM II/B-M (P-L) 32.5 R	07.05.2013	37.2	37.3
29	CEM III/A 32.5 R	07.05.2013	42.2	42.6
29	CEM I 42.5 R	07.05.2013	48	46.7
27	CEM I 42.5 R- SR5	07.05.2013	53.2	49.2
48	CEM II/A-P 42.5 R	07.05.2013	49.5	51.2
48	CEM I 42.5 R	07.05.2013	49.5	51.3
53	CEM II/A-M (P-L) 42.5 R	07.05.2013	52.3	51.3
27	CEM II/A-M (P-L) 42.5 N	07.05.2013	50.8	52.8
29	CEM II/B-L 42.5 R	07.05.2013	50.4	53.1
29	CEM II/A-V 42.5 R	07.05.2013	52.6	53.8
27	CEM I 42.5 R	07.05.2013	52.6	54.1
53	CEM I 42.5 R	07.05.2013	60	57
1	CEM V/A (S-P-Q) 32.5 R	08.05.2013	33.6	31.9
2	CEM II/B-M (P-LL) 32.5 R	08.05.2013	33.9	35.6
37	CEM II/B-M (P-LL) 32.5 R	08.05.2013	37.9	38.2
21	CEM IV/B (P-V) 32.5 N	08.05.2013	42	41.1
22	CEM IV/B (P-V) 32.5 R	08.05.2013	38.4	42.1
22	CEM II/B-M (P-V) 42.5 N	08.05.2013	45.8	46.4
2	CEM I 42.5 N	08.05.2013	46.3	46.5
1	CEM II/B-M (P-Q-S) 42.5 N	08.05.2013	45.8	47.4
1	CEM III/A 42.5 N	08.05.2013	47.5	47.6
1	CEM II/B-LL 42.5 R	08.05.2013	45.7	48
2	CEM I 42.5 R	08.05.2013	48.2	48
1	CEM I 42.5 R	08.05.2013	51.2	49.2
37	CEM II/A-M (P-LL) 42.5 N	08.05.2013	50.3	50.7
21	CEM II/A-M (P-L) 42.5 R	08.05.2013	48	51.2
2	CEM II/A-P 42.5 R	08.05.2013	50.9	54.2
1	CEM I 52.5 R	08.05.2013	53.8	54.2
21	CEM I 42.5 R	08.05.2013	55.2	55.4
37	CEM I 42.5 R	08.05.2013	56.9	57.1
37	CEM I 52.5 N	08.05.2013	56.9	57.3
47	CEM IV/B (P) 32.5 N	09.05.2013	34.8	35.3
11	CEM IV/B (P) 32.5 N	09.05.2013	37.1	35.7

Code of The Manufacturer	Type of Cement	The Date of Sampling	Standard Compressive Strength Result of Manufacturer (MPa)	Standard Compressive Strength Result of Notified Body (MPa)	Code of The Manufacturer	Type of Cement	The Date of Sampling	Standard Compressive Strength Result of Manufacturer (MPa)	Standard Compressive Strength Result of Notified Body (MPa)
41	CEM V/A (P-S) 32.5 R	09.05.2013	40.1	40.1	38	CEM II/A-M (P-LL) 42.5 R	29.05.2013	46.7	47.8
24	CEM II/B-LL 32.5 N	09.05.2013	42.7	42.8	3	CEM II/A-M (P-L) 42.5 N	29.05.2013	50.5	49.8
11	CEM IV/A (P) 42.5 N	09.05.2013	46.2	45	38	CEM I 42.5 N	29.05.2013	49.5	49.9
11	CEM II/A-LL 42.5 R	09.05.2013	47.9	46.1	38	CEM I 42.5 R	29.05.2013	48.6	50
41	CEM III/A 42.5 N	09.05.2013	46.2	47.5	58	CEM II/A-LL 42.5 R	29.05.2013	51	52.9
47	CEM II/B-M (P-S) 42.5 R	09.05.2013	46.8	47.5	38	CEM I 52.5 N	29.05.2013	53.5	53.3
41	CEM II/B-M (P-S) 42.5 R	09.05.2013	47.9	47.7	57	CEM I 52.5 R	29.05.2013	57	56.4
54	CEM IV/B (P) 32.5 R	09.05.2013	42.8	47.9	58	CEM I 42.5 R	29.05.2013	58	56.7
47	CEM I 42.5 N	09.05.2013	47.8	48.3	57	CEM I 42.5 R	29.05.2013	56.5	57.5
54	CEM I 42.5 R	09.05.2013	46.8	48.5	30	CEM IV/B (P) 32.5 R	30.05.2013	35.1	34.2
47	CEM I 42.5 R	09.05.2013	48	48.9	30	CEM II/A-M (P-L) 42.5 R	30.05.2013	54	57.9
11	CEM I 42.5 R	09.05.2013	52.4	53.6	30	CEM I 42.5 R	30.05.2013	56.4	58.6
24	CEM II/A-LL 42.5 R	09.05.2013	54.2	57	46	CEM IV/B (P) 32.5 N	04.06.2013	35.8	32.5
24	CEM I 42.5 R	09.05.2013	57.8	58.5	31	CEM II/B-LL 32.5 R	04.06.2013	39.1	39.8
11	CEM II/A-M (V-LL) 42.5 R	09.05.2013	59.9	61.6	31	CEM I 42.5 R	04.06.2013	53.5	51.6
60	CEM II/B-M (P-LL) 32.5 R	10.05.2013	36.5	36.2	46	CEM II/A-LL 42.5 R	04.06.2013	52.5	56
60	CEM II/A-M (P-LL) 42.5 N	10.05.2013	51	51.1	46	CEM I 42.5 R	04.06.2013	55.8	60.2
60	CEM I 42.5 N	10.05.2013	53.8	52.3	59	CEM IV/B (P) 32.5 R	05.06.2013	44.4	42.1
12	CEM IV/B (P) 32.5 R	15.05.2013	35.9	37.9	52	CEM II/B-M (P-L) 32.5 R	05.06.2013	42.4	42.6
20	CEM III/B 32.5 N	15.05.2013	37.1	39.2	59	CEM III/A 42.5 N	05.06.2013	51.7	50.8
42	CEM III/A 32.5 N	15.05.2013	39.6	39.3	59	CEM I 42.5 R	05.06.2013	51.9	50.8
12	CEM II/A-M (P-L) 42.5 R	15.05.2013	45.9	47.6	59	CEM II/A-M (P-LL) 42.5 R	05.06.2013	53.3	52.2
12	CEM IV/A (P) 42.5R- SR	15.05.2013	48.8	47.7	52	CEM I 42.5 R	05.06.2013	55.6	52.4
42	CEM II/B-S 42.5 N	15.05.2013	47.8	50.1	39	CEM II/B-M (P-LL) 32.5 R	06.06.2013	38.9	40.8
12	CEM I 42.5 R	15.05.2013	55.7	55.8	56	CEM II/B-M (P-LL) 32.5 R	06.06.2013	40.3	42
12	CEM I 42.5 N	15.05.2013	54.5	56	56	CEM II/A-M (P-LL) 42.5 R	06.06.2013	52.1	54.6
19	CEM IV/B (P) 32.5 R	16.05.2013	39.8	38.3	56	CEM I 42.5 R	06.06.2013	52.8	54.6
19	CEM II/A-M (P-L) 42.5 R	16.05.2013	50.7	50.9	56	CEM II/A-LL 42.5 R	06.06.2013	52.1	55.2
19	CEM I 42.5 N	16.05.2013	50.6	52	39	CEM I 42.5 R	06.06.2013	56.4	58.5
19	CEM I 42.5 R- SR5	16.05.2013	49.5	52.5	39	CEM II/A-M (P-LL) 42.5 R	06.06.2013	55.8	59.9
19	CEM I 42.5 R	16.05.2013	51.1	54.1	41	CEM III/A 32.5 N	07.06.2013	50	51.3
23	CEM II/B-M (S-L) 32.5 N	17.05.2013	33.9	35.9	49	CEM IV/B (P-W) 32.5 R	10.06.2013	35.8	36.4
23	CEM II/B-M (P-L) 32.5 R	17.05.2013	33.5	36.2	49	CEM II/A-M (P-L) 42.5 R	10.06.2013	51.2	50.5
23	CEM IV/A (P) 42.5N- SR	17.05.2013	48	49.4	49	CEM I 42.5 R	10.06.2013	53.8	53
23	CEM I 32.5 R- SR5	17.05.2013	47.8	50.4	28	CEM IV/B (P) 32.5 R	11.06.2013	34.5	36.6
23	CEM I 42.5 R	17.05.2013	57.2	55	67	CEM I 42.5 N	11.06.2013	47.86	46.7
18	CEM IV/B (P) 32.5 R	20.05.2013	35.09	36.6	28	CEM I 42.5 R	11.06.2013	47.4	49.4
7	CEM IV/B (P) 32.5 R	20.05.2013	37.5	42.5	28	CEM II/A-M (P-L) 42.5 R	11.06.2013	51.2	54.5
18	CEM I 42.5 R	20.05.2013	50.52	52.4	61	CEM II/B-LL 32.5 R	12.06.2013	34.6	34.3
7	CEM II/A-LL 42.5 R	20.05.2013	53.1	54.9	36	CEM II/B-M (P-LL) 32.5 R	12.06.2013	36.2	35.7
7	CEM I 42.5 R	20.05.2013	54	56.4	36	CEM I 42.5 N	12.06.2013	45.4	44.4
40	CEM II/B-M (P-L) 32.5 R	21.05.2013	36.5	38.6	36	CEM II/A-M (P-LL) 42.5 R	12.06.2013	46.2	46.3
26	CEM IV/B (P) 32.5 N	21.05.2013	37.2	40	61	CEM II/A-LL 42.5 R	12.06.2013	49.5	48.4
13	CEM II/B-M (P-L) 32.5 R	21.05.2013	40.3	40.5	61	CEM I 42.5 R	12.06.2013	57.2	56.2
40	CEM I 42.5 R	21.05.2013	52	51.8	63	CEM IV/B (P) 32.5 R	13.06.2013	46.5	45.4
13	CEM I 42.5 N- SR5	21.05.2013	52.9	52.3	63	CEM I 42.5 R	13.06.2013	49.6	52.1
40	CEM II/A-M (P-L) 42.5 R	21.05.2013	53.4	53.3	20	CEM III/B 32.5 N	14.06.2013	34	34.7
13	CEM I 42.5 R	21.05.2013	52.2	54	20	CEM III/A 42.5 N	14.06.2013	50.2	49.5
26	CEM I 42.5 R	21.05.2013	52.3	55.8	20	CEM III/B 42.5 N	14.06.2013	50.7	50.6
51	CEM IV/B (P) 32.5 R	27.05.2013	40.7	42.2	34	CEM IV/B (P) 32.5 R	15.06.2013	39.4	39.5
51	CEM I 52.5 N	27.05.2013	61.5	57.1	34	CEM II/A-M (P-L) 42.5 N	15.06.2013	49.8	48.4
51	CEM II/A-P 42.5 R	27.05.2013	58.3	57.8	34	CEM II/B-M (P-L) 42.5 N	15.06.2013	50.1	50.4
51	CEM I 42.5 R- SR5	27.05.2013	55.6	58.3	34	CEM I 42.5 N	15.06.2013	52	52.2
51	CEM I 42.5 R	27.05.2013	61.3	59.1	62	CEM II/B-M (P-L) 32.5 R	17.06.2013	37.5	37.1
4	CEM IV/B (P) 32.5 R	28.05.2013	39.7	38	48	CEM II/A-M (P-L) 42.5 R	17.06.2013	49	50.5
65	CEM IV/B (P) 32.5 R	28.05.2013	39.6	38.1	62	CEM I 42.5 R	17.06.2013	54.6	52.1
44	CEM II/B-M (P-L) 32.5 R	28.05.2013	36.6	38.4	62	CEM II/A-M (P-L) 42.5 R	17.06.2013	55.3	54.4
44	CEM II/B-M (P-L) 32.5 N	28.05.2013	36.1	39.3	10	CEM II/B-LL 32.5 R	18.06.2013	37.3	39.1
9	CEM V/A (P-S) 32.5 N	28.05.2013	37	39.8	8	CEM II/B-M (P-LL) 32.5 R	18.06.2013	38.6	43.1
44	CEM II/A-M (P-L) 42.5 R	28.05.2013	45.4	47.1	10	CEM II/B-LL 42.5 N	18.06.2013	47	49.5
4	CEM I 42.5 R	28.05.2013	51	49.6	8	CEM II/B-M (P-LL) 42.5 N	18.06.2013	48	51.8
44	CEM I 42.5 R	28.05.2013	49.9	52.7	8	CEM II/A-M (P-LL) 42.5 R	18.06.2013	50	54.3
9	CEM I 42.5 R	28.05.2013	57.3	57.5	10	CEM II/A-LL 42.5 R	18.06.2013	53.5	54.8
9	CEM II/B-M (S-L) 42.5 R	28.05.2013	54.9	58.5	10	CEM I 42.5 R	18.06.2013	56.6	58.6
9	CEM II/A-M (S-L) 42.5 R	28.05.2013	59.6	62.1	8	CEM I 42.5 R	18.06.2013	55	62
9	CEM II/A-M (S-L) 52.5 N	28.05.2013	63.3	64.3	43	CEM II/B-M (P-L) 32.5 N	19.06.2013	39.5	42.4
38	CEM IV/B (P) 32.5 N	29.05.2013	35.3	35.6	43	CEM II/A-M (P-L) 42.5 R	19.06.2013	47.3	48
58	CEM IV/B (P) 32.5 N	29.05.2013	37	38	43	CEM I 42.5 R	19.06.2013	49.5	51.2
3	CEM IV/B (P) 32.5 N	29.05.2013	38.9	38.3	55	CEM II/B-M (W-L) 32.5 R	20.06.2013	38.6	37.1
57	CEM II/B-L 32.5 R	29.05.2013	39.1	39.1	55	CEM II/A-LL 42.5 R	20.06.2013	49.9	49.4
15	CEM IV/B (P) 32.5 N	29.05.2013	37.8	40.1	55	CEM I 42.5 R	20.06.2013	52.1	52.7
57	CEM II/B-L 42.5 N	29.05.2013	47.6	44.4	23	CEM II/B-M (P-L) 32.5 R	21.06.2013	32.7	30.3
57	CEM II/A-L 42.5 R	29.05.2013	44.4	47.3	27	CEM I 42.5 R- SR5	21.06.2013	50.3	51.8

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5	CEM II/B-M (P-LL) 32.5 R	24.06.2013	38.9	38.1
5	CEM I 42.5 R	24.06.2013	53.7	52.3
5	CEM I 52.5 N	24.06.2013	64.7	62.4
32	CEM IV/B (P) 32.5 N	25.06.2013	34.2	34.4
32	CEM II/A-M (P-LL) 42.5 R	25.06.2013	48.6	51
32	CEM I 42.5 R	25.06.2013	52.2	52.6
32	CEM I 42.5 R- SR5	25.06.2013	49.5	53
16	CEM IV/B (P) 32.5 N	26.06.2013	34.2	34.6
56	CEM IV/B (P) 32.5 R- SR	26.06.2013	38.7	42.4
16	CEM I 42.5 R	26.06.2013	50.1	50.9
16	CEM I 42.5 R- SR5	26.06.2013	51.4	53
16	CEM II/A-LL 42.5 N	26.06.2013	51.9	54.1
25	CEM IV/B (P-W) 32.5 R	27.06.2013	32.7	31.7
14	CEM IV/B (P-W) 32.5 R	27.06.2013	37.4	38
25	CEM II/A-M (P-L) 42.5 R	27.06.2013	49.3	48.8
14	CEM II/A-M (P-L) 42.5 N	27.06.2013	46.9	49
14	CEM II/A-M (P-L) 42.5 R	27.06.2013	47.1	49.7
25	CEM I 42.5 R	27.06.2013	57.5	54.3
14	CEM I 42.5 R	27.06.2013	53	54.5
25	CEM II/B-M (L-W) 42.5 R	27.06.2013	56.5	55.3
14	CEM II/B-M (L-W) 42.5 R	27.06.2013	54.2	56.3
67	CEM I 42.5 N	04.07.2013	46.53	47
42	CEM III/A 32.5 N	22.07.2013	35	30.7
1	CEM V/A (S-P-Q) 32.5 R	22.07.2013	38.3	38
42	CEM II/B-S 42.5 N	22.07.2013	45.1	42.1
50	CEM IV/B (P) 32.5 R	22.07.2013	41.7	42.3
27	CEM IV/B (P) 32.5 N	22.07.2013	38.1	42.7
50	CEM II/A-L 42.5 R	22.07.2013	43.3	43.2
1	CEM III/A 42.5 N	22.07.2013	44	45.1
50	CEM I 42.5 R	22.07.2013	47.2	47.4
1	CEM II/B-M (P-Q-S) 42.5 N	22.07.2013	46.7	48.3
50	CEM II/A-M (P-L) 42.5 R	22.07.2013	48.3	48.4
27	CEM II/A-M (P-L) 42.5 N	22.07.2013	47.9	49.8
27	CEM I 42.5 R	22.07.2013	51	51.2
1	CEM II/B-LL 42.5 R	22.07.2013	48.4	52
50	CEM I 42.5 R- SR5	22.07.2013	51	52
27	CEM I 42.5 R- SR5	22.07.2013	50.1	52.3
1	CEM I 42.5 R	22.07.2013	51.7	53.2
1	CEM I 52.5 R	22.07.2013	57.3	58.7
41	CEM III/A 32.5 N	23.07.2013	33.1	33
41	CEM V/A (P-S) 32.5 R	23.07.2013	34.7	35.3
29	CEM III/A 32.5 R	23.07.2013	35.6	36.2
24	CEM II/B-LL 32.5 N	23.07.2013	37.8	38.3
12	CEM IV/B (P) 32.5 R	23.07.2013	34.7	39.4
41	CEM III/A 42.5 N	23.07.2013	43.1	42.8
41	CEM I 42.5 R	23.07.2013	46.2	47
41	CEM II/B-M (P-S) 42.5 R	23.07.2013	46.4	47.6
29	CEM II/B-L 42.5 R	23.07.2013	49.2	49.9
29	CEM I 42.5 R	23.07.2013	50.8	54.7
12	CEM I 42.5 N	23.07.2013	53.7	55.5
29	CEM II/A-V 42.5 R	23.07.2013	54.6	56.4
12	CEM I 42.5 R	23.07.2013	52.1	56.8
24	CEM II/A-LL 42.5 R	23.07.2013	54.7	56.9
24	CEM I 42.5 R	23.07.2013	55.3	58
24	CEM I 52.5 N	23.07.2013	57.6	58.8
11	CEM IV/B (P) 32.5 N	24.07.2013	37.1	35.6
2	CEM II/B-M (P-LL) 32.5 R	24.07.2013	35.5	37
48	CEM II/B-M (P-L) 32.5 R	24.07.2013	37.1	37.2
19	CEM IV/B (P) 32.5 R	24.07.2013	38.6	41.5
20	CEM III/B 42.5 N	24.07.2013	45.7	44.4
11	CEM IV/A (P) 42.5 N	24.07.2013	45.7	44.6
20	CEM III/A 42.5 N	24.07.2013	46.2	46.1
2	CEM I 42.5 N	24.07.2013	46.7	47.2
11	CEM I 42.5 R	24.07.2013	49.7	48.2
19	CEM II/A-M (P-L) 42.5 R	24.07.2013	47.3	48.7
2	CEM I 42.5 R	24.07.2013	49.4	50.5
19	CEM I 42.5 R	24.07.2013	51.3	50.6
2	CEM II/A-P 42.5 R	24.07.2013	48.7	51.6
48	CEM I 42.5 R	24.07.2013	51	52.5
19	CEM I 42.5 R- SR5	24.07.2013	49.2	52.9
11	CEM II/A-M (V-LL) 42.5 R	24.07.2013	55.5	53.6
19	CEM I 42.5 N	24.07.2013	51.2	54.3
37	CEM II/B-M (P-LL) 32.5 R	25.07.2013	38.5	38.6

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23	CEM II/B-M (P-L) 32.5 R	25.07.2013	41	44
23	CEM I 32.5 R- SR5	25.07.2013	53.8	51.9
37	CEM II/A-M (P-LL) 42.5 N	25.07.2013	52.3	52.4
37	CEM I 52.5 N	25.07.2013	54.1	52.4
37	CEM I 42.5 R	25.07.2013	54.1	53.3
62	CEM II/A-L 42.5 R	25.07.2013	54.3	54.9
23	CEM I 42.5 R	25.07.2013	54.9	55.3
54	CEM IV/B (P) 32.5 R	26.07.2013	37.6	39.5
47	CEM IV/B (P) 32.5 N	26.07.2013	37.3	39.6
47	CEM IV/B (P) 32.5 N-LH/SR	26.07.2013	36.8	40.9
47	CEM II/B-M (P-S) 42.5 R	26.07.2013	44.6	45.9
47	CEM I 42.5 R- SR3	26.07.2013	46.1	46.9
47	CEM I 42.5 R	26.07.2013	46.2	48.5
47	CEM I 42.5 N	26.07.2013	45.8	48.8
54	CEM I 42.5 R	26.07.2013	50.4	53.1
31	CEM II/B-LL 32.5 R	30.07.2013	35	34
44	CEM II/B-M (P-L) 32.5 N	30.07.2013	34	35.2
44	CEM II/B-M (P-L) 32.5 R	30.07.2013	34.5	35.6
46	CEM IV/B (P) 32.5 N	30.07.2013	36	36.2
7	CEM IV/B (P) 32.5 R	30.07.2013	39.8	46.6
31	CEM I 42.5 R	30.07.2013	51.8	48.7
44	CEM II/A-M (P-L) 42.5 R	30.07.2013	47.1	49.5
44	CEM I 42.5 R	30.07.2013	48.9	50.8
44	CEM I 42.5 R- SR5	30.07.2013	52.2	51.6
46	CEM II/A-LL 42.5 R	30.07.2013	56.3	53.4
7	CEM II/A-LL 42.5 R	30.07.2013	55.1	55.1
7	CEM I 42.5 R	30.07.2013	57.6	56.8
46	CEM I 42.5 R	30.07.2013	57.5	56.9
38	CEM IV/B (P) 32.5 N	31.07.2013	34.6	32.5
40	CEM II/B-M (P-L) 32.5 R	31.07.2013	32.9	34.7
59	CEM IV/B (P) 32.5 R	31.07.2013	38.9	36
3	CEM IV/B (P) 32.5 N	31.07.2013	36.4	36.2
13	CEM II/B-M (P-L) 32.5 R	31.07.2013	35.3	37.5
52	CEM II/B-M (P-L) 32.5 R	31.07.2013	41.2	40
15	CEM IV/B (P) 32.5 N	31.07.2013	41.7	42.9
59	CEM III/A 42.5 N	31.07.2013	50.8	49.1
3	CEM II/A-M (P-L) 42.5 N	31.07.2013	49.7	50.1
38	CEM II/A-M (P-LL) 42.5 R	31.07.2013	50	50.6
32	CEM II/A-M (P-LL) 42.5 R	31.07.2013	49.2	52
38	CEM I 42.5 R	31.07.2013	49.8	52
40	CEM I 42.5 R	31.07.2013	50.9	52.8
52	CEM I 42.5 R	31.07.2013	55.6	53.1
40	CEM II/A-M (P-L) 42.5 R	31.07.2013	52.7	53.6
13	CEM I 42.5 N- SR5	31.07.2013	51.7	54.6
13	CEM I 42.5 R	31.07.2013	54.4	54.8
26	CEM I 42.5 R	31.07.2013	56.2	59.7
18	CEM IV/B (P) 32.5 R	01.08.2013	36.9	34.9
26	CEM IV/B (P) 32.5 N	01.08.2013	37.4	37.1
56	CEM II/B-M (P-LL) 32.5 R	01.08.2013	50.5	52.1
56	CEM II/A-LL 42.5 R	01.08.2013	50.8	53.1
56	CEM II/A-M (P-LL) 42.5 R	01.08.2013	52.3	54.5
18	CEM I 42.5 R	01.08.2013	53.82	55.1
56	CEM I 42.5 R	01.08.2013	56.2	57.9
59	CEM II/A-M (P-LL) 42.5 R	02.08.2013	52.3	51.7
59	CEM I 42.5 R	02.08.2013	52.6	51.9
48	CEM II/A-M (P-L) 42.5 R	06.08.2013	54.1	56.4
51	CEM IV/B (P) 32.5 R	13.08.2013	38.3	39.1
53	CEM IV/B (P) 32.5 R	13.08.2013	40.6	39.1
51	CEM I 52.5 N	13.08.2013	53.1	50.2
51	CEM I 42.5 R	13.08.2013	51.8	51.3
51	CEM II/A-P 42.5 R	13.08.2013	51.1	51.4
51	CEM I 42.5 R- SR5	13.08.2013	52.3	52.7
19	CEM I 42.5 R- SR5	13.08.2013	54.7	54.3
53	CEM I 42.5 R	13.08.2013	59.1	59.7
53	CEM II/A-M (P-L) 42.5 R	13.08.2013	59.8	60.4
9	CEM V/A (P-S) 32.5 N	14.08.2013	35.4	39.4
9	CEM II/A-M (S-L) 42.5 R	14.08.2013	58.2	56.2
9	CEM I 42.5 R	14.08.2013	59.9	56.4
9	CEM II/A-M (S-L) 52.5 N	14.08.2013	58.6	61.2
65	CEM IV/B (P) 32.5 R	15.08.2013	38.2	36
57	CEM II/B-L 32.5 R	15.08.2013	39.4	39.5
21	CEM IV/B (P-V) 32.5 N	15.08.2013	42.8	40.5
57	CEM II/B-L 42.5 N	15.08.2013	45.1	45.1

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4	CEM I 42.5 R	15.08.2013	51.8	51.2
21	CEM II/A-M (P-L) 42.5 R	15.08.2013	50	51.5
57	CEM I 42.5 R	15.08.2013	55.6	54.3
57	CEM I 52.5 R	15.08.2013	56	55.4
21	CEM I 42.5 R	15.08.2013	58.6	58.4
58	CEM IV/B (P) 32.5 N	16.08.2013	34.7	32.6
30	CEM IV/B (P) 32.5 R	16.08.2013	44.1	44.3
11	CEM II/A-M (V-LL) 42.5 R	16.08.2013	54.8	55.4
58	CEM II/A-LL 42.5 R	16.08.2013	57.1	55.8
58	CEM I 42.5 R	16.08.2013	56	56.4
30	CEM II/A-M (P-L) 42.5 R	16.08.2013	56.6	61.4
30	CEM I 42.5 R	16.08.2013	59.7	62.4
23	CEM I 32.5 R- SR5	17.08.2013	40.1	43.8
9	CEM II/B-M (S-L) 42.5 R	17.08.2013	57.3	56.7
32	CEM IV/B (P) 32.5 N	20.08.2013	36.6	37.4
5	CEM II/B-M (P-LL) 32.5 R	20.08.2013	38.8	39.2
32	CEM I 42.5 R- SR5	20.08.2013	48.4	53.2
5	CEM I 42.5 R	20.08.2013	53	53.3
32	CEM I 42.5 R	20.08.2013	50.9	54.3
32	CEM II/A-M (P-LL) 42.5 R	20.08.2013	51.1	55.2
5	CEM I 52.5 N	20.08.2013	65.3	66.7
16	CEM IV/B (P) 32.5 N	21.08.2013	35.6	32.6
22	CEM IV/B (P-V) 32.5 R	21.08.2013	40.1	40.8
22	CEM II/B-M (P-V) 42.5 N	21.08.2013	46.2	46.2
41	CEM III/A 32.5 N	21.08.2013	44.5	47
16	CEM I 42.5 R	21.08.2013	54	52.5
16	CEM II/A-LL 42.5 N	21.08.2013	53.6	54.2
16	CEM I 42.5 R- SR5	21.08.2013	56.2	56.7
25	CEM IV/B (P-W) 32.5 R	22.08.2013	36.8	38.7
14	CEM IV/B (P-W) 32.5 R	22.08.2013	38.6	40.6
14	CEM II/A-M (P-L) 42.5 N	22.08.2013	48.8	50.4
14	CEM II/A-M (P-L) 42.5 R	22.08.2013	49	50.6
25	CEM II/A-M (P-L) 42.5 R	22.08.2013	51.5	51.4
25	CEM II/B-M (L-W) 42.5 R	22.08.2013	55.1	53.5
25	CEM I 42.5 R	22.08.2013	54.4	54.2
14	CEM II/B-M (L-W) 42.5 R	22.08.2013	52.1	54.5
14	CEM I 42.5 R	22.08.2013	53.2	55.4
49	CEM IV/B (P-W) 32.5 R	26.08.2013	36.8	39.1
49	CEM II/A-M (P-L) 42.5 R	26.08.2013	51.8	51.1
49	CEM I 42.5 R	26.08.2013	57.2	55.4
36	CEM II/B-M (P-LL) 32.5 R	27.08.2013	37.2	36.8
36	CEM II/A-M (P-LL) 42.5 R	27.08.2013	48.1	47
51	CEM II/A-LL 42.5 R	27.08.2013	45	47.5
36	CEM I 42.5 N	27.08.2013	48.4	48
63	CEM IV/B (P) 32.5 R	28.08.2013	38.2	37.5
61	CEM II/B-LL 32.5 R	28.08.2013	38	37.6
62	CEM II/B-M (P-L) 32.5 R	28.08.2013	38.5	39
61	CEM II/A-LL 42.5 R	28.08.2013	51	51.3
63	CEM I 42.5 R	28.08.2013	54	53.4
62	CEM I 42.5 R	28.08.2013	53.9	53.7
62	CEM II/A-L 42.5 R	28.08.2013	54.1	54.3
61	CEM I 42.5 R	28.08.2013	58.5	56.8
34	CEM IV/B (P) 32.5 R	29.08.2013	33.6	33.6
28	CEM IV/B (P) 32.5 R	29.08.2013	37.1	38.2
28	CEM I 42.5 R	29.08.2013	50.2	51.3
34	CEM I 42.5 N	29.08.2013	50.7	52.2
34	CEM II/A-M (P-L) 42.5 N	29.08.2013	51	52.6
34	CEM II/B-M (P-L) 42.5 N	29.08.2013	51.7	54
28	CEM II/A-M (P-L) 42.5 R	29.08.2013	55	57.2
55	CEM II/B-LL 32.5 R	04.09.2013	35	32.9
55	CEM II/B-M (W-L) 32.5 R	04.09.2013	40.9	38.8
10	CEM II/B-LL 32.5 R	04.09.2013	39.7	41.1
55	CEM II/A-LL 42.5 R	04.09.2013	50.9	50.3
55	CEM I 42.5 R	04.09.2013	51	50.3
10	CEM II/B-LL 42.5 N	04.09.2013	52.6	52.7
10	CEM II/A-LL 42.5 R	04.09.2013	53.6	55.9
10	CEM I 42.5 R	04.09.2013	60.7	62.1
8	CEM II/B-M (P-LL) 32.5 R	05.09.2013	42.7	41.8
8	CEM II/A-M (P-LL) 42.5 R	05.09.2013	54.1	54.6
8	CEM I 42.5 R	05.09.2013	61.4	60
43	CEM II/B-M (P-L) 32.5 N	06.09.2013	35.6	33.4
43	CEM II/A-M (P-L) 42.5 R	06.09.2013	45.3	45.2
43	CEM I 42.5 R	06.09.2013	52.9	53.8

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11	CEM IV/B (P) 32.5 N	09.09.2013	35.9	33.5
11	CEM IV/A (P) 42.5 N	09.09.2013	46.8	44.4
11	CEM I 42.5 R	09.09.2013	53.5	52.9
11	CEM II/A-M (V-LL) 42.5 R	09.09.2013	55.3	55.2
27	CEM IV/B (P) 32.5 N	11.09.2013	34.6	38.9
27	CEM II/A-M (P-L) 42.5 N	11.09.2013	44.5	50.7
27	CEM I 42.5 R	11.09.2013	50.1	55.2
24	CEM II/B-LL 32.5 N	12.09.2013	42.1	42.9
24	CEM II/A-LL 42.5 R	12.09.2013	54.8	56.3
24	CEM I 42.5 R	12.09.2013	60.5	65.3
18	CEM IV/B (P) 32.5 R	16.09.2013	35.62	35.8
7	CEM IV/B (P) 32.5 R	16.09.2013	38.9	43.1
18	CEM I 42.5 R	16.09.2013	52.32	55.4
7	CEM II/A-LL 42.5 R	16.09.2013	52.5	56.1
7	CEM I 42.5 R	16.09.2013	56.9	59.3
42	CEM III/A 32.5 N	17.09.2013	37.1	36.9
20	CEM III/B 32.5 N	17.09.2013	38.6	40.4
12	CEM IV/B (P) 32.5 R	17.09.2013	39.5	40.4
20	CEM III/A 42.5 N	17.09.2013	48.1	48.7
42	CEM II/B-S 42.5 N	17.09.2013	49.5	50
12	CEM I 42.5 N	17.09.2013	56.6	56.7
12	CEM I 42.5 R	17.09.2013	57.5	56.9
19	CEM IV/B (P) 32.5 R	18.09.2013	42.9	43.5
19	CEM I 42.5 N	18.09.2013	53.1	49.8
19	CEM II/A-M (P-L) 42.5 R	18.09.2013	47.9	50.2
19	CEM I 42.5 R- SR5	18.09.2013	54.5	54.2
19	CEM I 42.5 R	18.09.2013	53.1	54.7
62	CEM II/A-L 42.5 R	18.09.2013	54.9	54.7
13	CEM II/B-M (P-L) 32.5 R	19.09.2013	35.7	34.6
40	CEM II/B-M (P-L) 32.5 R	19.09.2013	37.1	37.8
13	CEM I 42.5 N- SR5	19.09.2013	49.5	52.3
40	CEM I 42.5 R	19.09.2013	50.1	52.3
13	CEM I 42.5 R	19.09.2013	51.4	54.8
40	CEM II/A-M (P-L) 42.5 R	19.09.2013	51.5	56.1
26	CEM IV/B (P) 32.5 N	20.09.2013	42	44.4
26	CEM I 42.5 R	20.09.2013	57.3	59.6
50	CEM IV/B (P) 32.5 R	23.09.2013	40.2	38.2
50	CEM II/A-M (P-L) 42.5 R	23.09.2013	52.2	50.6
50	CEM I 42.5 R- SR5	23.09.2013	52.3	51.6
50	CEM II/A-L 42.5 R	23.09.2013	53.3	54.3
50	CEM I 42.5 R	23.09.2013	56.6	56.1
2	CEM II/B-M (P-LL) 32.5 R	24.09.2013	36.7	38.4
29	CEM III/A 32.5 R	24.09.2013	40.3	42.2
2	CEM I 42.5 N	24.09.2013	45.3	46.8
29	CEM II/A-V 42.5 R	24.09.2013	52.6	55.1
29	CEM I 42.5 R	24.09.2013	53.3	55.9
2	CEM II/A-P 42.5 R	24.09.2013	52.3	57.5
29	CEM II/B-L 42.5 R	24.09.2013	54.8	57.6
2	CEM I 42.5 R	24.09.2013	52.7	58.2
48	CEM II/B-M (P-L) 32.5 R	25.09.2013	34.1	34.7
37	CEM II/B-M (P-LL) 32.5 R	25.09.2013	36.7	36.6
1	CEM V/A (S-P-Q) 32.5 R	25.09.2013	35.9	38.4
1	CEM II/B-M (P-Q-S) 42.5 N	25.09.2013	45.1	49
1	CEM III/A 42.5 N	25.09.2013	48.5	49.6
48	CEM II/A-P 42.5 R	25.09.2013	48	49.9
1	CEM II/B-LL 42.5 R	25.09.2013	48	51.5
1	CEM I 42.5 R	25.09.2013	48.6	52.4
48	CEM I 42.5 R	25.09.2013	50.6	53.3
37	CEM II/A-M (P-LL) 42.5 N	25.09.2013	53.4	53.5
16	CEM II/A-LL 42.5 N	25.09.2013	55.6	55.3
37	CEM I 52.5 N	25.09.2013	58.7	57.1
37	CEM I 42.5 R	25.09.2013	58.7	58.5
1	CEM I 52.5 R	25.09.2013	57.8	62.3
41	CEM V/A (P-S) 32.5 R	26.09.2013	39.2	42.4
41	CEM III/A 42.5 N	26.09.2013	50.9	52.8
41	CEM II/B-M (P-S) 42.5 R	26.09.2013	51.4	55.1
54	CEM IV/B (P) 32.5 R	27.09.2013	34.8	35.8
47	CEM IV/B (P) 32.5 N-LH/SR	27.09.2013	33.8	36.5
47	CEM IV/B (P) 32.5 N	27.09.2013	33.7	36.8
47	CEM II/A-M (P-LL) 42.5 R	27.09.2013	43.9	46.4
54	CEM I 42.5 R	27.09.2013	49.6	49.8
47	CEM II/B-M (P-S) 42.5 R	27.09.2013	45.3	50.4
47	CEM I 42.5 R	27.09.2013	47.1	52.3

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47	CEM I 42.5 N	27.09.2013	47.4	53	61	CEM II/B-LL 32.5 R	23.10.2013	38.5	42.1
53	CEM I 42.5 R	02.10.2013	56.3	55.2	10	CEM II/B-LL 32.5 R	23.10.2013	40.2	42.2
53	CEM II/A-M (P-L) 42.5 R	02.10.2013	58.3	56.1	10	CEM II/B-LL 42.5 N	23.10.2013	48.1	53.2
22	CEM IV/B (P-V) 32.5 R	03.10.2013	39.6	37.4	61	CEM II/A-LL 42.5 R	23.10.2013	51.3	54.2
21	CEM IV/B (P-V) 32.5 N	03.10.2013	39.3	38.6	10	CEM II/A-LL 42.5 R	23.10.2013	52.2	54.9
22	CEM II/B-M (P-V) 42.5 N	03.10.2013	49.4	48.5	63	CEM I 42.5 R	23.10.2013	52.2	57.1
21	CEM II/A-M (P-L) 42.5 R	03.10.2013	48.5	49.9	61	CEM I 42.5 R	23.10.2013	58.9	61.1
21	CEM II/A-V 42.5 R	03.10.2013	53.2	52.4	10	CEM I 42.5 R	23.10.2013	59.1	61.9
21	CEM I 42.5 R	03.10.2013	59.5	61.8	25	CEM IV/B (P-W) 32.5 R	24.10.2013	39.2	39.3
31	CEM II/B-LL 32.5 R	07.10.2013	34.6	34.7	43	CEM II/B-M (P-L) 32.5 N	24.10.2013	39.9	42.7
46	CEM IV/B (P) 32.5 N	07.10.2013	35.8	37	25	CEM II/A-M (P-L) 42.5 R	24.10.2013	48.4	47.3
44	CEM II/B-M (P-L) 32.5 N	07.10.2013	39	39.5	43	CEM I 42.5 R	24.10.2013	51.2	50.8
44	CEM II/B-M (P-L) 32.5 R	07.10.2013	39.5	39.6	14	CEM II/A-M (P-L) 42.5 N	24.10.2013	51.9	53.5
44	CEM I 42.5 R	07.10.2013	51.1	49.1	43	CEM II/A-M (P-L) 42.5 R	24.10.2013	50	54
44	CEM II/A-M (P-L) 42.5 R	07.10.2013	48.9	49.4	14	CEM II/A-M (P-L) 42.5 R	24.10.2013	51.7	54
31	CEM I 42.5 R	07.10.2013	53.4	51.1	25	CEM I 42.5 R	24.10.2013	55.9	54
44	CEM I 42.5 R- SR5	07.10.2013	51	53	25	CEM II/B-M (L-W) 42.5 R	24.10.2013	57.9	55.5
46	CEM I 42.5 R	07.10.2013	54.8	54.9	14	CEM I 42.5 R	24.10.2013	55.7	58.7
46	CEM II/A-LL 42.5 R	07.10.2013	54.2	58.1	8	CEM II/B-M (P-LL) 32.5 R	25.10.2013	38.4	38.7
59	CEM IV/B (P) 32.5 R	08.10.2013	36.2	34.3	28	CEM IV/B (P) 32.5 R	25.10.2013	37.2	39
52	CEM II/B-M (P-L) 32.5 R	08.10.2013	38	37.9	28	CEM I 42.5 R	25.10.2013	49.1	51
51	CEM IV/B (P) 32.5 R	08.10.2013	39	43.6	28	CEM II/A-M (P-L) 42.5 R	25.10.2013	50.9	51.8
52	CEM I 42.5 R	08.10.2013	49.6	50.1	8	CEM II/A-M (P-LL) 42.5 R	25.10.2013	51.5	52.6
59	CEM III/A 42.5 N	08.10.2013	53.6	53.5	8	CEM I 42.5 R	25.10.2013	59.2	60.2
59	CEM I 42.5 R	08.10.2013	56.1	55.1	55	CEM II/B-LL 32.5 R	26.10.2013	34.7	34.2
51	CEM I 42.5 R- SR5	08.10.2013	55.2	56.3	55	CEM II/B-M (W-L) 32.5 R	26.10.2013	43.9	42.4
51	CEM I 52.5 N	08.10.2013	55.9	56.4	55	CEM II/A-LL 42.5 R	26.10.2013	51.2	50.2
51	CEM I 42.5 R	08.10.2013	56.3	56.4	55	CEM I 42.5 R	26.10.2013	53.7	50.6
51	CEM II/A-P 42.5 R	08.10.2013	54.9	59.6	15	CEM IV/B (P) 32.5 N	30.10.2013	35.9	36.6
57	CEM II/B-L 32.5 R	09.10.2013	35.4	36.7	38	CEM IV/B (P) 32.5 N	30.10.2013	36.9	37.8
30	CEM IV/B (P) 32.5 R	09.10.2013	41.4	38.2	38	CEM II/A-M (P-LL) 42.5 R	30.10.2013	47.4	51
57	CEM II/B-L 42.5 N	09.10.2013	43.7	40.8	38	CEM I 42.5 N	30.10.2013	49.1	52.6
56	CEM II/B-M (P-LL) 32.5 R	09.10.2013	39.1	41.8	38	CEM I 42.5 R	30.10.2013	49.6	53
58	CEM IV/B (P) 32.5 N	09.10.2013	44.9	47.3	38	CEM I 42.5 R- SR5	30.10.2013	49.5	54.5
27	CEM I 42.5 R- SR5	09.10.2013	48.5	51.8	38	CEM I 52.5 N	30.10.2013	56.2	57
59	CEM II/A-M (P-LL) 42.5 R	09.10.2013	52.1	52.2	55	CEM II/B-LL 32.5 R	31.10.2013	34.3	33.5
57	CEM I 42.5 R	09.10.2013	52.2	54.1	32	CEM IV/B (P) 32.5 N	31.10.2013	35.4	35.9
58	CEM I 42.5 R	09.10.2013	56.5	54.4	14	CEM IV/B (P-W) 32.5 R	31.10.2013	37.5	41.1
57	CEM I 52.5 R	09.10.2013	55.4	54.7	32	CEM I 42.5 R	31.10.2013	51.1	52.9
56	CEM I 42.5 R	09.10.2013	55.7	56.3	32	CEM II/A-M (P-LL) 42.5 R	31.10.2013	50.1	53.5
56	CEM II/A-M (P-LL) 42.5 R	09.10.2013	58	57.2	32	CEM I 42.5 R- SR5	31.10.2013	49.9	54.1
56	CEM II/A-LL 42.5 R	09.10.2013	55.2	57.7	14	CEM II/B-M (L-W) 42.5 R	31.10.2013	53.8	56.3
58	CEM II/A-LL 42.5 R	09.10.2013	57.5	58.2	16	CEM IV/B (P) 32.5 N	01.11.2013	35.6	33.7
30	CEM I 42.5 R	09.10.2013	59.4	59.6	16	CEM I 42.5 R	01.11.2013	54.6	52.9
30	CEM II/A-M (P-L) 42.5 R	09.10.2013	59.1	60.1	16	CEM II/A-LL 42.5 N	01.11.2013	53.1	53.3
65	CEM IV/B (P) 32.5 R	10.10.2013	37.4	37.5	16	CEM I 42.5 R- SR5	01.11.2013	56.3	53.8
53	CEM IV/B (P) 32.5 R	10.10.2013	40.5	37.7	12	CEM IV/B (P) 32.5 R	12.11.2013	35.9	36.4
4	CEM IV/B (P) 32.5 R	10.10.2013	36.6	38	42	CEM III/A 32.5 N	12.11.2013	41.7	40.5
3	CEM IV/B (P) 32.5 N	10.10.2013	37.1	38.4	27	CEM IV/B (P) 32.5 N	12.11.2013	48.3	49.1
23	CEM I 32.5 R- SR5	10.10.2013	39.2	41.1	42	CEM II/B-S 42.5 N	12.11.2013	50.7	50.7
3	CEM II/A-M (P-L) 42.5 N	10.10.2013	48.5	48.4	27	CEM II/A-M (P-L) 42.5 N	12.11.2013	50.6	51.1
23	CEM I 42.5 R	10.10.2013	50.4	49.3	12	CEM II/A-M (P-L) 42.5 R	12.11.2013	49.8	51.8
4	CEM I 42.5 R	10.10.2013	53	55.4	27	CEM I 42.5 R- SR5	12.11.2013	54.4	53.4
9	CEM V/A (P-S) 32.5 N	11.10.2013	39.1	42.4	27	CEM I 42.5 R	12.11.2013	53	54.4
9	CEM II/A-M (S-L) 42.5 R	11.10.2013	60.5	60.8	12	CEM I 42.5 N	12.11.2013	55.2	56.3
9	CEM II/B-M (S-L) 42.5 R	11.10.2013	60.8	61.5	12	CEM I 42.5 R	12.11.2013	54.4	57.8
9	CEM I 42.5 R	11.10.2013	61.4	62.5	20	CEM III/B 32.5 N	13.11.2013	39.2	41.2
9	CEM II/A-M (S-L) 52.5 N	11.10.2013	65.1	66.2	20	CEM III/A 42.5 N	13.11.2013	46.3	48.8
49	CEM IV/B (P-W) 32.5 R	21.10.2013	37.7	37.8	19	CEM IV/B (P) 32.5 R	14.11.2013	39.8	37.6
5	CEM II/B-M (P-LL) 32.5 R	21.10.2013	38.8	39.1	19	CEM II/A-M (P-L) 42.5 R	14.11.2013	51.1	49.4
49	CEM II/A-M (P-L) 42.5 R	21.10.2013	52.7	50.7	19	CEM I 42.5 R- SR5	14.11.2013	55.1	54.1
5	CEM I 42.5 R	21.10.2013	51.7	51.9	24	CEM II/A-LL 42.5 R	14.11.2013	55.3	54.2
49	CEM I 42.5 R	21.10.2013	52.8	52.2	19	CEM I 42.5 R	14.11.2013	54.5	55.8
5	CEM I 52.5 N	21.10.2013	65.9	66.2	19	CEM I 42.5 N	14.11.2013	54.7	56.1
36	CEM II/B-M (P-LL) 32.5 R	22.10.2013	34.7	33.8	24	CEM I 52.5 N	14.11.2013	59.7	59.3
34	CEM IV/B (P) 32.5 R	22.10.2013	38.1	38.3	11	CEM IV/B (P) 32.5 N	15.11.2013	36.8	34.6
62	CEM II/B-M (P-L) 32.5 R	22.10.2013	39.5	39.2	24	CEM II/B-LL 32.5 N	15.11.2013	39.8	40.2
36	CEM II/A-M (P-LL) 42.5 R	22.10.2013	46.3	47.1	40	CEM II/B-M (P-L) 32.5 R	15.11.2013	38.6	40.5
36	CEM I 42.5 N	22.10.2013	49.6	47.2	26	CEM IV/B (P) 32.5 N	15.11.2013	43.5	47.1
34	CEM II/A-M (P-L) 42.5 N	22.10.2013	50	49.3	11	CEM IV/A (P) 42.5 N	15.11.2013	48.9	48.8
34	CEM I 42.5 N	22.10.2013	48.1	49.4	11	CEM I 42.5 R	15.11.2013	53.2	50.5
62	CEM I 42.5 R	22.10.2013	54.4	55.3	11	CEM II/A-M (V-LL) 42.5 R	15.11.2013	55.6	52.6
63	CEM IV/B (P) 32.5 R	23.10.2013	35	39	40	CEM I 42.5 R	15.11.2013	54.2	53.4

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40	CEM II/A-M (P-L) 42.5 R	15.11.2013	56.9	56.7
26	CEM I 42.5 R	15.11.2013	55	59.3
50	CEM IV/B (P) 32.5 R	18.11.2013	37.8	36.9
50	CEM II/A-L 42.5 R	18.11.2013	43.6	44.4
50	CEM I 42.5 R- SR5	18.11.2013	48.1	49.8
50	CEM II/A-M (P-L) 42.5 R	18.11.2013	54.1	52.2
50	CEM I 42.5 R	18.11.2013	56.5	53.2
53	CEM IV/B (P) 32.5 R	19.11.2013	39.3	39.3
21	CEM IV/B (P-V) 32.5 N	19.11.2013	43.3	40.4
1	CEM V/A (S-P-Q) 32.5 R	19.11.2013	42.1	41.2
29	CEM III/A 32.5 R	19.11.2013	43.9	42.4
1	CEM II/B-M (P-Q-S) 42.5 N	19.11.2013	47.5	47.1
21	CEM II/A-M (P-L) 42.5 R	19.11.2013	48.6	48.5
1	CEM III/A 42.5 N	19.11.2013	49.9	52.3
1	CEM I 42.5 R	19.11.2013	52.5	53.1
29	CEM II/B-L 42.5 R	19.11.2013	51.5	53.5
29	CEM II/A-V 42.5 R	19.11.2013	52.5	53.7
53	CEM I 42.5 R	19.11.2013	56.5	54.2
29	CEM I 42.5 R	19.11.2013	54.3	54.4
1	CEM II/B-LL 42.5 R	19.11.2013	51.4	54.5
53	CEM II/A-M (P-L) 42.5 R	19.11.2013	54.9	54.9
21	CEM I 42.5 R	19.11.2013	58.9	57.8
1	CEM I 52.5 R	19.11.2013	57.3	58.5
48	CEM II/B-M (P-L) 32.5 R	20.11.2013	38.9	39.5
41	CEM V/A (P-S) 32.5 R	20.11.2013	45.8	45
41	CEM II/B-M (P-S) 42.5 R	20.11.2013	49.8	48.7
48	CEM II/A-M (P-L) 42.5 R	20.11.2013	48.3	50.3
41	CEM III/A 42.5 N	20.11.2013	52.7	52.2
48	CEM I 42.5 R	20.11.2013	51.9	54.1
2	CEM II/B-M (P-LL) 32.5 R	21.11.2013	33.4	32.1
22	CEM IV/B (P-V) 32.5 R	21.11.2013	38.2	33.7
22	CEM II/B-M (P-V) 42.5 N	21.11.2013	47	46.9
2	CEM I 42.5 N	21.11.2013	50.9	52.1
16	CEM II/B-M (L-W) 42.5 R	21.11.2013	51.3	52.2
2	CEM I 42.5 R	21.11.2013	55.5	58.1
2	CEM II/A-P 42.5 R	21.11.2013	53.7	58.9
5	CEM II/B-M (P-LL) 32.5 R	22.11.2013	35.9	36.3
47	CEM IV/B (P) 32.5 N	22.11.2013	36.5	36.3
47	CEM IV/B (P) 32.5 N-LH/SR	22.11.2013	36.8	36.8
54	CEM IV/B (P) 32.5 R	22.11.2013	41.7	45.5
47	CEM II/A-M (P-LL) 42.5 R	22.11.2013	46.6	48.5
47	CEM I 42.5 R- SR3	22.11.2013	47.1	48.7
47	CEM II/B-M (P-S) 42.5 R	22.11.2013	46.9	48.9
54	CEM I 42.5 R	22.11.2013	50	50.2
47	CEM I 42.5 R	22.11.2013	46.5	51.7
47	CEM I 42.5 N	22.11.2013	46.8	52.2
5	CEM I 42.5 R	22.11.2013	53.5	53.7
5	CEM I 52.5 N	22.11.2013	60.4	60.1
67	CEM I 42.5 N	26.11.2013	47.81	50.4
24	CEM I 42.5 R	26.11.2013	56.4	56.1
23	CEM II/B-M (P-L) 32.5 R	27.11.2013	35.9	39.1
23	CEM I 42.5 R	27.11.2013	55.2	58.7
58	CEM IV/B (P) 32.5 N	28.11.2013	38	39.1
57	CEM II/B-L 32.5 R	28.11.2013	38.5	39.7
57	CEM II/B-L 42.5 N	28.11.2013	43	44.6
57	CEM II/A-L 42.5 R	28.11.2013	46.8	46.4
57	CEM I 42.5 R	28.11.2013	50.5	52.2
57	CEM I 52.5 R	28.11.2013	52.5	52.5
58	CEM I 42.5 R	28.11.2013	54	54.6
58	CEM II/A-LL 42.5 R	28.11.2013	57	55.9
50	CEM I 42.5 R- SR5	01.12.2013	46.2	42.5
62	CEM II/B-M (P-L) 32.5 R	03.12.2013	41.2	41.3
62	CEM I 42.5 R	03.12.2013	57.2	56.9
55	CEM II/B-M (W-L) 32.5 R	04.12.2013	43.8	39.8
55	CEM II/A-LL 42.5 R	04.12.2013	53.1	52.3
55	CEM I 42.5 R	04.12.2013	55.1	53.8
10	CEM II/B-LL 32.5 R	05.12.2013	40.4	42.6
10	CEM II/B-LL 42.5 N	05.12.2013	48.3	51.5
8	CEM II/B-M (P-LL) 32.5 R	05.12.2013	48.7	52
10	CEM II/A-LL 42.5 R	05.12.2013	53.3	55.2
8	CEM II/A-M (P-LL) 42.5 R	05.12.2013	56.1	56.8
10	CEM I 42.5 R	05.12.2013	55.8	59.1
8	CEM I 42.5 R	05.12.2013	61.6	64.1

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43	CEM II/B-M (P-L) 32.5 N	06.12.2013	38.1	36.9
43	CEM II/A-M (P-L) 42.5 R	06.12.2013	48.9	48.5
43	CEM I 42.5 R	06.12.2013	52.1	53.1
49	CEM IV/B (P-W) 32.5 R	09.12.2013	38.4	39.2
49	CEM I 42.5 R	09.12.2013	49.5	49
49	CEM II/A-M (P-L) 42.5 R	09.12.2013	50	50.6
34	CEM IV/B (P) 32.5 R	10.12.2013	33	33.5
7	CEM IV/B (P) 32.5 R	10.12.2013	38.5	41
28	CEM IV/B (P) 32.5 R	10.12.2013	41.3	42.3
28	CEM I 42.5 R	10.12.2013	48.9	50.4
28	CEM II/A-M (P-L) 42.5 R	10.12.2013	50.3	52.6
34	CEM II/A-M (P-L) 42.5 N	10.12.2013	51	53.2
27	CEM I 42.5 R- SR5	10.12.2013	53.5	54.1
34	CEM I 42.5 N	10.12.2013	53.6	54.2
7	CEM I 42.5 R	10.12.2013	56	57
7	CEM II/A-M (V-LL) 42.5 R	10.12.2013	58.2	61.2
7	CEM II/A-LL 42.5 R	10.12.2013	59.2	64.2
32	CEM IV/B (P) 32.5 N	11.12.2013	35.9	36.9
16	CEM IV/B (P) 32.5 N	11.12.2013	38	37.6
36	CEM II/B-M (P-LL) 32.5 R	11.12.2013	39.1	40.9
36	CEM I 42.5 N	11.12.2013	49.9	48
16	CEM I 42.5 R- SR5	11.12.2013	52.5	49.9
36	CEM II/A-M (P-LL) 42.5 R	11.12.2013	49	50.3
16	CEM II/A-LL 42.5 N	11.12.2013	53.4	51.1
32	CEM II/A-M (P-LL) 42.5 R	11.12.2013	48.9	51.9
16	CEM I 42.5 R	11.12.2013	55.4	55.7
32	CEM I 42.5 R	11.12.2013	54.6	56.5
61	CEM II/B-LL 32.5 R	12.12.2013	36	37.6
25	CEM IV/B (P-W) 32.5 R	12.12.2013	48.4	50.1
61	CEM II/A-LL 42.5 R	12.12.2013	52.6	51.9
25	CEM II/A-M (P-L) 42.5 R	12.12.2013	50.9	52.4
25	CEM I 42.5 R	12.12.2013	57.6	53.1
25	CEM II/B-M (L-W) 42.5 R	12.12.2013	56.8	55
61	CEM I 42.5 R	12.12.2013	57.1	56.7
63	CEM IV/B (P) 32.5 R	13.12.2013	41	40.6
14	CEM IV/B (P-W) 32.5 R	13.12.2013	38.8	42.1
14	CEM II/A-M (P-L) 42.5 N	13.12.2013	50.2	47.4
14	CEM II/A-M (P-L) 42.5 R	13.12.2013	50.3	48.3
14	CEM I 42.5 R	13.12.2013	50.6	52.1
14	CEM II/B-M (L-W) 42.5 R	13.12.2013	52.3	53.4
63	CEM I 42.5 R	13.12.2013	56	54.6
15	CEM IV/B (P) 32.5 N	17.12.2013	35.2	37
32	CEM I 42.5 R- SR5	17.12.2013	50.4	50.7
3	CEM IV/B (P) 32.5 N	18.12.2013	37.9	38.4
3	CEM II/A-M (P-L) 42.5 N	18.12.2013	51	52.7
62	CEM II/A-L 42.5 R	18.12.2013	56.1	56.6
38	CEM IV/B (P) 32.5 N	19.12.2013	35.9	35.6
38	CEM II/A-M (P-LL) 42.5 R	19.12.2013	48.7	52.2
38	CEM I 42.5 N	19.12.2013	50.1	55.3
38	CEM I 42.5 R	19.12.2013	50.3	55.3
38	CEM I 52.5 N	19.12.2013	55.8	61.3
44	CEM II/B-M (P-L) 32.5 N	20.12.2013	38.9	38.5
44	CEM II/B-M (P-L) 32.5 R	20.12.2013	38.7	39.7
44	CEM II/A-M (P-L) 42.5 R	20.12.2013	50.2	50.2
44	CEM I 42.5 R	20.12.2013	51.1	51.3
44	CEM I 42.5 R- SR5	20.12.2013	50.4	52.5
31	CEM II/B-LL 32.5 R	23.12.2013	36.8	36.7
46	CEM IV/B (P) 32.5 N	23.12.2013	36.1	40.2
31	CEM I 42.5 R	23.12.2013	55.7	55.1
46	CEM I 42.5 R	23.12.2013	54.8	56.6
46	CEM II/A-LL 42.5 R	23.12.2013	55.1	59.3
59	CEM IV/B (P) 32.5 R	24.12.2013	38.9	37
52	CEM II/B-M (P-L) 32.5 R	24.12.2013	37.7	39.3
59	CEM III/A 42.5 N	24.12.2013	50.6	49.1
59	CEM II/A-M (P-LL) 42.5 R	24.12.2013	50.7	49.7
52	CEM I 42.5 R	24.12.2013	52.5	53.1
12	CEM II/A-M (P-L) 42.5 R	24.12.2013	52.7	55.3
59	CEM I 42.5 R	24.12.2013	55.8	55.7
56	CEM II/B-M (P-LL) 32.5 R	25.12.2013	35.5	36.8
9	CEM V/A (P-S) 32.5 N	25.12.2013	40.1	39.5
23	CEM II/B-M (P-L) 32.5 R	25.12.2013	39.2	41.3
23	CEM I 32.5 R- SR5	25.12.2013	42.6	44.9
56	CEM II/A-M (P-LL) 42.5 R	25.12.2013	53	53.8

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9	CEM I 42.5 R	25.12.2013	54.4	55.6
56	CEM I 42.5 R	25.12.2013	56.4	58.5
9	CEM II/A-M (S-L) 42.5 R	25.12.2013	60.9	59.7
9	CEM II/B-M (S-L) 42.5 R	25.12.2013	60.5	60
9	CEM II/A-M (S-L) 52.5 N	25.12.2013	65.1	65.1
30	CEM IV/B (P) 32.5 R	26.12.2013	32.9	31.1
30	CEM II/A-M (P-L) 42.5 R	26.12.2013	56.5	55.2
30	CEM I 42.5 R	26.12.2013	59.8	58.1
51	CEM IV/B (P) 32.5 R	27.12.2013	32.7	35.1
4	CEM IV/B (P) 32.5 R	27.12.2013	36.7	36.1
65	CEM IV/B (P) 32.5 R	27.12.2013	36.5	36.5
51	CEM II/A-P 42.5 R	27.12.2013	43.1	49
51	CEM I 52.5 N	27.12.2013	54.3	52.2
51	CEM I 42.5 R	27.12.2013	54.4	53.2
4	CEM I 42.5 R	27.12.2013	55.2	54.6
51	CEM I 42.5 R- SR5	27.12.2013	56.5	60.8
18	CEM IV/B (P) 32.5 R	30.12.2013	35.25	37.3
18	CEM I 42.5 R	30.12.2013	52.95	57.5
50	CEM IV/B (P) 32.5 R	07.01.2014	33.4	33.7
42	CEM III/A 32.5 N	07.01.2014	38.8	38.5
12	CEM IV/B (P) 32.5 R	07.01.2014	39.3	41.4
42	CEM II/B-S 42.5 N	07.01.2014	44	47
50	CEM II/A-M (P-L) 42.5 R	07.01.2014	49.9	47.3
50	CEM II/A-L 42.5 R	07.01.2014	49	48.1
50	CEM I 42.5 R- SR5	07.01.2014	47.8	48.5
50	CEM I 42.5 R	07.01.2014	48.5	49.4
12	CEM I 42.5 R	07.01.2014	53.4	57
12	CEM I 42.5 N	07.01.2014	54.6	57.3
20	CEM III/B (S) 32.5 N-SR	08.01.2014	37.6	38.1
41	CEM V/A (S-P) 32.5 R	08.01.2014	38.7	40.6
1	CEM V/A (S-P) 32.5 R	08.01.2014	40.1	41.3
1	CEM II/B-M (P-S) 42.5 N	08.01.2014	49.2	48
1	CEM II/B-LL 42.5 R	08.01.2014	50.7	50.8
41	CEM II/B-M (P-S) 42.5 R	08.01.2014	49.7	51.4
1	CEM III/A 42.5 N	08.01.2014	50.1	53
41	CEM III/A 42.5 N	08.01.2014	52.2	55.1
1	CEM I 42.5 R	08.01.2014	53	55.5
1	CEM I 52.5 R	08.01.2014	58.6	60.2
29	CEM III/A 32.5 R	09.01.2014	43.1	45.1
19	CEM IV/B (P) 32.5 R-SR	09.01.2014	42.3	45.3
29	CEM II/A-V 42.5 R	09.01.2014	50.6	51.1
19	CEM I 42.5 N	09.01.2014	50.5	51.6
29	CEM II/B-L 42.5 R	09.01.2014	53.5	51.9
19	CEM II/A-M (P-L) 42.5 R	09.01.2014	50.6	52.5
19	CEM I 42.5 R- SR5	09.01.2014	50.8	52.6
29	CEM I 42.5 R	09.01.2014	52.4	56.7
19	CEM I 42.5 R	09.01.2014	56	58
27	CEM IV/B (P) 32.5 N	13.01.2014	38.3	37.9
27	CEM II/A-M (P-L) 42.5 N	13.01.2014	54.3	52.6
27	CEM I 42.5 R	13.01.2014	60.2	57.2
62	CEM II/B-M (P-L) 32.5 R	14.01.2014	39.1	38.9
22	CEM IV/B (P-V) 32.5 R	14.01.2014	39.4	40.8
22	CEM II/B-M (P-V) 42.5 N	14.01.2014	49.1	48
62	CEM I 42.5 R	14.01.2014	55.1	53.6
62	CEM II/A-L 42.5 R	14.01.2014	56.9	55.3
55	CEM II/B-M (W-L) 32.5 R	15.01.2014	44	41
21	CEM IV/B (P-V) 32.5 N	15.01.2014	42.2	41.7
8	CEM II/B-M (P-LL) 32.5 R	15.01.2014	44.8	48
21	CEM II/A-M (P-L) 42.5 R	15.01.2014	49.6	49.1
55	CEM I 42.5 R	15.01.2014	55.1	51.7
55	CEM II/A-LL 42.5 R	15.01.2014	53	52.1
8	CEM II/A-M (P-LL) 42.5 R	15.01.2014	52.7	54.2
8	CEM IV/A (P) 42.5 N-SR	15.01.2014	54.6	56.6
8	CEM I 42.5 R	15.01.2014	58.1	58.9
21	CEM I 42.5 R	15.01.2014	61.2	59.8
43	CEM II/B-M (P-L) 32.5 N	16.01.2014	40.7	38.6
24	CEM II/B-LL 32.5 N	16.01.2014	41.2	40.2
11	CEM IV/B (P) 32.5 N	16.01.2014	39.5	42.7
10	CEM II/B-LL 32.5 R	16.01.2014	43	43.5
43	CEM II/A-M (P-L) 42.5 R	16.01.2014	49.7	49.2
11	CEM I 42.5 R	16.01.2014	51.8	50
11	CEM IV/A (P) 42.5 N	16.01.2014	50.8	50.6
10	CEM II/B-LL 42.5 N	16.01.2014	48	50.8

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11	CEM II/A-M (V-LL) 42.5 R	16.01.2014	54.8	53.4
24	CEM II/A-LL 42.5 R	16.01.2014	56.3	54.8
43	CEM I 42.5 R	16.01.2014	55.5	55.9
10	CEM II/A-LL 42.5 R	16.01.2014	54.8	57.2
24	CEM I 42.5 R	16.01.2014	59	58.9
24	CEM I 52.5 N	16.01.2014	59.5	59
10	CEM I 42.5 R	16.01.2014	61.2	61.7
68	CEM IV/B (P) 32.5 N	17.01.2014	42.8	41.9
32	CEM II/A-M (LL-W) 42.5 R	17.01.2014	52.3	53.9
32	CEM II/A-LL 42.5 R	17.01.2014	54.3	55.1
68	CEM II/A-M (P-LL) 42.5 R	17.01.2014	56.8	56.4
15	CEM II/A-M (P-LL) 42.5 R	17.01.2014	56.9	57.4
15	CEM I 42.5 R	17.01.2014	59.5	58.3
68	CEM I 42.5 R	17.01.2014	57.8	58.7
46	CEM IV/B (P) 32.5 N	21.01.2014	38.7	37.2
31	CEM II/B-LL 32.5 R	21.01.2014	38.3	37.4
31	CEM I 42.5 R	21.01.2014	54.6	51
46	CEM II/A-LL 42.5 R	21.01.2014	58.8	55.7
46	CEM I 42.5 R	21.01.2014	59.2	58
52	CEM II/B-M (P-L) 32.5 R	22.01.2014	35.2	35
59	CEM III/A 42.5 N	22.01.2014	47	43.3
59	CEM II/A-M (S-LL) 52.5 R	22.01.2014	56.5	54
52	CEM I 42.5 R	22.01.2014	55.1	55.4
59	CEM II/B-M (S-LL) 42.5 R	22.01.2014	57.9	56.1
56	CEM II/B-M (P-LL) 32.5 R	24.01.2014	39.3	40.5
56	CEM IV/B (P) 32.5 R-SR	24.01.2014	43.9	43.9
56	CEM IV/B (P) 32.5 R-SR	24.01.2014	43.9	43.9
59	CEM II/A-M (P-LL) 42.5 R	24.01.2014	55.1	52.4
59	CEM I 42.5 R	24.01.2014	57.3	53.9
56	CEM II/A-M (P-LL) 42.5 R	24.01.2014	52.7	55.1
56	CEM I 42.5 R	24.01.2014	56.1	56.5
7	CEM IV/B (P) 32.5 R	29.01.2014	40.8	39.7
18	CEM IV/B (P) 32.5 R-SR	29.01.2014	36.53	40.2
18	CEM I 42.5 R	29.01.2014	53.96	56.7
7	CEM I 42.5 R	29.01.2014	56.1	58.2
7	CEM II/A-M (V-LL) 42.5 R	29.01.2014	60.3	60.4
26	CEM IV/B (P) 32.5 N	30.01.2014	40.4	44.1
40	CEM II/A-M (P-L) 42.5 R	30.01.2014	57.3	54
26	CEM I 42.5 R	30.01.2014	53.5	54.4
48	CEM II/B-M (P-L) 32.5 R	04.02.2014	39.3	37.7
51	CEM IV/B (P) 32.5 R	04.02.2014	35.6	38
48	CEM II/A-M (P-L) 42.5 R	04.02.2014	49.4	50.7
51	CEM I 42.5 R- SR5	04.02.2014	52.1	54
51	CEM I 42.5 R	04.02.2014	54.6	55.1
48	CEM I 42.5 R	04.02.2014	54.9	55.2
51	CEM II/A-P 42.5 R	04.02.2014	53.9	55.8
51	CEM I 52.5 N	04.02.2014	56	56.9
65	CEM IV/B (P) 32.5 R	05.02.2014	37	34.2
4	CEM IV/B (P) 32.5 R	05.02.2014	37.1	34.9
9	CEM V/A (P-S) 32.5 N	05.02.2014	33	35.9
2	CEM II/B-M (P-LL) 32.5 R	05.02.2014	34.1	37.5
23	CEM II/B-M (P-L) 32.5 R	05.02.2014	39.9	40.4
23	CEM I 32.5 R- SR5	05.02.2014	42.7	40.5
2	CEM I 42.5 N	05.02.2014	46.3	46.1
23	CEM I 42.5 R	05.02.2014	53.1	48.7
2	CEM I 42.5 R- SR5	05.02.2014	53.1	52.4
2	CEM II/A-P 42.5 R	05.02.2014	53.4	52.9
9	CEM I 42.5 R	05.02.2014	55.4	54.2
4	CEM I 42.5 R	05.02.2014	56.8	55.9
2	CEM I 42.5 R	05.02.2014	54.2	56.2
9	CEM II/B-M (S-L) 42.5 R	05.02.2014	59	58.8
9	CEM II/A-M (S-L) 42.5 R	05.02.2014	58.3	58.9
9	CEM II/A-M (S-L) 52.5 N	05.02.2014	62.2	62.6
57	CEM II/B-L 32.5 R	06.02.2014	35.5	34.9
54	CEM IV/B (P) 32.5 R	06.02.2014	36.2	36.3
58	CEM IV/B (P) 32.5 N	06.02.2014	38	39
47	CEM IV/B (P) 32.5 N - LH - SR	06.02.2014	37.6	41.5
47	CEM IV/B (P) 32.5 N	06.02.2014	37.9	41.8
57	CEM II/B-L 42.5 N	06.02.2014	43.1	42.9
47	CEM I 42.5 R- SR3	06.02.2014	46.9	43.6
57	CEM II/A-L 42.5 R	06.02.2014	44.1	44.2
30	CEM IV/B (P) 32.5 R	06.02.2014	44.6	44.7
47	CEM II/B-M (P-S) 42.5 R	06.02.2014	46.9	45.7

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47	CEM II/A-M (P-LL) 42.5 R	06.02.2014	47.1	46.1
54	CEM I 42.5 R	06.02.2014	49.2	49.5
47	CEM I 42.5 N	06.02.2014	51.2	51.1
47	CEM I 42.5 R	06.02.2014	51.5	51.4
57	CEM I 42.5 R	06.02.2014	53.3	54
57	CEM I 52.5 R	06.02.2014	53.4	54.3
58	CEM II/A-LL 42.5 R	06.02.2014	59.3	54.9
58	CEM I 42.5 R	06.02.2014	58.4	57.2
30	CEM II/A-M (P-L) 42.5 R	06.02.2014	58.1	59.5
30	CEM I 42.5 R	06.02.2014	60.3	59.6
44	CEM II/B-M (P-L) 32.5 R	10.02.2014	35.9	36.9
44	CEM II/B-M (P-L) 32.5 N	10.02.2014	37.5	37.6
44	CEM II/A-M (P-L) 42.5 R	10.02.2014	47	46.9
44	CEM I 42.5 R- SR5	10.02.2014	47.4	48.7
44	CEM I 42.5 R	10.02.2014	52.6	53.4
38	CEM IV/B (P) 32.5 N	11.02.2014	38.3	37.8
38	CEM II/A-M (P-LL) 42.5 R	11.02.2014	50.3	51.1
38	CEM I 42.5 R	11.02.2014	53.3	52.6
38	CEM I 42.5 R- SR5	11.02.2014	57.6	59.2
53	CEM IV/B (P) 32.5 R	12.02.2014	38	37.4
15	CEM IV/B (P) 32.5 N	12.02.2014	37.2	37.7
3	CEM IV/B (P) 32.5 N	12.02.2014	36.9	38.9
3	CEM II/A-M (P-L) 42.5 N	12.02.2014	51.7	50.9
27	CEM I 42.5 R- SR5	12.02.2014	52.7	51.6
53	CEM II/A-M (P-L) 42.5 R	12.02.2014	55.3	55.8
53	CEM I 42.5 R	12.02.2014	60.7	58.9
49	CEM IV/B (P-W) 32.5 R	17.02.2014	37.8	36.8
49	CEM II/A-M (P-L) 42.5 R	17.02.2014	53.5	51.5
49	CEM I 42.5 R	17.02.2014	56.2	52.2
5	CEM II/B-M (P-LL) 32.5 R	18.02.2014	36.1	36.7
28	CEM IV/B (P) 32.5 R	18.02.2014	36.8	37.4
5	CEM I 42.5 R	18.02.2014	48.4	48
28	CEM I 42.5 R	18.02.2014	49.2	50.4
28	CEM II/A-M (P-L) 42.5 R	18.02.2014	52.2	54
38	CEM I 42.5 R- SR5	18.02.2014	56.5	57.8
5	CEM I 52.5 N	18.02.2014	66	63.1
59	CEM IV/B (P) 32.5 R-SR	19.02.2014	36.8	37.1
36	CEM II/B-M (P-LL) 32.5 R	19.02.2014	38.4	38.3
32	CEM IV/B (P) 32.5 N	19.02.2014	42.9	42.2
36	CEM II/A-M (P-LL) 42.5 R	19.02.2014	48	47.6
36	CEM I 42.5 N	19.02.2014	48.1	48.2
32	CEM I 42.5 R- SR5	19.02.2014	48.5	48.2
32	CEM I 42.5 R	19.02.2014	51	51.2
32	CEM II/A-M (P-LL) 42.5 R	19.02.2014	51.7	52.3
16	CEM IV/B (P) 32.5 N	20.02.2014	34	28.8
61	CEM II/B-LL 32.5 R	20.02.2014	33.8	31.1
63	CEM IV/B (P) 32.5 R	20.02.2014	38.5	38.8
14	CEM IV/B (P-W) 32.5 R	20.02.2014	40.7	41.7
56	CEM IV/B (P) 32.5 R-SR	20.02.2014	43.5	43.5
56	CEM IV/B (P) 32.5 R-SR	20.02.2014	43.5	43.5
61	CEM II/A-LL 42.5 R	20.02.2014	49	48.4
16	CEM I 42.5 R	20.02.2014	52.9	49.5
16	CEM I 42.5 R- SR5	20.02.2014	50.4	49.8
14	CEM II/A-M (P-L) 42.5 N	20.02.2014	53.4	51.3
14	CEM II/A-M (P-L) 42.5 R	20.02.2014	53.7	51.4
63	CEM I 42.5 R	20.02.2014	54.3	53.4
14	CEM II/B-M (L-W) 42.5 R	20.02.2014	54.6	54.7
14	CEM I 42.5 R	20.02.2014	56.4	55.9
61	CEM I 42.5 R	20.02.2014	59	57.3
34	CEM IV/B (P) 32.5 R	21.02.2014	32.5	28.8
25	CEM IV/B (P-W) 32.5 R	21.02.2014	38.1	37.8
34	CEM II/A-M (P-L) 42.5 N	21.02.2014	48.4	46.6
25	CEM II/A-M (P-L) 42.5 R	21.02.2014	51.3	49.4
34	CEM I 42.5 N	21.02.2014	52.3	51.9
25	CEM II/B-M (L-W) 42.5 R	21.02.2014	58.5	54
25	CEM I 42.5 R	21.02.2014	57.6	54.6
66	CEM IV/B (V) 32.5 R - SR	22.02.2014	34.8	35.5
40	CEM II/B-M (P-L) 32.5 R	25.02.2014	41.3	39.9
40	CEM I 42.5 R	25.02.2014	61.2	59.2
7	CEM II/A-M (V-LL) 42.5 R	25.02.2014	58.5	59.6
67	CEM I 42.5 N	27.02.2014	48.24	50.2
27	CEM IV/B (P) 32.5 N	03.03.2014	33.6	32.8
50	CEM IV/B (P) 32.5 R	03.03.2014	35.8	37.5

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53	CEM IV/B (P) 32.5 R	03.03.2014	40.3	38
50	CEM II/A-L 42.5 R	03.03.2014	43.5	39.2
50	CEM I 42.5 R	03.03.2014	44.6	44.1
50	CEM II/A-M (P-L) 42.5 R	03.03.2014	46.1	46
50	CEM I 42.5 R- SR5	03.03.2014	47.8	46.4
27	CEM I 42.5 R- SR5	03.03.2014	47	47.1
27	CEM II/A-M (P-L) 42.5 N	03.03.2014	49.8	49.1
27	CEM I 42.5 R	03.03.2014	52.6	51.9
53	CEM II/A-M (P-L) 42.5 R	03.03.2014	56	56.5
53	CEM I 42.5 R	03.03.2014	62.5	60
22	CEM IV/B (P-V) 32.5 R	04.03.2014	42.9	38.2
22	CEM II/B-M (P-V) 42.5 N	04.03.2014	48.5	45.5
41	CEM V/A (S-P) 32.5 R	05.03.2014	35.6	35.4
21	CEM IV/B (P-V) 32.5 N	05.03.2014	43.5	39.1
41	CEM II/B-M (P-S) 42.5 R	05.03.2014	46.4	45.9
21	CEM II/A-M (P-L) 42.5 R	05.03.2014	49.4	47.2
41	CEM III/A 42.5 N	05.03.2014	54.7	55.2
21	CEM I 42.5 R	05.03.2014	60.3	58.7
11	CEM IV/B (P) 32.5 N	06.03.2014	36.1	33.3
24	CEM II/B-LL 32.5 N	06.03.2014	41.6	38.2
11	CEM IV/A (P) 42.5 N	06.03.2014	45.7	44.4
11	CEM I 42.5 R	06.03.2014	51.2	48.2
11	CEM II/A-M (V-LL) 42.5 R	06.03.2014	55	52.2
24	CEM I 52.5 N	06.03.2014	56.4	53.4
24	CEM I 42.5 R	06.03.2014	56.3	54.6
24	CEM II/A-LL 42.5 R	06.03.2014	58.9	57.5
1	CEM V/A (S-P) 32.5 R	07.03.2014	34.1	34.4
1	CEM II/B-M (P-S) 42.5 N	07.03.2014	46.7	48.1
1	CEM II/B-LL 42.5 R	07.03.2014	46.4	48.3
1	CEM III/A 42.5 N	07.03.2014	49	50.4
1	CEM I 42.5 R	07.03.2014	49.9	51.8
1	CEM I 52.5 R	07.03.2014	59.1	61.9
51	CEM IV/B (P) 32.5 R	10.03.2014	42.4	43.8
51	CEM II/A-P 42.5 R	10.03.2014	53.9	55.9
51	CEM I 52.5 N	10.03.2014	55.9	56.2
51	CEM I 42.5 R	10.03.2014	55.5	56.8
51	CEM I 42.5 R- SR5	10.03.2014	56.1	58.9
9	CEM V/A (P-S) 32.5 N	11.03.2014	34.7	34.7
12	CEM IV/B (P) 32.5 R	11.03.2014	37.9	36.6
23	CEM I 32.5 R- SR5	11.03.2014	42.7	39.3
12	CEM IV/A (P) 42.5 R-SR	11.03.2014	47.9	50
12	CEM I 42.5 N	11.03.2014	53.7	52.4
12	CEM I 42.5 R	11.03.2014	53.9	52.8
9	CEM II/A-M (S-L) 42.5 R	11.03.2014	54.6	53.8
23	CEM I 42.5 R	11.03.2014	55.3	55.8
9	CEM II/B-M (S-L) 42.5 R	11.03.2014	58.1	59
9	CEM II/A-M (S-L) 52.5 N	11.03.2014	65.6	62.3
20	CEM III/B (S) 32.5 N-SR	12.03.2014	35.3	34.5
58	CEM IV/B (P) 32.5 N	12.03.2014	36	34.6
57	CEM II/B-L 32.5 R	12.03.2014	36.4	36.5
42	CEM III/A 32.5 N	12.03.2014	37.5	38.1
57	CEM II/B-L 42.5 N	12.03.2014	42.6	41.1
57	CEM II/A-L 42.5 R	12.03.2014	44.1	43.1
42	CEM II/B-S 42.5 N	12.03.2014	45.1	44.8
57	CEM I 42.5 R	12.03.2014	52.6	52.2
58	CEM II/A-LL 42.5 R	12.03.2014	54.6	52.6
57	CEM I 52.5 R	12.03.2014	54	52.7
58	CEM I 42.5 R	12.03.2014	57.5	55.3
19	CEM IV/B (P) 32.5 R-SR	13.03.2014	39.8	36
30	CEM IV/B (P) 32.5 R	13.03.2014	42.9	41.4
19	CEM II/A-M (P-L) 42.5 R	13.03.2014	52.5	52.3
19	CEM I 42.5 N	13.03.2014	55.1	52.5
19	CEM I 42.5 R- SR5	13.03.2014	54.3	53.1
30	CEM I 42.5 R	13.03.2014	56.2	56.7
19	CEM I 42.5 R	13.03.2014	59.1	56.7
30	CEM II/A-M (P-L) 42.5 R	13.03.2014	58.2	60.2
65	CEM IV/B (P) 32.5 R	14.03.2014	36.8	35.3
4	CEM IV/B (P) 32.5 R	14.03.2014	36.8	36.8
23	CEM IV/B (P) 32.5 N - LH - SR	14.03.2014	39.6	41.7
4	CEM I 42.5 R	14.03.2014	54.6	54.4
9	CEM I 42.5 R	14.03.2014	57.8	55.4
38	CEM IV/B (P) 32.5 N	17.03.2014	37	36
38	CEM II/A-M (P-LL) 42.5 R	17.03.2014	48.8	50.5

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38	CEM I 42.5 R	17.03.2014	51.9	54.5
26	CEM IV/B (P) 32.5 N	18.03.2014	36.9	36.7
40	CEM II/B-M (P-L) 32.5 R	18.03.2014	37	37.4
68	CEM IV/B (P) 32.5 N	18.03.2014	42.3	42.2
15	CEM IV/B (P) 32.5 N	18.03.2014	41.8	43.2
15	CEM I 42.5 R	18.03.2014	52.8	56.1
40	CEM II/A-M (P-L) 42.5 R	18.03.2014	56.8	56.4
40	CEM I 42.5 R	18.03.2014	58	56.5
68	CEM I 42.5 R	18.03.2014	51.7	56.7
26	CEM I 42.5 R	18.03.2014	54	58.3
3	CEM IV/B (P) 32.5 N	19.03.2014	36.5	37.7
18	CEM IV/B (P) 32.5 R-SR	19.03.2014	41.1	44.5
3	CEM II/A-M (P-L) 42.5 N	19.03.2014	46	47
32	CEM II/A-LL 42.5 R	19.03.2014	51.5	52.1
18	CEM I 42.5 R	19.03.2014	52.43	54.6
8	CEM II/B-M (P-LL) 32.5 R	21.03.2014	38.5	40.6
8	CEM IV/A (P) 42.5 N-SR	21.03.2014	44.8	48.2
8	CEM II/A-M (P-LL) 42.5 R	21.03.2014	49.2	50
8	CEM I 42.5 R	21.03.2014	54.2	55.2
16	CEM II/A-LL 42.5 N	21.03.2014	59.1	56.4
44	CEM II/B-M (P-L) 32.5 N	24.03.2014	37.5	39.7
44	CEM II/B-M (P-L) 32.5 R	24.03.2014	37.3	40.6
44	CEM I 42.5 R	24.03.2014	46	49.6
44	CEM II/A-M (P-L) 42.5 R	24.03.2014	46.5	49.6
44	CEM I 42.5 R- SR5	24.03.2014	49.2	51.8
46	CEM IV/B (P) 32.5 N	25.03.2014	35.6	33.8
31	CEM II/B-LL 32.5 R	25.03.2014	38.2	37.6
31	CEM I 42.5 R	25.03.2014	51	50.6
46	CEM II/A-LL 42.5 R	25.03.2014	57.1	55.8
46	CEM I 42.5 R	25.03.2014	54.8	58.6
59	CEM IV/B (P) 32.5 R-SR	26.03.2014	36.3	36.6
59	CEM I 42.5 R	26.03.2014	54.4	53.5
66	CEM IV/B (V) 32.5 R - SR	27.03.2014	34.9	36.8
56	CEM II/B-M (P-LL) 32.5 R	27.03.2014	38.1	37.7
56	CEM IV/B (P) 32.5 R-SR	27.03.2014	36.8	38.3
56	CEM IV/B (P) 32.5 R-SR	27.03.2014	36.8	38.3
61	CEM II/B-LL 32.5 R	27.03.2014	40.2	41.2
59	CEM III/A 42.5 N	27.03.2014	47.6	44.8
56	CEM II/A-M (P-LL) 42.5 R	27.03.2014	50.7	51
61	CEM II/A-LL 42.5 R	27.03.2014	51.1	52.7
61	CEM II/B-M (P-LL) 42.5 N	27.03.2014	50.3	52.9
56	CEM I 42.5 R	27.03.2014	53.1	54.1
59	CEM II/A-M (P-LL) 42.5 R	27.03.2014	53.4	54.1
61	CEM I 42.5 R	27.03.2014	58.5	61.8
52	CEM II/B-M (P-L) 32.5 R	28.03.2014	47.9	46.3
52	CEM I 42.5 R	28.03.2014	54.9	53.7
62	CEM II/B-M (P-L) 32.5 R	01.04.2014	39.9	38.7
62	CEM I 42.5 R	01.04.2014	55	54.2
62	CEM II/A-L 42.5 R	01.04.2014	56.6	55.2
55	CEM II/B-M (W-L) 32.5 R	02.04.2014	39	36.7
55	CEM II/A-LL 42.5 R	02.04.2014	50.2	48.6
55	CEM I 42.5 R	02.04.2014	52.9	51.7
43	CEM II/B-M (P-L) 32.5 N	03.04.2014	40.7	37.1
43	CEM II/A-M (P-L) 42.5 R	03.04.2014	49.3	48.1
12	CEM IV/A (P) 42.5 R-SR	03.04.2014	50.9	52.1
43	CEM I 42.5 R	03.04.2014	54.2	52.5
10	CEM II/B-LL 32.5 R	04.04.2014	39.9	42
10	CEM II/A-LL 42.5 R	04.04.2014	53.6	55.4
10	CEM I 42.5 R	04.04.2014	58.2	60
49	CEM IV/B (P-W) 32.5 R	08.04.2014	39.83	38.4
28	CEM IV/B (P) 32.5 R	08.04.2014	39.1	40.6
49	CEM I 42.5 R	08.04.2014	53.4	51.3
49	CEM II/A-M (P-L) 42.5 R	08.04.2014	52.1	51.8
28	CEM I 42.5 R	08.04.2014	48.2	53.2
28	CEM II/A-M (P-L) 42.5 R	08.04.2014	51.8	54.9
48	CEM II/B-M (P-L) 32.5 R	09.04.2014	32.8	32.5
29	CEM III/A 32.5 R	09.04.2014	42	41.2
48	CEM II/A-M (P-L) 42.5 R	09.04.2014	47.6	50.2
48	CEM I 42.5 R	09.04.2014	50.7	52
29	CEM II/A-V 42.5 R	09.04.2014	53.2	52.3
29	CEM I 42.5 R	09.04.2014	52.5	53.6
29	CEM II/B-L 42.5 R	09.04.2014	52.5	54.5
34	CEM IV/B (P) 32.5 R	10.04.2014	35.2	35.3

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36	CEM II/B-M (P-LL) 32.5 R	10.04.2014	36	36.7
63	CEM IV/B (P) 32.5 R	10.04.2014	35	37.7
14	CEM IV/B (P-W) 32.5 R	10.04.2014	39.1	37.8
25	CEM IV/B (P-W) 32.5 R	10.04.2014	41.1	39.4
36	CEM I 42.5 N	10.04.2014	46.5	44.8
36	CEM II/A-M (P-LL) 42.5 R	10.04.2014	47	45
14	CEM II/A-M (P-L) 42.5 R	10.04.2014	52.3	49.7
25	CEM II/A-M (P-L) 42.5 R	10.04.2014	52.8	49.7
63	CEM I 42.5 R	10.04.2014	53.5	50.4
14	CEM II/A-M (P-L) 42.5 N	10.04.2014	52.5	50.5
34	CEM I 42.5 N	10.04.2014	50.2	51.5
63	CEM II/A-M (P-L) 42.5 R	10.04.2014	50.7	51.9
14	CEM II/B-M (L-W) 42.5 R	10.04.2014	54.3	53.1
25	CEM I 42.5 R	10.04.2014	56.7	53.1
25	CEM II/B-M (L-W) 42.5 R	10.04.2014	55.5	53.5
34	CEM II/A-M (P-L) 42.5 N	10.04.2014	50.9	53.7
14	CEM I 42.5 R	10.04.2014	55.9	53.9
34	CEM II/A-S 42.5 N	10.04.2014	53.3	56.1
5	CEM II/B-M (P-LL) 32.5 R	14.04.2014	38.3	35.8
5	CEM I 42.5 R	14.04.2014	49.9	50.1
5	CEM I 52.5 N	14.04.2014	66.9	67.5
32	CEM IV/B (P) 32.5 N	15.04.2014	38.1	34.3
41	CEM III/A 32.5 N	15.04.2014	38.2	39.5
32	CEM II/A-LL 42.5 R	15.04.2014	51.5	51
32	CEM I 42.5 R- SR5	15.04.2014	50.2	52
32	CEM II/A-M (P-LL) 42.5 R	15.04.2014	50.4	52.5
32	CEM I 42.5 R	15.04.2014	51.8	53
2	CEM II/B-M (P-LL) 32.5 R	16.04.2014	36.9	36.4
2	CEM I 42.5 N	16.04.2014	48.3	46.2
2	CEM II/A-P 42.5 R	16.04.2014	52.5	47.5
2	CEM I 42.5 R	16.04.2014	52.5	49.3
2	CEM I 42.5 R- SR5	16.04.2014	54.6	50.8
47	CEM IV/B (P) 32.5 N	17.04.2014	34.3	33
54	CEM IV/B (P) 32.5 R	17.04.2014	38.1	34.6
16	CEM IV/B (P) 32.5 N	17.04.2014	42.9	37
47	CEM II/B-M (P-S) 42.5 R	17.04.2014	44.2	42.6
47	CEM II/A-M (P-LL) 42.5 R	17.04.2014	45	42.6
47	CEM I 42.5 N	17.04.2014	45.5	45.1
47	CEM I 42.5 R	17.04.2014	46	46.4
54	CEM I 42.5 R	17.04.2014	50.6	49.2
16	CEM I 42.5 R	17.04.2014	53.4	49.8
16	CEM II/B-M (L-W) 42.5 R	17.04.2014	55.6	50.8
16	CEM I 42.5 R- SR5	17.04.2014	53.3	51.8
7	CEM IV/B (P) 32.5 R	18.04.2014	37.5	41.7
7	CEM I 42.5 R	18.04.2014	54	55.5
7	CEM II/A-M (V-LL) 42.5 R	18.04.2014	58.7	60.8
67	CEM I 42.5 N	29.04.2014	47.97	44.2
10	CEM II/B-LL 42.5 N	29.04.2014	48.7	47.6
27	CEM IV/B (P) 32.5 N	05.05.2014	35.2	32.8
21	CEM IV/B (P-V) 32.5 N	05.05.2014	47.5	43.2
21	CEM II/A-M (P-L) 42.5 R	05.05.2014	49.4	45.8
27	CEM I 42.5 R- SR5	05.05.2014	49.2	47.1
27	CEM II/A-M (P-L) 42.5 N	05.05.2014	50.3	50.8
27	CEM I 42.5 R	05.05.2014	52.1	52.1
21	CEM I 42.5 R	05.05.2014	59.3	56.7
21	CEM II/A-M (P-V) 42.5 R	05.05.2014	60.8	61.5
50	CEM IV/B (P) 32.5 R	06.05.2014	33.8	31.7
53	CEM IV/B (P) 32.5 R	06.05.2014	37.6	32.7
22	CEM IV/B (P-V) 32.5 R	06.05.2014	36.1	33.2
50	CEM II/A-L 42.5 R	06.05.2014	49.7	45.7
22	CEM II/B-M (P-V) 42.5 N	06.05.2014	48.8	45.8
50	CEM I 42.5 R	06.05.2014	49.6	47
50	CEM II/A-M (P-L) 42.5 R	06.05.2014	48.6	47.4
50	CEM I 42.5 R- SR5	06.05.2014	48.8	47.5
53	CEM I 42.5 R	06.05.2014	58.4	56.7
53	CEM II/A-M (P-L) 42.5 R	06.05.2014	59.8	57.4
24	CEM II/B-LL 32.5 N	07.05.2014	36.7	34.2
1	CEM V/A (S-P) 32.5 R	07.05.2014	40.1	38.3
1	CEM II/B-LL 42.5 R	07.05.2014	44.2	45
11	CEM IV/A (P-V) 42.5 R	07.05.2014	46.5	45.7
29	CEM II/A-V 42.5 R	07.05.2014	48.9	49
1	CEM II/B-M (P-S) 42.5 N	07.05.2014	47.3	49.3
16	CEM II/B-M (L-W) 42.5 R	07.05.2014	51.2	50

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24	CEM I 42.5 R	07.05.2014	53.8	50.4
1	CEM I 42.5 R	07.05.2014	49.6	50.9
11	CEM I 42.5 R	07.05.2014	51.5	50.9
29	CEM II/B-L 42.5 R	07.05.2014	48.1	51.1
24	CEM II/A-LL 42.5 R	07.05.2014	53.7	51.2
32	CEM II/A-LL 42.5 R	07.05.2014	49.4	51.7
29	CEM I 42.5 R	07.05.2014	50.5	52.3
11	CEM II/A-M (V-LL) 42.5 R	07.05.2014	55	52.4
1	CEM III/A 42.5 N	07.05.2014	50.8	54.5
1	CEM II/A-S 42.5 R	07.05.2014	51.8	55.2
1	CEM I 52.5 R	07.05.2014	56.7	58
41	CEM V/A (S-P) 32.5 R	08.05.2014	37.5	37.4
41	CEM II/B-M (P-S) 42.5 R	08.05.2014	49	48.9
41	CEM III/A 42.5 N	08.05.2014	49.5	49.4
31	CEM II/B-LL 32.5 R	13.05.2014	35.6	34.9
44	CEM II/B-M (P-L) 32.5 N	13.05.2014	35.8	36
44	CEM II/B-M (P-L) 32.5 R	13.05.2014	36.4	36.7
44	CEM II/A-M (P-L) 42.5 R	13.05.2014	45.6	47
44	CEM I 42.5 R	13.05.2014	45.2	47.7
31	CEM I 42.5 R	13.05.2014	53.3	54.1
44	CEM I 42.5 R- SR5	13.05.2014	57.1	56
59	CEM IV/B (P) 32.5 R-SR	14.05.2014	36	30.6
42	CEM III/A 32.5 N	14.05.2014	34.9	34.7
68	CEM IV/B (P) 32.5 N	14.05.2014	37.1	34.9
15	CEM IV/B (P) 32.5 N	14.05.2014	36.7	35
12	CEM IV/B (P) 32.5 R	14.05.2014	37.7	38
38	CEM IV/B (P) 32.5 N	14.05.2014	40	38.1
52	CEM II/B-M (P-L) 32.5 R	14.05.2014	43.7	41.5
38	CEM II/A-M (P-LL) 42.5 R	14.05.2014	49.4	46.3
42	CEM II/B-S 42.5 N	14.05.2014	46.1	48
59	CEM III/A 42.5 N	14.05.2014	50.2	48.1
38	CEM I 42.5 R	14.05.2014	49.3	48.7
12	CEM IV/A (P) 42.5 R-SR	14.05.2014	50.7	50.7
59	CEM I 42.5 R	14.05.2014	52.4	50.8
15	CEM I 42.5 R	14.05.2014	54.7	51.8
68	CEM I 42.5 R	14.05.2014	54	52.8
52	CEM I 42.5 R	14.05.2014	57.5	55
12	CEM I 42.5 N	14.05.2014	55.4	55.8
12	CEM I 42.5 R	14.05.2014	56.2	56.2
3	CEM IV/B (P) 32.5 N	15.05.2014	35.3	34.8
66	CEM IV/B (V) 32.5 R - SR	15.05.2014	35.2	35.4
19	CEM IV/B (P) 32.5 R-SR	15.05.2014	34.9	36.7
20	CEM III/B (S) 32.5 N-SR	15.05.2014	38.8	38.8
56	CEM II/B-M (P-LL) 32.5 R	15.05.2014	43.7	40.9
3	CEM II/A-M (P-L) 42.5 N	15.05.2014	47.1	45.5
19	CEM II/A-M (P-L) 42.5 R	15.05.2014	46.1	47.8
19	CEM I 42.5 N	15.05.2014	49.1	48.8
19	CEM I 42.5 R- SR5	15.05.2014	48.3	49
59	CEM II/A-M (P-LL) 42.5 R	15.05.2014	52.7	50.7
63	CEM II/A-M (P-L) 42.5 R	15.05.2014	49.5	51.4
56	CEM I 42.5 R	15.05.2014	50.3	52.4
19	CEM I 42.5 R	15.05.2014	52.5	53.3
56	CEM II/A-M (P-LL) 42.5 R	15.05.2014	54.6	54.4
46	CEM IV/B (P) 32.5 N	16.05.2014	35.7	36
46	CEM I 42.5 R	16.05.2014	57.1	54.2
46	CEM II/A-LL 42.5 R	16.05.2014	57	55.8
7	CEM IV/B (P) 32.5 R	20.05.2014	36.3	35.6
18	CEM IV/B (P) 32.5 R-SR	20.05.2014	37.12	38.6
51	CEM IV/B (P) 32.5 R	20.05.2014	48.3	50.5
51	CEM I 42.5 R	20.05.2014	53.9	55.4
18	CEM I 42.5 R	20.05.2014	54.57	55.4
7	CEM I 42.5 R	20.05.2014	54.9	56.2
51	CEM II/A-P 42.5 R	20.05.2014	55.1	57.2
51	CEM I 42.5 R- SR5	20.05.2014	56.9	58.2
51	CEM I 52.5 N	20.05.2014	56.9	58.4
23	CEM II/B-M (P-L) 32.5 R	21.05.2014	33.1	33.6
26	CEM IV/B (P) 32.5 N	21.05.2014	35.5	35.6
40	CEM II/B-M (P-L) 32.5 R	21.05.2014	37.6	38.1
9	CEM V/A (P-S) 32.5 N	21.05.2014	50.5	50.8
40	CEM I 42.5 R	21.05.2014	57.3	53.2
40	CEM II/A-M (P-L) 42.5 R	21.05.2014	55.5	55.4
26	CEM I 42.5 R	21.05.2014	56.4	56.1
9	CEM II/B-M (S-L) 42.5 R	21.05.2014	61.7	57.8

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9	CEM II/A-M (S-L) 42.5 R	21.05.2014	61.3	58.5
9	CEM I 42.5 R	21.05.2014	61.8	59
9	CEM II/A-M (S-L) 52.5 N	21.05.2014	64	60.8
4	CEM IV/B (P) 32.5 R	22.05.2014	37.2	33.9
65	CEM IV/B (P) 32.5 R	22.05.2014	36.2	34.5
57	CEM II/B-L 32.5 R	22.05.2014	37.1	37.2
57	CEM II/B-L 42.5 N	22.05.2014	43	40.3
57	CEM II/A-L 42.5 R	22.05.2014	47.6	47.5
4	CEM I 42.5 R	22.05.2014	56.2	51.8
57	CEM I 42.5 R	22.05.2014	53.8	52.8
23	CEM I 42.5 R	22.05.2014	53.6	53.1
57	CEM I 52.5 R	22.05.2014	54	53.1
23	CEM IV/A (P) 42.5 N-SR	22.05.2014	53.3	57.8
58	CEM IV/B (P) 32.5 N	23.05.2014	35.1	33.2
30	CEM IV/B (P) 32.5 R	23.05.2014	41.6	40.2
34	CEM II/A-S 42.5 N	23.05.2014	50.3	50.3
58	CEM I 42.5 R	23.05.2014	57	53.7
58	CEM II/A-LL 42.5 R	23.05.2014	56	55.5
30	CEM II/A-M (P-L) 42.5 R	23.05.2014	56.1	55.7
30	CEM I 42.5 R	23.05.2014	56.9	57.7
56	CEM IV/B (P) 32.5 R-SR	27.05.2014	41.6	47
56	CEM IV/B (P) 32.5 R-SR	27.05.2014	41.6	47
56	CEM I 42.5 R- SR5	27.05.2014	50.7	54.2
62	CEM II/B-M (P-L) 32.5 R	02.06.2014	38.8	36.9
62	CEM I 42.5 R	02.06.2014	53.3	52.5
62	CEM II/A-L 42.5 R	02.06.2014	55.4	54.3
55	CEM II/B-M (W-L) 32.5 R	03.06.2014	37.5	36.3
10	CEM II/B-LL 32.5 R	03.06.2014	38.7	40.9
10	CEM II/B-LL 42.5 N	03.06.2014	46.6	46.5
55	CEM II/A-LL 42.5 R	03.06.2014	53.3	49.7
55	CEM I 42.5 R	03.06.2014	50.3	50.5
10	CEM II/A-LL 42.5 R	03.06.2014	51.7	52.1
10	CEM I 42.5 R	03.06.2014	59.4	58.7
8	CEM II/B-M (P-LL) 32.5 R	04.06.2014	39.4	40
8	CEM IV/A (P) 42.5 N-SR	04.06.2014	51.7	48.1
8	CEM II/A-M (P-LL) 42.5 R	04.06.2014	52.6	52.9
8	CEM I 42.5 R	04.06.2014	56.7	56
2	CEM II/B-M (P-LL) 32.5 R	05.06.2014	33.4	34.3
68	CEM IV/B (P) 32.5 N	05.06.2014	37	36.6
43	CEM II/B-M (P-L) 32.5 N	05.06.2014	38	39.4
2	CEM I 42.5 N	05.06.2014	47.6	45.1
43	CEM II/A-M (P-L) 42.5 R	05.06.2014	44.9	46.5
2	CEM I 42.5 R	05.06.2014	49.6	50.1
43	CEM I 42.5 R	05.06.2014	49.3	51
2	CEM II/A-P 42.5 R	05.06.2014	48.7	51.7
2	CEM I 42.5 R- SR5	05.06.2014	53.3	52.2
15	CEM I 42.5 R	05.06.2014	51.1	54.5
68	CEM I 42.5 R	05.06.2014	51.6	55.5
5	CEM II/B-M (P-LL) 32.5 R	16.06.2014	45.2	44.4
5	CEM I 42.5 R	16.06.2014	52.7	53.6
5	CEM I 52.5 N	16.06.2014	63	63.3
58	CEM IV/B (P) 32.5 R-SR	17.06.2014	35	33
32	CEM IV/B (P) 32.5 N	17.06.2014	38.2	35.7
23	CEM IV/B (P) 32.5 N - LH - SR	17.06.2014	40.3	39.7
49	CEM IV/B (P-W) 32.5 R	17.06.2014	39.9	40
28	CEM IV/B (P) 32.5 R	17.06.2014	40.5	41
32	CEM I 42.5 R- SR5	17.06.2014	50	49.7
32	CEM I 42.5 R	17.06.2014	50.1	50.2
28	CEM I 42.5 R	17.06.2014	48.2	50.6
49	CEM II/A-M (P-L) 42.5 R	17.06.2014	53.7	53.1
28	CEM II/A-M (P-L) 42.5 R	17.06.2014	51.3	54.2
23	CEM IV/A (P) 42.5 N-SR	17.06.2014	55.4	55.5
63	CEM IV/B (P) 32.5 R	18.06.2014	35.5	36.8
16	CEM IV/B (P) 32.5 N	18.06.2014	38.9	40.3
16	CEM I 42.5 R	18.06.2014	51	47.2
16	CEM II/B-M (L-W) 42.5 R	18.06.2014	50.6	48.3
63	CEM II/A-M (P-L) 42.5 R	18.06.2014	50.5	50.2
63	CEM I 42.5 R	18.06.2014	50.2	51.4
36	CEM II/B-M (P-LL) 32.5 R	19.06.2014	39.1	39.6
61	CEM II/B-LL 32.5 R	19.06.2014	41.3	40.9
61	CEM II/B-M (P-LL) 42.5 N	19.06.2014	48.5	44.5
36	CEM I 42.5 N	19.06.2014	48	47.7
61	CEM II/A-LL 42.5 R	19.06.2014	50.4	48.8

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36	CEM II/A-M (P-LL) 42.5 R	19.06.2014	48.6	49.3
61	CEM I 42.5 R	19.06.2014	56	56
34	CEM IV/B (P) 32.5 R	20.06.2014	38	37.1
34	CEM IV/B (P) 32.5 R-SR	20.06.2014	38	37.2
34	CEM II/A-S 42.5 N	20.06.2014	49.4	49.7
34	CEM II/A-M (P-L) 42.5 N	20.06.2014	50.3	51
34	CEM I 42.5 N	20.06.2014	51	51.1
47	CEM IV/B (P) 32.5 N	25.06.2014	35	37.1
54	CEM IV/B (P) 32.5 R	25.06.2014	37.3	38.5
47	CEM I 42.5 R- SR3	25.06.2014	46.1	44.7
47	CEM II/A-M (P-LL) 42.5 R	25.06.2014	45	45.1
47	CEM I 42.5 N	25.06.2014	48.1	45.9
54	CEM I 42.5 R	25.06.2014	47.4	47.6
47	CEM I 42.5 R	25.06.2014	48.5	48
47	CEM II/B-M (P-S) 42.5 R	25.06.2014	49.9	48.9
25	CEM IV/B (P-W) 32.5 R	26.06.2014	39.5	36.9
14	CEM IV/B (P-W) 32.5 R	26.06.2014	37.8	37.6
48	CEM II/B-M (P-L) 32.5 R	26.06.2014	38.2	38.7
25	CEM II/A-M (P-L) 42.5 R	26.06.2014	50	46.2
14	CEM II/A-M (P-L) 42.5 N	26.06.2014	51	49.7
14	CEM II/A-M (P-L) 42.5 R	26.06.2014	50.6	50
25	CEM II/B-M (L-W) 42.5 R	26.06.2014	53	51.9
14	CEM II/B-M (L-W) 42.5 R	26.06.2014	54.2	51.9
14	CEM I 42.5 R	26.06.2014	54.4	53
25	CEM I 42.5 R	26.06.2014	55.7	53.3
48	CEM II/A-M (P-L) 42.5 R	27.06.2014	48	51.3
48	CEM I 42.5 R	27.06.2014	52.3	54.6
67	CEM I 42.5 N	28.06.2014	47.05	46.8
12	CEM IV/B (P) 32.5 R	02.07.2014	33.2	31.6
42	CEM III/A 32.5 N	02.07.2014	35.4	33.4
42	CEM II/B-S 42.5 N	02.07.2014	46.8	49.6
12	CEM I 42.5 R	02.07.2014	53.7	53.6
12	CEM I 42.5 N	02.07.2014	53.5	56.4
19	CEM IV/B (P) 32.5 R-SR	03.07.2014	37	37.9
20	CEM III/B (S) 32.5 N-SR	03.07.2014	41	41.4
19	CEM I 42.5 R- SR5	03.07.2014	47.3	49.1
19	CEM I 42.5 N	03.07.2014	48.5	49.1
19	CEM I 42.5 R	03.07.2014	52.1	55.2
53	CEM IV/B (P) 32.5 R	07.07.2014	35.9	33.6
53	CEM I 42.5 R	07.07.2014	54.9	52.6
53	CEM II/A-M (P-L) 42.5 R	07.07.2014	59.4	58.2
24	CEM II/B-LL 32.5 N	08.07.2014	38.3	35.2
51	CEM IV/B (P) 32.5 R	08.07.2014	38.8	38.6
24	CEM II/A-LL 42.5 R	08.07.2014	54	50.9
51	CEM II/A-P 42.5 R	08.07.2014	51.9	51.6
51	CEM I 42.5 R- SR5	08.07.2014	54.8	54.3
24	CEM I 42.5 R	08.07.2014	57.5	55
51	CEM I 42.5 R	08.07.2014	55.8	55.2
51	CEM I 52.5 N	08.07.2014	55.3	56.6
65	CEM IV/B (P) 32.5 R	09.07.2014	37.4	34
4	CEM IV/B (P) 32.5 R	09.07.2014	37.4	36.3
23	CEM IV/B (P) 32.5 N - LH - SR	09.07.2014	42.6	38.6
9	CEM V/A (P-S) 32.5 N	09.07.2014	41.1	39.5
23	CEM II/B-M (P-L) 32.5 R	09.07.2014	46.5	49.4
4	CEM I 42.5 R	09.07.2014	54.8	50.4
23	CEM IV/A (P) 42.5 N-SR	09.07.2014	52.8	51.9
23	CEM I 42.5 R	09.07.2014	53.6	53.6
9	CEM I 42.5 R	09.07.2014	57.9	54.1
9	CEM II/A-M (S-L) 42.5 R	09.07.2014	60.2	56.2
9	CEM II/B-M (S-L) 42.5 R	09.07.2014	60.9	58
9	CEM II/A-M (S-L) 52.5 N	09.07.2014	66	61.1
58	CEM IV/B (P) 32.5 N	10.07.2014	34	33.4
11	CEM IV/B (P-V) 32.5 N	10.07.2014	34.9	34
30	CEM IV/B (P) 32.5 R	10.07.2014	37.5	35
18	CEM IV/B (P) 32.5 R-SR	10.07.2014	36.28	36.8
57	CEM II/B-L 32.5 R	10.07.2014	33.6	37.4
57	CEM II/B-L 42.5 N	10.07.2014	46.5	44.7
11	CEM IV/A (P-V) 42.5 R	10.07.2014	46.1	45.4
20	CEM III/A 42.5 N	10.07.2014	45.1	45.6
11	CEM I 42.5 R	10.07.2014	51.3	49.4
19	CEM II/A-M (P-L) 42.5 R	10.07.2014	50.8	49.5
20	CEM III/B (S) 42.5 N-SR	10.07.2014	51.2	50.7
11	CEM II/A-M (V-LL) 42.5 R	10.07.2014	53.9	51
18	CEM I 42.5 R	10.07.2014	51.44	51.1
58	CEM II/A-LL 42.5 R	10.07.2014	55.3	52.3
57	CEM I 52.5 R	10.07.2014	55	52.7
30	CEM I 42.5 R	10.07.2014	55.9	53
57	CEM I 42.5 R	10.07.2014	55.1	53.1
30	CEM II/A-M (P-L) 42.5 R	10.07.2014	54.1	53.7
58	CEM I 42.5 R	10.07.2014	56.5	53.7
50	CEM IV/B (P) 32.5 R	14.07.2014	37.1	35.9
50	CEM II/A-M (P-L) 42.5 R	14.07.2014	49.4	47.2
50	CEM I 42.5 R- SR5	14.07.2014	47.9	47.3
50	CEM II/A-L 42.5 R	14.07.2014	50.9	48
50	CEM I 42.5 R	14.07.2014	52.7	51
27	CEM IV/B (P) 32.5 N	15.07.2014	33.5	32.9
31	CEM II/B-LL 32.5 R	15.07.2014	38	35.7
46	CEM IV/B (P) 32.5 N	15.07.2014	38	37.9
27	CEM II/A-M (P-L) 42.5 N	15.07.2014	44.5	46.7
67	CEM I 42.5 N	15.07.2014	47.16	48
29	CEM II/B-L 42.5 R	15.07.2014	48.6	48.5
27	CEM I 42.5 R	15.07.2014	47.1	49
31	CEM I 42.5 R	15.07.2014	52.6	49.5
27	CEM I 42.5 R- SR5	15.07.2014	50.9	50.7
29	CEM II/A-V 42.5 R	15.07.2014	51.3	50.9
29	CEM I 42.5 R	15.07.2014	51.4	54.1
46	CEM I 42.5 R	15.07.2014	58.5	58.6
22	CEM IV/B (P-V) 32.5 R	16.07.2014	34.1	32.5
1	CEM V/A (S-P) 32.5 R	16.07.2014	35.5	33.1
59	CEM IV/B (P) 32.5 R-SR	16.07.2014	36	34.2
52	CEM II/B-M (P-L) 32.5 R	16.07.2014	37.1	37.6
1	CEM II/B-M (P-S) 42.5 N	16.07.2014	45	43.9
59	CEM III/A 42.5 N	16.07.2014	49.6	45
1	CEM II/B-LL 42.5 R	16.07.2014	45.2	45.6
1	CEM I 42.5 R	16.07.2014	45.3	45.7
22	CEM II/B-M (P-V) 42.5 N	16.07.2014	46	46.3
59	CEM I 42.5 R	16.07.2014	50.9	48
52	CEM I 42.5 R	16.07.2014	56.1	50.6
1	CEM II/A-S 42.5 R	16.07.2014	50.3	51.3
1	CEM I 52.5 R	16.07.2014	57	57.9
56	CEM IV/B (P) 32.5 R-SR	17.07.2014	35.7	38
56	CEM IV/B (P) 32.5 R-SR	17.07.2014	35.7	38
56	CEM II/B-M (P-LL) 32.5 R	17.07.2014	35.3	40.4
21	CEM IV/B (P-V) 32.5 N	17.07.2014	38.9	40.5
41	CEM V/A (S-P) 32.5 R	17.07.2014	42.8	41.9
41	CEM III/A 42.5 N	17.07.2014	44.9	45.5
21	CEM II/A-M (P-L) 42.5 R	17.07.2014	48	46.2
56	CEM I 42.5 R- SR5	17.07.2014	45.8	48.7
41	CEM II/B-M (P-S) 42.5 R	17.07.2014	48.7	49
61	CEM II/B-M (P-LL) 42.5 N	17.07.2014	51	49.5
56	CEM I 42.5 R	17.07.2014	51	51.5
21	CEM I 42.5 R	17.07.2014	54.4	54.7
21	CEM II/A-M (P-V) 42.5 R	17.07.2014	57.3	55.5
56	CEM II/A-M (P-LL) 42.5 R	17.07.2014	54.8	57.4
66	CEM IV/B (V) 32.5 R - SR	18.07.2014	35.8	33.9
59	CEM II/A-M (P-LL) 42.5 R	18.07.2014	50.6	45.9
40	CEM II/B-M (P-L) 32.5 R	22.07.2014	36.3	35.8
44	CEM II/B-M (P-L) 32.5 R	22.07.2014	36.3	36.3
44	CEM II/B-M (P-L) 32.5 N	22.07.2014	36.1	36.8
26	CEM IV/B (P) 32.5 N	22.07.2014	36.5	38.2
7	CEM IV/B (P) 32.5 R	22.07.2014	39.3	38.7
44	CEM II/A-M (P-L) 42.5 R	22.07.2014	45.3	46.6
44	CEM I 42.5 R	22.07.2014	49.7	49.3
44	CEM I 42.5 R- SR5	22.07.2014	48.9	49.5
7	CEM II/A-M (V-LL) 42.5 R	22.07.2014	53.6	50.9
40	CEM II/A-M (P-L) 42.5 R	22.07.2014	52.9	51.8
40	CEM I 42.5 R	22.07.2014	54.9	54.5
26	CEM I 42.5 R	22.07.2014	54.9	57.1
7	CEM I 42.5 R	22.07.2014	55.7	57.4
38	CEM IV/B (P) 32.5 N	23.07.2014	37.6	33.7
3	CEM IV/B (P) 32.5 N	23.07.2014	37.8	33.9
38	CEM II/A-M (P-LL) 42.5 R	23.07.2014	48.1	46.3
38	CEM I 42.5 R	23.07.2014	46.7	47.2
3	CEM II/A-M (P-L) 42.5 N	23.07.2014	48.8	47.8
32	CEM IV/B (P) 32.5 N	05.08.2014	37.1	35.7
5	CEM II/B-M (P-LL) 32.5 R	05.08.2014	38.8	39.9

Code of The Manufacturer	Type of Cement	The Date of Sampling	Standard Compressive Strength Result of Manufacturer (MPa)	Standard Compressive Strength Result of Notified Body (MPa)	Code of The Manufacturer	Type of Cement	The Date of Sampling	Standard Compressive Strength Result of Manufacturer (MPa)	Standard Compressive Strength Result of Notified Body (MPa)
32	CEM I 42.5 R- SR5	05.08.2014	47.3	46.5	43	CEM I 42.5 R	21.08.2014	54.2	55
5	CEM I 42.5 R	05.08.2014	48.1	47.8	2	CEM I 42.5 R	21.08.2014	57.4	55.2
32	CEM II/A-LL 42.5 R	05.08.2014	49.6	48.4	2	CEM II/A-P 42.5 R	21.08.2014	55.9	57.1
32	CEM I 42.5 R	05.08.2014	49.5	49.7	54	CEM IV/B (P) 32.5 R	22.08.2014	38	38.5
5	CEM I 52.5 N	05.08.2014	62.4	65.4	54	CEM I 42.5 R	22.08.2014	54.7	55.2
16	CEM IV/B (P) 32.5 N	07.08.2014	35.1	32.5	48	CEM II/B-M (P-L) 32.5 R	23.08.2014	38	40.8
25	CEM IV/B (P-W) 32.5 R	07.08.2014	41.1	39.3	48	CEM I 42.5 R	23.08.2014	52.3	55.3
16	CEM I 42.5 R- SR5	07.08.2014	50.7	46.1	1	CEM III/A 42.5 N	27.08.2014	53.9	52.9
16	CEM II/A-M (P-L) 42.5 N	07.08.2014	48.3	46.4	1	CEM II/A-S 42.5 R	27.08.2014	53.2	54
16	CEM I 42.5 R	07.08.2014	49.9	47.4	53	CEM IV/B (P) 32.5 R	01.09.2014	38.4	35
25	CEM I 42.5 R	07.08.2014	52.5	49.6	53	CEM I 42.5 R	01.09.2014	56.8	55
25	CEM II/A-M (P-L) 42.5 R	07.08.2014	52.7	52.6	53	CEM II/A-M (P-L) 42.5 R	01.09.2014	59.1	57.9
25	CEM II/B-M (L-W) 42.5 R	07.08.2014	55.9	55.2	22	CEM IV/B (P-V) 32.5 R	02.09.2014	36	35.7
14	CEM IV/B (P-W) 32.5 R	08.08.2014	37.2	38.7	27	CEM IV/B (P) 32.5 N	02.09.2014	39.9	38.1
14	CEM II/A-M (P-L) 42.5 R	08.08.2014	48.4	46.7	22	CEM II/B-M (P-V) 42.5 N	02.09.2014	46.8	44.7
14	CEM II/A-M (P-L) 42.5 N	08.08.2014	48	47.8	27	CEM I 42.5 R- SR5	02.09.2014	49	46.1
14	CEM I 42.5 R	08.08.2014	52	53.2	27	CEM II/A-M (P-L) 42.5 N	02.09.2014	46.1	46.2
14	CEM II/B-M (L-W) 42.5 R	08.08.2014	51	53.3	27	CEM I 42.5 R	02.09.2014	49.8	50.2
49	CEM IV/B (P-W) 32.5 R	11.08.2014	38.5	37.5	21	CEM IV/B (P-V) 32.5 N	03.09.2014	39.3	38.2
28	CEM IV/B (P) 32.5 R	11.08.2014	39.9	40.3	21	CEM II/A-M (P-L) 42.5 R	03.09.2014	47.5	48.2
34	CEM II/B-M (P-L) 42.5 N	11.08.2014	47.5	46.3	21	CEM I 42.5 R	03.09.2014	58.1	55.4
28	CEM II/A-M (P-L) 42.5 R	11.08.2014	49.1	48.2	11	CEM IV/B (P-V) 32.5 N	04.09.2014	37.9	35.9
28	CEM I 42.5 R	11.08.2014	49.5	49	11	CEM IV/A (P-V) 42.5 R	04.09.2014	46.7	49
49	CEM II/A-M (P-L) 42.5 R	11.08.2014	55.2	51	11	CEM I 42.5 R	04.09.2014	50.7	52.6
34	CEM IV/B (P) 32.5 R-SR	12.08.2014	37.6	35.6	11	CEM II/A-M (V-LL) 42.5 R	04.09.2014	53	53.5
34	CEM IV/B (P) 32.5 R	12.08.2014	37.6	36.2	24	CEM II/B-LL 32.5 N	05.09.2014	38.6	35.8
34	CEM II/B-M (P-L) 42.5 N	12.08.2014	47	46.8	24	CEM II/A-LL 42.5 R	05.09.2014	54.7	51.8
34	CEM II/A-M (P-L) 42.5 N	12.08.2014	47.6	47.9	24	CEM I 42.5 R	06.09.2014	54.9	51.4
34	CEM I 42.5 N	12.08.2014	48.1	50.6	50	CEM IV/B (P) 32.5 R	09.09.2014	41.2	44.2
36	CEM II/B-M (P-LL) 32.5 R	13.08.2014	36.3	36.3	50	CEM II/A-L 42.5 R	09.09.2014	45.8	44.2
36	CEM I 42.5 N	13.08.2014	47.6	45.8	50	CEM II/A-M (P-L) 42.5 R	09.09.2014	46.7	46.3
34	CEM II/B-M (P-L) 42.5 N	13.08.2014	47.2	47.5	50	CEM I 42.5 R	09.09.2014	47.1	46.7
36	CEM II/A-M (P-LL) 42.5 R	13.08.2014	48.4	47.8	50	CEM I 42.5 R- SR5	09.09.2014	48.6	50.1
34	CEM II/A-S 42.5 N	13.08.2014	49.2	48.6	1	CEM V/A (S-P) 32.5 R	10.09.2014	38.1	35.9
61	CEM II/B-LL 32.5 R	14.08.2014	42	42.1	1	CEM II/B-LL 42.5 R	10.09.2014	43.8	42.6
66	CEM II/A-V 42.5 R	14.08.2014	51.7	47.6	1	CEM II/B-M (P-S) 42.5 N	10.09.2014	46.4	43.6
56	CEM I 42.5 R- SR5	14.08.2014	46.9	49	51	CEM IV/B (P) 32.5 R	10.09.2014	45.7	44.8
61	CEM II/A-LL 42.5 R	14.08.2014	51	49.9	29	CEM II/B-L 42.5 R	10.09.2014	48.7	47.7
61	CEM II/B-M (P-LL) 42.5 N	14.08.2014	51.7	50.1	1	CEM III/A 42.5 N	10.09.2014	49.7	47.9
61	CEM I 42.5 R	14.08.2014	56.8	53.5	1	CEM I 42.5 R	10.09.2014	50.6	48.8
63	CEM IV/B (P) 32.5 R	15.08.2014	34.5	36.1	29	CEM II/A-V 42.5 R	10.09.2014	49.8	50.6
63	CEM I 42.5 R	15.08.2014	50	49.1	1	CEM II/A-S 42.5 R	10.09.2014	51.8	50.9
63	CEM II/A-M (P-L) 42.5 R	15.08.2014	47.3	49.7	1	CEM I 52.5 R	10.09.2014	53.2	53.1
29	CEM I 42.5 R	16.08.2014	50.2	53	51	CEM II/A-P 42.5 R	10.09.2014	51.2	55.2
55	CEM II/B-M (W-L) 32.5 R	19.08.2014	35.4	36.1	51	CEM I 42.5 R- SR5	10.09.2014	54.4	57.8
62	CEM II/B-M (P-L) 32.5 R	19.08.2014	38.7	36.2	51	CEM I 42.5 R	10.09.2014	57.1	59.6
55	CEM II/A-LL 42.5 R	19.08.2014	50.1	49	51	CEM I 52.5 N	10.09.2014	58.9	61
55	CEM I 42.5 R	19.08.2014	49.9	51.1	65	CEM IV/B (P) 32.5 R	11.09.2014	35.9	36.5
62	CEM I 42.5 R	19.08.2014	53.7	52.6	4	CEM IV/B (P) 32.5 R	11.09.2014	36	37
62	CEM II/A-L 42.5 R	19.08.2014	54.8	52.8	9	CEM V/A (P-S) 32.5 N	11.09.2014	37.8	37.1
8	CEM II/B-M (P-LL) 32.5 R	20.08.2014	36	33.7	41	CEM V/A (S-P) 32.5 R	11.09.2014	40.3	39.2
10	CEM II/B-LL 32.5 R	20.08.2014	38.2	38.9	23	CEM IV/B (P) 32.5 N - LH - SR	11.09.2014	39.1	40.6
8	CEM II/A-M (P-LL) 42.5 R	20.08.2014	49.1	48.3	41	CEM III/A 42.5 N	11.09.2014	45	46.2
10	CEM II/B-LL 42.5 N	20.08.2014	47.6	49.2	41	CEM II/B-M (P-S) 42.5 R	11.09.2014	47.5	46.7
48	CEM II/A-M (P-L) 42.5 R	20.08.2014	48.1	49.3	23	CEM II/B-M (P-L) 32.5 R	11.09.2014	46.2	49.4
10	CEM II/A-LL 42.5 R	20.08.2014	52.2	53.4	4	CEM I 42.5 R	11.09.2014	54.2	51.8
10	CEM I 42.5 R	20.08.2014	50	53.6	23	CEM I 42.5 R	11.09.2014	54.8	56.4
8	CEM I 42.5 R	20.08.2014	54.2	55.1	9	CEM I 42.5 R	11.09.2014	59.2	57.3
15	CEM IV/B (P) 32.5 N	21.08.2014	37.4	33.4	9	CEM II/A-M (S-L) 42.5 R	11.09.2014	60.5	57.8
68	CEM IV/B (P) 32.5 N	21.08.2014	37.2	34.6	9	CEM II/B-M (S-L) 42.5 R	11.09.2014	61.1	59.8
2	CEM II/B-M (P-LL) 32.5 R	21.08.2014	36.8	34.8	9	CEM II/A-M (S-L) 52.5 N	11.09.2014	64.4	61.1
47	CEM IV/B (P) 32.5 N	21.08.2014	35.5	36.2	58	CEM IV/B (P) 32.5 N	12.09.2014	35.5	34.8
43	CEM II/B-M (P-L) 32.5 N	21.08.2014	40.5	37.6	30	CEM IV/B (P) 32.5 R	12.09.2014	38.5	36.6
47	CEM IV/B (P) 32.5 N - LH - SR	21.08.2014	35.7	38.3	57	CEM II/B-L 32.5 R	12.09.2014	36	38.7
47	CEM II/B-M (P-S) 42.5 R	21.08.2014	46.1	44.7	57	CEM II/B-L 42.5 N	12.09.2014	44.2	44.7
47	CEM II/A-M (P-LL) 42.5 R	21.08.2014	47.1	46.1	57	CEM II/A-L 42.5 R	12.09.2014	49.9	48.9
15	CEM I 42.5 R	21.08.2014	50.6	48.5	58	CEM II/A-LL 42.5 R	12.09.2014	52.6	48.9
68	CEM I 42.5 R	21.08.2014	51	49.1	30	CEM II/A-M (P-L) 42.5 R	12.09.2014	51.2	51.3
43	CEM II/A-M (P-L) 42.5 R	21.08.2014	50.3	49.8	57	CEM I 42.5 R	12.09.2014	52.5	52.4
47	CEM I 42.5 R	21.08.2014	48.6	50.2	57	CEM I 52.5 R	12.09.2014	53.7	52.5
47	CEM I 42.5 N	21.08.2014	48.4	50.7	58	CEM I 42.5 R	12.09.2014	59.3	57.3
2	CEM I 42.5 N	21.08.2014	52.9	51.6	30	CEM I 42.5 R	12.09.2014	55.4	57.8
2	CEM I 42.5 R- SR5	21.08.2014	54.5	52.8	67	CEM II/A-L 32.5 N	18.09.2014	43.81	41.2

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67	CEM I 42.5 N	18.09.2014	47.05	48.7
31	CEM II/B-LL 32.5 R	23.09.2014	36.1	33.5
46	CEM IV/B (P) 32.5 N	23.09.2014	37	34.6
31	CEM I 42.5 R	23.09.2014	55	50.7
46	CEM I 42.5 R	23.09.2014	55	54
56	CEM IV/B (P) 32.5 R-SR	24.09.2014	35.7	35.4
56	CEM IV/B (P) 32.5 R-SR	24.09.2014	35.7	35.4
52	CEM II/B-M (P-L) 32.5 R	24.09.2014	35.7	37.9
56	CEM II/B-M (P-LL) 32.5 R	24.09.2014	39.7	39.3
20	CEM III/B (S) 32.5 N-SR	24.09.2014	39.3	39.7
56	CEM I 42.5 R- SR5	24.09.2014	51.4	50.6
56	CEM II/A-M (P-LL) 42.5 R	24.09.2014	47.9	50.9
56	CEM I 42.5 R	24.09.2014	51.2	51.1
52	CEM I 42.5 R	24.09.2014	51.6	51.8
66	CEM IV/B (V) 32.5 R - SR	25.09.2014	34.6	32.8
59	CEM IV/B (P) 32.5 R-SR	25.09.2014	35.8	34
26	CEM IV/B (P) 32.5 N	25.09.2014	34.5	36
44	CEM II/B-M (P-L) 32.5 R	25.09.2014	37	37.4
44	CEM II/B-M (P-L) 32.5 N	25.09.2014	37.3	38.1
38	CEM IV/B (P) 32.5 N	25.09.2014	38.3	40.2
40	CEM II/B-M (P-L) 32.5 R	25.09.2014	44	42.4
59	CEM III/A 42.5 N	25.09.2014	49	46.4
66	CEM II/A-V 42.5 R	25.09.2014	50.7	47.1
44	CEM I 42.5 R- SR5	25.09.2014	48.5	47.2
44	CEM II/A-M (P-L) 42.5 R	25.09.2014	47	47.7
44	CEM I 42.5 R	25.09.2014	49.5	49
40	CEM I 42.5 R	25.09.2014	49.9	49.5
59	CEM II/A-M (P-LL) 42.5 R	25.09.2014	51.1	49.6
38	CEM II/A-M (P-LL) 42.5 R	25.09.2014	48.4	50.3
38	CEM I 42.5 R	25.09.2014	50.4	51.4
59	CEM I 42.5 R	25.09.2014	54.1	51.8
40	CEM II/A-M (P-L) 42.5 R	25.09.2014	53.5	52.4
38	CEM I 42.5 N	25.09.2014	50.5	54.4
26	CEM I 42.5 R	25.09.2014	55	56.1
68	CEM IV/B (P) 32.5 N	26.09.2014	36	33.8
34	CEM IV/B (P) 32.5 R-SR	26.09.2014	35.1	34.2
15	CEM IV/B (P) 32.5 N	26.09.2014	36.7	35.1
7	CEM IV/B (P) 32.5 R	26.09.2014	37.1	35.7
18	CEM IV/B (P) 32.5 R-SR	26.09.2014	37.13	38.2
15	CEM I 42.5 R	26.09.2014	49.1	48
68	CEM I 42.5 R	26.09.2014	49	48.6
7	CEM I 42.5 R	26.09.2014	52.9	50.2
18	CEM I 42.5 R	26.09.2014	50.43	50.4
7	CEM II/A-M (V-LL) 42.5 R	26.09.2014	50.6	51.1
3	CEM IV/B (P) 32.5 N	27.09.2014	35.2	34.2
3	CEM II/A-M (P-L) 42.5 N	27.09.2014	50.1	48.6
42	CEM III/A 32.5 N	30.09.2014	36.3	32.6
2	CEM II/B-M (P-LL) 32.5 R	30.09.2014	36.8	33.7
48	CEM II/B-M (P-L) 32.5 R	30.09.2014	35.2	34.9
48	CEM II/A-M (P-L) 42.5 R	30.09.2014	46	45
42	CEM II/B-S 42.5 N	30.09.2014	46.5	46.8
2	CEM I 42.5 N	30.09.2014	50.8	48
2	CEM II/A-P 42.5 R	30.09.2014	50.4	49.4
2	CEM I 42.5 R- SR5	30.09.2014	51.6	50.6
2	CEM I 42.5 R	30.09.2014	51.8	51
48	CEM I 42.5 R	30.09.2014	51.1	51.9
38	CEM I 42.5 N	30.09.2014	52.6	52.8
47	CEM IV/B (P) 32.5 N	01.10.2014	35.6	34.6
47	CEM IV/B (P) 32.5 N - LH - SR	01.10.2014	35.9	35.2
19	CEM IV/B (P) 32.5 R	01.10.2014	39.4	37.2
19	CEM IV/B (P) 32.5 R-SR	01.10.2014	39.1	38.9
54	CEM IV/B (P) 32.5 R	01.10.2014	44.3	44.1
47	CEM II/A-M (P-LL) 42.5 R	01.10.2014	45.5	45.7
47	CEM II/B-M (P-S) 42.5 R	01.10.2014	44.4	45.8
19	CEM II/A-M (P-L) 42.5 R	01.10.2014	48.6	46.5
19	CEM I 42.5 R	01.10.2014	50.9	49.8
47	CEM I 42.5 R	01.10.2014	49.1	50.8
47	CEM I 42.5 N	01.10.2014	48.8	51.7
54	CEM I 42.5 R	01.10.2014	54.6	52.8
18	CEM IV/B (P) 32.5 R	02.10.2014	35.18	37.8
12	CEM IV/B (P) 32.5 R	02.10.2014	41.3	39.7
19	CEM I 42.5 N	02.10.2014	47.1	46.6
19	CEM I 42.5 R- SR5	02.10.2014	50.3	49.2

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12	CEM I 42.5 R	02.10.2014	54.2	53.5
12	CEM I 42.5 N	02.10.2014	54.8	54
5	CEM II/B-M (P-LL) 32.5 R	13.10.2014	39.7	40
5	CEM I 42.5 R	13.10.2014	47.1	47.8
5	CEM I 52.5 N	13.10.2014	62.1	64.4
32	CEM IV/B (P) 32.5 N	14.10.2014	35	33
49	CEM IV/B (P-W) 32.5 R	14.10.2014	35.6	34
28	CEM IV/B (P) 32.5 R	14.10.2014	36.2	34.6
16	CEM IV/B (P) 32.5 N	14.10.2014	40	38.4
32	CEM I 42.5 R- SR5	14.10.2014	49.1	47.8
16	CEM I 42.5 R	14.10.2014	51.6	48.1
28	CEM II/A-M (P-L) 42.5 R	14.10.2014	49.2	48.4
16	CEM I 42.5 R- SR5	14.10.2014	51.6	49.5
32	CEM II/A-LL 42.5 R	14.10.2014	51.7	49.6
32	CEM I 42.5 R	14.10.2014	52	50.4
49	CEM II/A-M (P-L) 42.5 R	14.10.2014	54.7	53.2
28	CEM I 42.5 R	15.10.2014	48.5	46.8
16	CEM I 42.5 R- SR5	15.10.2014	51.3	47.6
25	CEM IV/B (P-W) 32.5 R	16.10.2014	36.4	35.9
63	CEM IV/B (P) 32.5 R	16.10.2014	36.5	36.2
34	CEM IV/B (P) 32.5 R-SR	16.10.2014	45.5	43.5
34	CEM IV/B (P) 32.5 R	16.10.2014	45.5	44.7
63	CEM II/A-M (P-L) 42.5 R	16.10.2014	51.5	48.6
34	CEM II/A-S 42.5 N	16.10.2014	49.4	48.9
34	CEM II/A-M (P-L) 42.5 N	16.10.2014	49.8	49.3
34	CEM I 42.5 N	16.10.2014	51.8	50.5
25	CEM I 42.5 R	16.10.2014	54.3	52.7
63	CEM I 42.5 R	16.10.2014	53.4	52.8
25	CEM II/A-M (P-L) 42.5 R	16.10.2014	55.9	55
25	CEM II/B-M (L-W) 42.5 R	16.10.2014	59.2	55.3
36	CEM II/B-M (P-LL) 32.5 R	17.10.2014	35.8	34.5
14	CEM IV/B (P-W) 32.5 R	17.10.2014	36.2	35.5
61	CEM II/B-LL 32.5 R	17.10.2014	41.4	41.6
14	CEM II/A-M (P-L) 42.5 R	17.10.2014	48.7	46.4
36	CEM II/A-M (P-LL) 42.5 R	17.10.2014	48.1	47.2
14	CEM II/A-M (P-L) 42.5 N	17.10.2014	49.1	47.2
61	CEM II/A-LL 42.5 R	17.10.2014	50	48.2
36	CEM I 42.5 N	17.10.2014	48.5	48.8
14	CEM I 42.5 R	17.10.2014	52.5	49.4
61	CEM I 42.5 R	17.10.2014	54.5	50.8
14	CEM II/B-M (L-W) 42.5 R	17.10.2014	52.7	53.2
55	CEM II/B-M (W-L) 32.5 R	21.10.2014	39.7	38.5
62	CEM II/B-M (P-L) 32.5 R	21.10.2014	39.5	38.7
55	CEM II/A-LL 42.5 R	21.10.2014	48.3	47.5
55	CEM I 42.5 R	21.10.2014	52.6	50.3
62	CEM II/A-L 42.5 R	21.10.2014	56.4	53.8
62	CEM I 42.5 R	21.10.2014	56.2	54.5
8	CEM II/B-M (P-LL) 32.5 R	22.10.2014	35.7	30
8	CEM II/A-M (P-LL) 42.5 R	22.10.2014	46.8	44.2
8	CEM I 42.5 R	22.10.2014	48.5	48
43	CEM II/B-M (P-L) 32.5 N	23.10.2014	35.2	30.1
43	CEM II/A-M (P-L) 42.5 R	23.10.2014	44.8	42.7
43	CEM I 42.5 R	23.10.2014	47.5	46.9
10	CEM II/B-LL 32.5 R	24.10.2014	39.1	38.9
10	CEM II/B-LL 42.5 N	24.10.2014	48.3	47.2
10	CEM II/A-LL 42.5 R	24.10.2014	50.5	49.9
10	CEM I 42.5 R	24.10.2014	57.8	54.5
38	CEM I 42.5 N	30.10.2014	50.9	51.7
3	CEM II/B-M (P-L) 42.5 N	31.10.2014	44.3	44.3
16	CEM II/A-M (P-L) 42.5 N	31.10.2014	51.3	49.3
53	CEM IV/B (P) 32.5 R	03.11.2014	36	36
27	CEM IV/B (P) 32.5 N	03.11.2014	42.9	42.4
51	CEM IV/B (P) 32.5 R	03.11.2014	41.8	43.9
27	CEM I 42.5 R- SR5	03.11.2014	47	45.5
27	CEM II/A-M (P-L) 42.5 N	03.11.2014	49.5	48.4
27	CEM I 42.5 R	03.11.2014	49.9	49.3
51	CEM I 42.5 R	03.11.2014	58	54.5
51	CEM I 52.5 N	03.11.2014	57.3	56.3
53	CEM I 42.5 R	03.11.2014	57.7	57.4
51	CEM I 42.5 R- SR5	03.11.2014	58.2	57.5
53	CEM II/A-M (P-L) 42.5 R	03.11.2014	60	58.4
51	CEM II/A-P 42.5 R	03.11.2014	60.5	58.7
9	CEM V/A (P-S) 32.5 N	04.11.2014	39.1	35.7

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22	CEM IV/B (P-V) 32.5 R	04.11.2014	40.8	38.3
50	CEM IV/B (P) 32.5 R	04.11.2014	38	38.8
21	CEM IV/B (P-V) 32.5 N	04.11.2014	39.5	39.4
50	CEM I 42.5 R- SR5	04.11.2014	48.6	45.3
50	CEM II/A-L 42.5 R	04.11.2014	47.3	46.4
21	CEM II/A-M (P-L) 42.5 R	04.11.2014	48.7	47
22	CEM II/B-M (P-V) 42.5 N	04.11.2014	47.8	47.1
50	CEM II/A-M (P-L) 42.5 R	04.11.2014	48.9	47.8
50	CEM I 42.5 R	04.11.2014	48.4	47.9
29	CEM II/B-L 42.5 R	04.11.2014	49	48.1
29	CEM I 42.5 R	04.11.2014	51.6	51.3
21	CEM II/A-M (P-V) 42.5 R	04.11.2014	56.5	52
21	CEM I 42.5 R	04.11.2014	57.9	56.5
9	CEM II/A-M (S-L) 42.5 R	04.11.2014	59	58.4
9	CEM II/B-M (S-L) 42.5 R	04.11.2014	60.3	59
9	CEM I 42.5 R	04.11.2014	59.7	59.7
9	CEM II/A-M (S-L) 52.5 N	04.11.2014	65.2	61.5
57	CEM II/B-L 32.5 R	05.11.2014	37	35
4	CEM IV/B (P) 32.5 R	05.11.2014	36.7	35.9
65	CEM IV/B (P) 32.5 R	05.11.2014	36.7	36.1
11	CEM IV/B (P-V) 32.5 N	05.11.2014	39.9	38.7
1	CEM V/A (S-P) 32.5 R	05.11.2014	44.7	40.6
24	CEM II/B-LL 32.5 N	05.11.2014	43.8	41.5
57	CEM II/B-L 42.5 N	05.11.2014	43	42.5
57	CEM II/A-L 42.5 R	05.11.2014	45.6	43.1
1	CEM III/A 42.5 N	05.11.2014	46.6	44.1
1	CEM II/B-M (P-S) 42.5 N	05.11.2014	50	45.3
11	CEM IV/A (P-V) 42.5 R	05.11.2014	48.9	46.4
11	CEM I 42.5 R	05.11.2014	51.3	48.9
57	CEM I 42.5 R	05.11.2014	51.7	49.6
57	CEM I 52.5 R	05.11.2014	53.1	50.1
23	CEM IV/A (P) 42.5 N-SR	05.11.2014	53.5	50.2
4	CEM I 42.5 R	05.11.2014	52.9	50.6
1	CEM II/B-LL 42.5 R	05.11.2014	50.1	51.4
1	CEM I 42.5 R	05.11.2014	54.1	51.5
11	CEM II/A-M (V-LL) 42.5 R	05.11.2014	54.2	52.6
23	CEM I 42.5 R	05.11.2014	54.9	52.7
1	CEM II/A-S 42.5 R	05.11.2014	53.4	54.3
24	CEM II/A-LL 42.5 R	05.11.2014	56.9	55
1	CEM I 52.5 R	05.11.2014	58.6	58.1
24	CEM I 52.5 N	05.11.2014	61.2	60.8
41	CEM V/A (S-P) 32.5 R	06.11.2014	35.2	33.7
58	CEM IV/B (P) 32.5 N	06.11.2014	36	34.3
30	CEM IV/B (P) 32.5 R	06.11.2014	42.7	40.6
41	CEM III/A 42.5 N	06.11.2014	46.1	45
41	CEM II/B-M (P-S) 42.5 R	06.11.2014	49.1	47.7
58	CEM II/A-LL 42.5 R	06.11.2014	56	52
30	CEM II/A-M (P-L) 42.5 R	06.11.2014	57.3	55
58	CEM I 42.5 R	06.11.2014	59	55.2
30	CEM I 42.5 R	06.11.2014	58.1	55.3
24	CEM I 42.5 R	07.11.2014	60.7	58
12	CEM II/A-M (P-L) 42.5 R	13.11.2014	52.6	52.7
44	CEM II/B-M (P-L) 32.5 R	17.11.2014	35.2	33.2
44	CEM II/B-M (P-L) 32.5 N	17.11.2014	35	34.9
44	CEM II/A-M (P-L) 42.5 R	17.11.2014	47.5	45
44	CEM I 42.5 R	17.11.2014	50.4	48
44	CEM I 42.5 R- SR5	17.11.2014	53.1	53.1
38	CEM IV/B (P) 32.5 N	18.11.2014	35.2	32.6
31	CEM II/B-LL 32.5 R	18.11.2014	39.5	37.2
46	CEM IV/B (P) 32.5 N	18.11.2014	37.9	39.5
38	CEM II/A-M (P-LL) 42.5 R	18.11.2014	48.3	47.9
38	CEM I 42.5 R	18.11.2014	50.8	50.7
31	CEM I 42.5 R	18.11.2014	52.6	54.7
46	CEM I 42.5 R	18.11.2014	57	56.7
52	CEM II/B-M (P-L) 32.5 R	19.11.2014	32.5	32.8
59	CEM IV/B (P) 32.5 R-SR	19.11.2014	36.5	33.6
15	CEM IV/B (P) 32.5 N	19.11.2014	35.9	35.9
68	CEM IV/B (P) 32.5 N	19.11.2014	36.3	36.1
68	CEM I 42.5 R	19.11.2014	53.3	50.5
15	CEM I 42.5 R	19.11.2014	50.2	51.4
59	CEM II/A-M (P-LL) 42.5 R	19.11.2014	56.3	53.1
52	CEM I 42.5 R	19.11.2014	52.8	53.8
59	CEM I 42.5 R	19.11.2014	55.3	54.2

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66	CEM IV/B (V) 32.5 R - SR	20.11.2014	38.4	35.3
3	CEM IV/B (P) 32.5 N	20.11.2014	37.4	36
56	CEM IV/B (P) 32.5 R-SR	20.11.2014	37.2	38.2
56	CEM IV/B (P) 32.5 R-SR	20.11.2014	37.2	38.2
56	CEM II/B-M (P-LL) 32.5 R	20.11.2014	36.6	38.3
66	CEM II/A-V 42.5 R	20.11.2014	52.2	46.9
3	CEM II/A-M (P-L) 42.5 N	20.11.2014	45.3	47.2
59	CEM III/A 42.5 N	20.11.2014	50.5	47.4
56	CEM I 42.5 R	20.11.2014	55.6	52.7
56	CEM II/A-M (P-LL) 42.5 R	20.11.2014	51.2	54.2
19	CEM IV/B (P) 32.5 R-SR	25.11.2014	38.3	39.1
19	CEM III/B (S) 32.5 N-SR	25.11.2014	38.9	39.2
7	CEM IV/B (P) 32.5 R	25.11.2014	44.8	43.5
19	CEM II/A-M (P-L) 42.5 R	25.11.2014	47.7	48
19	CEM I 42.5 N	25.11.2014	48.5	50.1
7	CEM II/A-M (V-LL) 42.5 R	25.11.2014	51.9	50.1
19	CEM I 42.5 R- SR5	25.11.2014	48.3	50.5
7	CEM I 42.5 R	25.11.2014	52.3	52.1
18	CEM I 42.5 R	25.11.2014	47.51	52.8
19	CEM I 42.5 R	25.11.2014	55.2	58.8
20	CEM III/B (S) 32.5 N-SR	26.11.2014	35.8	33.9
40	CEM II/B-M (P-L) 32.5 R	26.11.2014	35.4	34.8
12	CEM IV/B (P) 32.5 R	26.11.2014	36.8	36.3
40	CEM I 42.5 R	26.11.2014	51.3	50.2
40	CEM II/A-M (P-L) 42.5 R	26.11.2014	54.4	53.3
12	CEM I 42.5 R	26.11.2014	55	54
12	CEM I 42.5 N	26.11.2014	54.8	54.1
42	CEM III/A 32.5 N	27.11.2014	32.9	31.8
19	CEM IV/B (P) 32.5 R	27.11.2014	37.7	36
26	CEM IV/B (P) 32.5 N-SR	27.11.2014	39.8	41.6
13	CEM II/B-M (P-L) 32.5 R	27.11.2014	46.7	44.1
42	CEM II/B-S 42.5 N	27.11.2014	43.8	44.4
13	CEM I 42.5 N- SR5	27.11.2014	47.4	46.6
13	CEM I 42.5 R	27.11.2014	50.5	48.4
26	CEM I 42.5 R	27.11.2014	55.3	57.4
62	CEM II/B-M (P-L) 32.5 R	02.12.2014	40.4	38.6
62	CEM I 42.5 R	02.12.2014	55.3	53.8
62	CEM II/A-L 42.5 R	02.12.2014	56	54
55	CEM II/B-M (W-L) 32.5 R	03.12.2014	42.3	37.6
55	CEM II/A-LL 42.5 R	03.12.2014	50.2	51.7
55	CEM I 42.5 R	03.12.2014	53.4	51.7
10	CEM II/B-LL 32.5 R	04.12.2014	39	38.2
8	CEM II/B-M (P-LL) 32.5 R	04.12.2014	39	39.6
10	CEM II/B-LL 42.5 N	04.12.2014	44.1	44.7
8	CEM II/A-M (P-LL) 42.5 R	04.12.2014	47	47.6
12	CEM II/A-M (P-L) 42.5 R	04.12.2014	47.5	50.1
10	CEM II/A-LL 42.5 R	04.12.2014	50.1	51.2
8	CEM I 42.5 R	04.12.2014	53.4	54.6
10	CEM I 42.5 R	04.12.2014	55	55.2
43	CEM II/B-M (P-L) 32.5 N	05.12.2014	36.5	32.5
43	CEM II/A-M (P-L) 42.5 R	05.12.2014	46.5	44.2
43	CEM I 42.5 R	05.12.2014	50.2	48.6
28	CEM IV/B (P) 32.5 R	08.12.2014	40.8	38.3
49	CEM IV/B (P-W) 32.5 R	08.12.2014	40.4	38.7
28	CEM II/A-M (P-L) 42.5 R	08.12.2014	50.3	48.5
49	CEM II/A-M (P-L) 42.5 R	08.12.2014	55.7	52.9
5	CEM II/B-M (P-LL) 32.5 R	09.12.2014	37.4	38.4
28	CEM I 42.5 R	09.12.2014	48	46.1
5	CEM I 42.5 R	09.12.2014	52.2	51.7
5	CEM I 52.5 N	09.12.2014	62.5	64
32	CEM IV/B (P) 32.5 N	10.12.2014	33.8	33.4
16	CEM IV/B (P) 32.5 N	10.12.2014	38.9	37.4
36	CEM II/B-M (P-LL) 32.5 R	10.12.2014	38	37.5
16	CEM I 42.5 R- SR5	10.12.2014	48.1	45.6
16	CEM I 42.5 R	10.12.2014	50.9	46.2
36	CEM II/A-M (P-LL) 42.5 R	10.12.2014	48.4	46.3
36	CEM I 42.5 N	10.12.2014	49.2	46.7
32	CEM II/A-LL 42.5 R	10.12.2014	50.4	49.9
32	CEM I 42.5 R- SR5	10.12.2014	50.4	50.4
32	CEM I 42.5 R	10.12.2014	53	51.5
25	CEM IV/B (P-W) 32.5 R	11.12.2014	37.5	35.9
61	CEM II/B-LL 32.5 R	11.12.2014	38.6	36.3
63	CEM IV/B (P) 32.5 R	11.12.2014	37.4	38.2

Code of The Manufacturer	Type of Cement	The Date of Sampling	Standard Compressive Strength Result of Manufacturer (MPa)	Standard Compressive Strength Result of Notified Body (MPa)
14	CEM IV/B (P-W) 32.5 R	11.12.2014	39.5	41.1
14	CEM II/A-M (P-L) 42.5 N	11.12.2014	48.8	47.1
14	CEM II/A-M (P-L) 42.5 R	11.12.2014	48.7	47.6
61	CEM II/A-LL 42.5 R	11.12.2014	50.4	47.9
61	CEM I 42.5 R	11.12.2014	54	50.1
63	CEM II/A-M (P-L) 42.5 R	11.12.2014	52.3	51.1
14	CEM II/B-M (L-W) 42.5 R	11.12.2014	52.5	52.2
25	CEM II/A-M (P-L) 42.5 R	11.12.2014	53.7	52.2
25	CEM II/B-M (L-W) 42.5 R	11.12.2014	57.1	52.2
14	CEM I 42.5 R	11.12.2014	53	52.3
63	CEM I 42.5 R	11.12.2014	52.3	52.8
25	CEM I 42.5 R	11.12.2014	55.3	52.8
34	CEM IV/B (P) 32.5 R	15.12.2014	39.8	38.7
34	CEM IV/B (P) 32.5 R-SR	15.12.2014	39.8	38.8
34	CEM II/A-M (P-L) 42.5 N	15.12.2014	49.8	47.9
34	CEM I 42.5 N	15.12.2014	53	51.9
58	CEM IV/B (P) 32.5 R-SR	16.12.2014	35.7	33.4
66	CEM II/A-V 42.5 R	17.12.2014	49.8	45.1
56	CEM I 42.5 R- SR5	17.12.2014	50.4	51.5
46	CEM II/A-LL 42.5 R	18.12.2014	56.3	57.3
19	CEM IV/B (P) 32.5 R	19.12.2014	37	35.6
12	CEM II/A-M (P-L) 42.5 R	19.12.2014	44.5	44.5
48	CEM II/B-M (P-L) 32.5 R	24.12.2014	37.4	38.1
48	CEM II/A-M (P-L) 42.5 R	24.12.2014	50.2	51.1
48	CEM I 42.5 R	24.12.2014	54.9	58
2	CEM II/B-M (P-LL) 32.5 R	25.12.2014	34	33.3
2	CEM II/A-P 42.5 R	25.12.2014	50	50.3
2	CEM I 42.5 N	25.12.2014	52.1	50.5
2	CEM I 42.5 R	25.12.2014	53.6	51.8
2	CEM I 42.5 R- SR5	25.12.2014	54.5	54.1
38	CEM I 52.5 N	25.12.2014	57.4	54.9
47	CEM IV/B (P) 32.5 N	26.12.2014	33.9	34.1
47	CEM II/A-M (P-LL) 42.5 R	26.12.2014	44.9	45.4
3	CEM II/B-M (P-L) 42.5 N	26.12.2014	46.6	46.8
47	CEM I 42.5 R	26.12.2014	49	50.2
47	CEM I 42.5 N	26.12.2014	48.8	50.6
47	CEM I 42.5 R- SR3	26.12.2014	50.3	50.8
18	CEM IV/B (P) 32.5 R-SR	30.12.2014	40.85	44.2
18	CEM IV/B (P) 32.5 R	30.12.2014	40.61	44.9
50	CEM IV/B (P) 32.5 R	06.01.2015	40.4	42.2
50	CEM I 42.5 R	06.01.2015	45.6	46.4
50	CEM II/A-L 42.5 R	06.01.2015	46.7	46.8
50	CEM I 42.5 R-SR5	06.01.2015	46.3	47.6
50	CEM II/A-M (P-L) 42.5 R	06.01.2015	48.2	48
29	CEM II/B-L 42.5 R	07.01.2015	49.4	47.5
29	CEM I 42.5 R	07.01.2015	54	53.9
1	CEM V/A (S-P) 32.5 R	08.01.2015	32.9	32.5
1	CEM V/A (S-P-V) 32.5 R	08.01.2015	33.2	32.5
1	CEM II/B-LL 42.5 R	08.01.2015	49.3	49.2
1	CEM I 42.5 R	08.01.2015	50.1	51.2
1	CEM III/A 42.5 N	08.01.2015	51.1	52.2
1	CEM I 52.5 R	08.01.2015	52.7	53.8
1	CEM II/A-S 42.5 R	08.01.2015	52.7	53.8
41	CEM V/A (S-V) 32.5 R	09.01.2015	34.4	34.8
41	CEM V/A (P-S) 32.5 R	09.01.2015	35.4	35.3
41	CEM II/B-M (S-V) 42.5 R	09.01.2015	48.3	48.3
41	CEM II/B-M (P-S) 42.5 R	09.01.2015	48.2	48.8
41	CEM III/A 42.5 N	09.01.2015	50.8	50.6
31	CEM II/B-LL 32.5 R	13.01.2015	35	35.6
46	CEM IV/B (P) 32.5 N	13.01.2015	37.5	39.3
46	CEM I 42.5 R	13.01.2015	55.6	54.8
31	CEM I 42.5 R	13.01.2015	53.8	55.4
59	CEM IV/B (P) 32.5 R - SR	14.01.2015	37.4	36.3
51	CEM IV/B (P) 32.5 R	14.01.2015	39.6	43
23	CEM IV/B (P) 32.5N - LH - SR	14.01.2015	40.3	44.9
59	CEM III/A 42.5 N	14.01.2015	49.7	45.8
59	CEM II/A-M (P-LL) 42.5 R	14.01.2015	51.4	50.4
23	CEM IV/A (P) 42.5N- SR	14.01.2015	50.2	50.5
59	CEM I 42.5 R	14.01.2015	52.7	50.6
23	CEM I 42.5 R	14.01.2015	58.2	56.8
51	CEM I 42.5 R-SR5	14.01.2015	56.5	57.4
51	CEM II/A-P 42.5 R	14.01.2015	55.4	58.9
51	CEM I 42.5 R	14.01.2015	58.6	59.2
51	CEM I 52.5 N	14.01.2015	59.3	62.1
66	CEM IV/B (V) 32.5 R - SR	15.01.2015	37.6	35.6
9	CEM V/A (P-S) 32.5 N	15.01.2015	37.3	38
56	CEM IV/B (P) 32.5 R - SR	15.01.2015	38.9	42.4
56	CEM II/B-M (P-LL) 32.5 R	15.01.2015	40.7	44.8
56	CEM II/A-M (P-LL) 42.5 R	15.01.2015	50.6	51.2
56	CEM I 42.5 R-SR5	15.01.2015	50.5	53.7
56	CEM I 42.5 R	15.01.2015	51.8	54.5
9	CEM I 42.5 R	15.01.2015	58.1	57.4
24	CEM I 42.5 R	15.01.2015	56.1	58.7
9	CEM II/A-M (S-L) 42.5 R	15.01.2015	59.5	59.8
9	CEM II/B-M (S-L) 42.5 R	15.01.2015	57.8	60.3
9	CEM II/A-M (S-L) 52.5 N	15.01.2015	64	60.9
52	CEM II/B-M (P-L) 32.5 R	16.01.2015	39.3	37.5
52	CEM I 42.5 R	16.01.2015	54.7	54.3
27	CEM IV/B (P) 32.5 N	19.01.2015	41.6	41.3
27	CEM II/A-M (P-L) 42.5 N	19.01.2015	48.8	48.1
27	CEM I 42.5 R	19.01.2015	49.8	49.9
27	CEM I 42.5 R-SR5	19.01.2015	52.1	53.1
12	CEM IV/B (P) 32.5 R	20.01.2015	34.5	34.5
44	CEM II/B-M (P-L) 32.5 R	20.01.2015	36.9	37.6
42	CEM III/A 32.5 N	20.01.2015	35.8	38.3
44	CEM II/B-M (P-L) 32.5 N	20.01.2015	36.6	39.4
21	CEM IV/B (P-V) 32.5 N	20.01.2015	41.5	41.8
22	CEM IV/B (P-V) 32.5 R	20.01.2015	40.4	43.4
42	CEM II/B-S 42.5 N	20.01.2015	43.8	45.4
22	CEM II/B-M (P-V) 42.5 N	20.01.2015	47.7	47.6
44	CEM II/A-M (P-L) 42.5 R	20.01.2015	46.7	48.3
21	CEM II/A-M (P-L) 42.5 R	20.01.2015	50.2	49.1
44	CEM I 42.5 R	20.01.2015	49.1	49.4
44	CEM I 42.5 R-SR5	20.01.2015	47.5	51.8
21	CEM I 42.5 R	20.01.2015	58.4	57
12	CEM I 42.5 R	20.01.2015	56.8	58.8
12	CEM I 42.5 N	20.01.2015	56.1	59.3
24	CEM II/B-LL 32.5 N	21.01.2015	42.5	42.8
24	CEM II/A-LL 42.5 R	21.01.2015	54.6	54.1
53	CEM IV/B (P) 32.5 R	22.01.2015	35.3	35.3
11	CEM IV/B (P-V) 32.5 N	22.01.2015	38	38.9
38	CEM IV/B (P) 32.5 N	22.01.2015	40.2	39.8
11	CEM IV/A (P-V) 42.5 R	22.01.2015	43	43.9
38	CEM II/A-M (P-LL) 42.5 R	22.01.2015	50.4	50
11	CEM I 42.5 R	22.01.2015	52.8	53.8
53	CEM I 42.5 R	22.01.2015	54.5	54.3
11	CEM II/A-M (V-LL) 42.5 R	22.01.2015	54.9	55.3
38	CEM I 42.5 R	22.01.2015	54.7	55.8
53	CEM II/A-M (P-L) 42.5 R	22.01.2015	54.2	56.5
3	CEM IV/B (P) 32.5 N	23.01.2015	38	39.9
3	CEM II/B-M (P-L) 42.5 N	23.01.2015	47.2	46.9
67	CEM II/A-L 32.5 N	26.01.2015	42.53	46.7
67	CEM I 42.5 N	26.01.2015	48.48	52.9
4	CEM IV/B (P) 32.5 R	27.01.2015	39.7	38.8
65	CEM IV/B (P) 32.5 R	27.01.2015	39.4	39.7
4	CEM I 42.5 R	27.01.2015	52.7	54.8
30	CEM IV/B (P) 32.5 R - SR	28.01.2015	40.2	42
57	CEM II/B-L 32.5 R	28.01.2015	46.1	46.7
57	CEM II/B-L 42.5 N	28.01.2015	47.5	49.2
30	CEM II/A-M (P-L) 42.5 R	28.01.2015	53.6	55.4
30	CEM I 42.5 R	28.01.2015	53.4	56.1
58	CEM I 42.5 R	28.01.2015	57.7	56.6
57	CEM I 42.5 R	28.01.2015	54.2	56.8
57	CEM I 52.5 R	28.01.2015	56.2	57.6
3	CEM II/B-M (P-L) 42.5 N	10.02.2015	47.8	50.7
7	CEM IV/B (P) 32.5 R	10.02.2015	50	52.4
7	CEM II/A-M (V-LL) 42.5 R	10.02.2015	53.4	53.4
7	CEM I 42.5 R	10.02.2015	54.6	56.2
15	CEM IV/B (P) 32.5 N	11.02.2015	39.8	43.4
38	CEM I 42.5 R-SR5	12.02.2015	51.5	53.7
13	CEM II/B-M (P-L) 32.5 R	16.02.2015	47.5	46.8
13	CEM I 42.5 N- SR5	16.02.2015	51.5	49.8
13	CEM II/A-P 42.5 R	16.02.2015	50.1	50
13	CEM I 42.5 R	16.02.2015	53	52.5
55	CEM II/B-M (W-L) 32.5 R	17.02.2015	40.4	37.8
62	CEM II/B-M (P-L) 32.5 R	17.02.2015	38.9	38.9

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26	CEM IV/B (P) 32.5 N - SR	17.02.2015	37.6	39
40	CEM II/B-M (P-L) 32.5 R	17.02.2015	41.7	41.2
5	CEM II/B-M (P-LL) 32.5 R	17.02.2015	39.2	42.3
5	CEM I 42.5 R	17.02.2015	48.2	51.3
55	CEM II/A-LL 42.5 R	17.02.2015	50.4	52
55	CEM I 42.5 R	17.02.2015	52.9	53.2
40	CEM I 42.5 R	17.02.2015	53.9	54.3
40	CEM II/A-M (P-L) 42.5 R	17.02.2015	55.6	54.3
62	CEM I 42.5 R	17.02.2015	55.6	55.4
62	CEM II/A-L 42.5 R	17.02.2015	57.9	55.7
26	CEM I 42.5 R	17.02.2015	54.65	62.2
5	CEM I 52.5 N	17.02.2015	61.6	69
10	CEM II/B-LL 32.5 R	18.02.2015	33.4	34.2
16	CEM IV/B (P) 32.5 N	18.02.2015	35.8	37.4
32	CEM IV/B (P) 32.5 N	18.02.2015	37.8	38.7
10	CEM II/B-LL 42.5 N	18.02.2015	45.6	47.5
10	CEM II/A-LL 42.5 R	18.02.2015	49	52.1
32	CEM I 42.5 R-SR5	18.02.2015	51.9	52.1
16	CEM I 42.5 R	18.02.2015	52.7	52.5
32	CEM I 42.5 R	18.02.2015	52.4	52.9
16	CEM I 42.5 R-SR5	18.02.2015	53.2	53.3
32	CEM II/A-LL 42.5 R	18.02.2015	53.8	54.7
10	CEM I 42.5 R	18.02.2015	54.2	57
43	CEM II/B-M (P-L) 32.5 N	19.02.2015	36.5	36.6
14	CEM IV/B (P-W) 32.5 R	19.02.2015	37.8	38.1
25	CEM IV/B (P-W) 32.5 R	19.02.2015	38.2	40.2
43	CEM II/A-M (P-L) 42.5 R	19.02.2015	44.7	43.4
14	CEM II/A-M (P-L) 42.5 N	19.02.2015	48.5	47.8
14	CEM II/A-M (P-L) 42.5 R	19.02.2015	48.2	48.9
25	CEM II/B-M (L-W) 42.5 R	19.02.2015	50	49.5
43	CEM I 42.5 R	19.02.2015	48.9	49.9
14	CEM II/B-M (L-W) 42.5 R	19.02.2015	52.5	54.4
25	CEM I 42.5 R	19.02.2015	56.9	54.8
14	CEM I 42.5 R	19.02.2015	52.6	56.5
8	CEM I 42.5 R	19.02.2015	54.3	59.9
49	CEM IV/B (P-W) 32.5 R	24.02.2015	39.2	38.8
28	CEM IV/B (P) 32.5 R	24.02.2015	45.9	45.1
28	CEM I 42.5 R	24.02.2015	52.4	52.1
28	CEM II/A-M (P-L) 42.5 R	24.02.2015	51.5	52.7
49	CEM II/A-M (P-L) 42.5 R	24.02.2015	52.9	53.1
36	CEM II/B-M (P-LL) 32.5 R	25.02.2015	37.3	38.2
2	CEM II/B-M (P-LL) 32.5 R	25.02.2015	39.4	40
47	CEM IV/B (P) 32.5 N	25.02.2015	38.5	40.5
47	CEM I 42.5 N	25.02.2015	47.2	46.2
2	CEM II/A-P 42.5 R	25.02.2015	48.4	47.9
36	CEM II/A-M (P-LL) 42.5 R	25.02.2015	48.4	48
47	CEM II/A-M (P-LL) 42.5 R	25.02.2015	43.9	48.5
2	CEM I 42.5 N	25.02.2015	49	49.5
2	CEM I 42.5 R	25.02.2015	48.2	50.4
36	CEM I 42.5 N	25.02.2015	49.3	50.6
2	CEM I 42.5 R-SR5	25.02.2015	55.2	52.8
54	CEM IV/B (P) 32.5 R	26.02.2015	38.5	39.3
63	CEM IV/B (P) 32.5 R	26.02.2015	37.5	39.5
54	CEM I 42.5 R	26.02.2015	49	47.6
63	CEM II/A-LL 42.5 R	26.02.2015	49.8	53.9
63	CEM I 42.5 R	26.02.2015	51.8	55.1
34	CEM IV/B (P) 32.5 R - SR	27.02.2015	36.4	36.5
34	CEM IV/B (P) 32.5 R	27.02.2015	36.4	36.6
48	CEM II/B-M (P-L) 32.5 R	27.02.2015	44.7	44.4
48	CEM II/A-M (P-L) 42.5 R	27.02.2015	47.4	46.9
34	CEM II/A-M (P-L) 42.5 N	27.02.2015	52.8	52.6
34	CEM I 42.5 N	27.02.2015	51.6	52.9
48	CEM I 42.5 R	27.02.2015	55.4	56.5
27	CEM IV/B (P) 32.5 N	02.03.2015	36.2	37.2
27	CEM I 42.5 R-SR5	02.03.2015	50.3	49.3
27	CEM II/A-M (P-L) 42.5 N	02.03.2015	50	51.8
27	CEM I 42.5 R	02.03.2015	51.5	52.6
31	CEM II/B-LL 32.5 R	03.03.2015	35.5	36.1
46	CEM IV/B (P) 32.5 N	03.03.2015	40.5	41.2
31	CEM I 42.5 R	03.03.2015	56.4	55
46	CEM I 42.5 R	03.03.2015	54.4	59.6
59	CEM IV/B (P) 32.5 R - SR	04.03.2015	34.3	34.4
52	CEM II/B-M (P-L) 32.5 R	04.03.2015	39.5	39.1

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59	CEM I 42.5 R	04.03.2015	57.9	52.4
52	CEM I 42.5 R	04.03.2015	52.9	53.5
66	CEM IV/B (V) 32.5 R - SR	05.03.2015	33.3	32.5
56	CEM IV/B (P) 32.5 R - SR	05.03.2015	37.3	39.7
59	CEM III/A 42.5 N	05.03.2015	52.5	51.3
56	CEM II/A-M (P-LL) 42.5 R	05.03.2015	51.6	51.8
59	CEM II/A-M (P-LL) 42.5 R	05.03.2015	53.2	51.9
56	CEM I 42.5 R	05.03.2015	52.8	55.8
61	CEM II/B-LL 32.5 R	06.03.2015	35.3	38.6
61	CEM II/A-LL 42.5 R	06.03.2015	49.3	50.3
61	CEM I 42.5 R	06.03.2015	52.8	53.7
59	CEM II/B-M (S-LL) 42.5 R	06.03.2015	57.8	54.7
59	CEM II/A-M (S-LL) 52.5 R	06.03.2015	60.4	58.6
59	CEM II/B-M (S-LL) 42.5 R	07.03.2015	56.6	54.7
59	CEM II/B-M (S-LL) 42.5 R	07.03.2015	57.6	55
59	CEM II/A-M (S-LL) 52.5 R	07.03.2015	60.8	57.5
59	CEM II/A-M (S-LL) 52.5 R	07.03.2015	60.9	58.7
21	CEM IV/B (P-V) 32.5 N	10.03.2015	46	45.5
21	CEM I 42.5 R	10.03.2015	55.9	52.5
21	CEM II/A-M (P-L) 42.5 R	10.03.2015	53.2	54.1
51	CEM IV/B (P) 32.5 R	11.03.2015	42.4	44
21	CEM II/A-M (P-V) 42.5 R	11.03.2015	55	52
51	CEM I 42.5 R	11.03.2015	56.2	55.9
51	CEM II/A-P 42.5 R	11.03.2015	57.8	60.5
51	CEM I 52.5 N	11.03.2015	58.8	61
9	CEM V/A (P-S) 32.5 N	12.03.2015	39.2	40.7
9	CEM II/B-M (S-L) 42.5 R	12.03.2015	59.9	59.2
9	CEM II/A-M (S-L) 42.5 R	12.03.2015	60.2	59.4
9	CEM I 42.5 R	12.03.2015	61.3	61
9	CEM II/A-M (S-L) 52.5 N	12.03.2015	67.2	64.9
30	CEM IV/B (P) 32.5 R - SR	13.03.2015	45.2	46.2
30	CEM I 42.5 R	13.03.2015	52.2	51
30	CEM II/A-M (P-L) 42.5 R	13.03.2015	51.8	52.7
50	CEM IV/B (P) 32.5 R	17.03.2015	39.8	40.1
50	CEM I 42.5 R-SR5	17.03.2015	48.3	47.6
44	CEM II/A-M (P-L) 42.5 R	17.03.2015	47.6	48.8
50	CEM I 42.5 R	17.03.2015	49.7	49.9
50	CEM II/A-M (P-L) 42.5 R	17.03.2015	49.1	50.9
44	CEM I 42.5 R	17.03.2015	51.5	51.1
50	CEM II/A-L 42.5 R	17.03.2015	51.6	51.8
44	CEM I 42.5 R-SR5	17.03.2015	52.5	53.7
29	CEM II/B-L 42.5 R	18.03.2015	46.6	49.9
1	CEM V/A (S-P-V) 32.5 R	19.03.2015	35.7	35.7
41	CEM V/A (S-V) 32.5 R	19.03.2015	37.7	38.4
12	CEM IV/B (P) 32.5 R	19.03.2015	39.1	41.4
1	CEM I 42.5 R	19.03.2015	47.3	46.5
1	CEM II/B-LL 42.5 R	19.03.2015	46.2	49.4
1	CEM III/A 42.5 N	19.03.2015	48.7	50.3
1	CEM I 52.5 R	19.03.2015	47.2	50.4
41	CEM III/A 42.5 N	19.03.2015	49.3	50.9
41	CEM II/B-M (S-V) 42.5 R	19.03.2015	51.4	52.2
12	CEM I 42.5 N	19.03.2015	54.8	55.7
12	CEM I 42.5 R	19.03.2015	54.8	56.6
42	CEM III/A 32.5 N	20.03.2015	30	31.5
38	CEM IV/B (P) 32.5 N	20.03.2015	37.3	38
3	CEM IV/B (P) 32.5 N	20.03.2015	37.9	40.1
15	CEM IV/B (P) 32.5 N	20.03.2015	40	42.1
38	CEM II/B-M (P-LL) 42.5 N	20.03.2015	45.1	45.8
42	CEM II/B-S 42.5 N	20.03.2015	41.73	46.4
38	CEM II/A-M (P-LL) 42.5 R	20.03.2015	47.7	47.8
3	CEM II/A-M (P-L) 42.5 N	20.03.2015	47.7	49
38	CEM I 42.5 R	20.03.2015	51.2	53.1
38	CEM I 42.5 R-SR5	20.03.2015	51.6	53.8
15	CEM I 42.5 R	20.03.2015	52.3	55.6
29	CEM I 42.5 R	21.03.2015	48.13	51.3
51	CEM I 42.5 R-SR5	24.03.2015	59.4	61.1
53	CEM IV/B (P) 32.5 R	25.03.2015	35.9	39.5
23	CEM IV/B (P) 32.5N - LH - SR	25.03.2015	42.6	46.2
23	CEM I 42.5 R	25.03.2015	52.9	53.2
23	CEM IV/A (P) 42.5N- SR	25.03.2015	53.2	56.9
53	CEM II/A-M (P-L) 42.5 R	25.03.2015	58.2	58.1
58	CEM I 42.5 R	25.03.2015	61	59.9
24	CEM I 42.5 R	25.03.2015	60.5	61

Code of The Manufacturer	Type of Cement	The Date of Sampling	Standard Compressive Strength Result of Manufacturer (MPa)	Standard Compressive Strength Result of Notified Body (MPa)
53	CEM I 42.5 R	25.03.2015	61.6	61
57	CEM II/B-L 32.5 R	26.03.2015	37.5	38.7
22	CEM IV/B (P-V) 32.5 R	26.03.2015	36.7	39.7
22	CEM II/B-M (P-V) 42.5 N	26.03.2015	49	47.2
57	CEM II/A-L 42.5 R	26.03.2015	52	53.7
57	CEM I 42.5 R	26.03.2015	55.1	56.3
57	CEM I 52.5 R	26.03.2015	55.8	57.2
65	CEM IV/B (P) 32.5 R	27.03.2015	39	38.1
24	CEM II/B-LL 32.5 N	27.03.2015	41.8	41.1
67	CEM II/A-L 32.5 N	27.03.2015	41.46	41.2
67	CEM I 42.5 N	27.03.2015	47.5	47.6
24	CEM II/A-LL 42.5 R	27.03.2015	57.3	56.6
16	CEM II/A-M (P-L) 42.5 N	28.03.2015	48.5	47.5
44	CEM II/B-M (P-L) 32.5 R	02.04.2015	34.8	36.9
44	CEM II/B-M (P-L) 32.5 N	02.04.2015	34.6	37.5
26	CEM IV/B (P) 32.5 N - SR	06.04.2015	36.7	41.5
40	CEM II/B-M (P-L) 32.5 R	07.04.2015	39.4	38.5
7	CEM IV/B (P) 32.5 R	07.04.2015	45	45.1
13	CEM II/A-P 42.5 R	07.04.2015	52.5	49.2
13	CEM I 42.5 N- SR5	07.04.2015	51.5	50.5
13	CEM I 42.5 R	07.04.2015	52.5	50.6
7	CEM II/A-M (V-LL) 42.5 R	07.04.2015	55.2	52.7
40	CEM I 42.5 R	07.04.2015	54.3	53.9
40	CEM II/A-M (P-L) 42.5 R	07.04.2015	54.8	54
7	CEM I 42.5 R	07.04.2015	55.6	54.1
41	CEM V/A (S-V) 32.5 R	08.04.2015	38.3	38.9
41	CEM II/B-M (S-V) 42.5 R	08.04.2015	51.1	51.8
34	CEM II/B-M (P-L) 42.5 N	11.04.2015	50.6	53.8
32	CEM IV/B (P) 32.5 N	14.04.2015	35.1	33.6
32	CEM II/A-LL 42.5 R	14.04.2015	49.2	50.8
32	CEM I 42.5 R-SR5	14.04.2015	51	54
32	CEM I 42.5 R	14.04.2015	53.1	55.2
16	CEM IV/B (P) 32.5 N	15.04.2015	37.8	35.6
16	CEM I 42.5 R	15.04.2015	49.6	49.3
16	CEM I 42.5 R-SR5	15.04.2015	49.4	50.1
49	CEM IV/B (P-W) 32.5 R	27.04.2015	35.3	35.9
62	CEM II/B-M (P-L) 32.5 R	27.04.2015	35.1	36.6
48	CEM II/B-M (P-L) 32.5 R	27.04.2015	41.6	42
48	CEM II/A-M (P-L) 42.5 R	27.04.2015	48	49.3
49	CEM II/A-M (P-L) 42.5 R	27.04.2015	51.4	51.1
48	CEM I 42.5 R	27.04.2015	53.2	54.3
62	CEM I 42.5 R	27.04.2015	55.3	55.1
62	CEM II/A-L 42.5 R	27.04.2015	54.7	57.1

Code of The Manufacturer	Type of Cement	The Date of Sampling	Standard Compressive Strength Result of Manufacturer (MPa)	Standard Compressive Strength Result of Notified Body (MPa)
54	CEM IV/B (P) 32.5 R	28.04.2015	36.1	35.1
36	CEM II/B-M (P-LL) 32.5 R	28.04.2015	36	38.1
54	CEM I 42.5 R	28.04.2015	47.4	47.2
36	CEM II/A-M (P-LL) 42.5 R	28.04.2015	47.3	47.5
36	CEM I 42.5 N	28.04.2015	46.3	47.7
55	CEM II/A-LL 42.5 R	28.04.2015	48.1	54.1
55	CEM I 42.5 R	28.04.2015	49.3	54.8
43	CEM II/B-M (P-L) 32.5 N	29.04.2015	36.9	35.1
63	CEM IV/B (P) 32.5 R	29.04.2015	41.6	39.7
47	CEM IV/B (P) 32.5 N	29.04.2015	38.5	43
43	CEM II/A-M (P-L) 42.5 R	29.04.2015	44.6	43.4
61	CEM II/B-LL 32.5 R	29.04.2015	43.4	44
47	CEM II/A-M (P-LL) 42.5 R	29.04.2015	46.5	44.7
47	CEM I 42.5 N	29.04.2015	48	44.7
47	CEM I 42.5 R- SR3	29.04.2015	45.7	46.2
63	CEM II/A-LL 42.5 R	29.04.2015	50.7	48.9
43	CEM I 42.5 R	29.04.2015	50.4	49.4
12	CEM IV/A (P) 42.5R- SR	29.04.2015	48	50.4
63	CEM I 42.5 R	29.04.2015	52.4	52
61	CEM II/A-LL 42.5 R	29.04.2015	52.3	52.6
61	CEM I 42.5 R	29.04.2015	56.8	55
55	CEM II/B-M (W-L) 32.5 R	30.04.2015	38.2	38.4
34	CEM II/B-M (P-L) 42.5 N	30.04.2015	53.7	53.9
34	CEM IV/B (P) 32.5 R - SR	30.04.2015	52.3	54.1
2	CEM I 42.5 R-SR5	30.04.2015	54.8	54.4
34	CEM II/A-M (P-L) 42.5 N	30.04.2015	53.3	54.5
34	CEM I 42.5 N	30.04.2015	52.9	54.6
27	CEM I 42.5 R-SR5	05.05.2015	51.6	49.5
23	CEM IV/B (P) 32.5N - LH - SR	07.05.2015	37.6	38.7
12	CEM IV/A (P) 42.5R- SR	07.05.2015	48.9	46.7
23	CEM IV/A (P) 42.5N- SR	07.05.2015	50.2	54.6
30	CEM IV/B (P) 32.5 R - SR	08.05.2015	38.3	38.3
57	CEM II/B-L 32.5 R	08.05.2015	39.7	39.7
57	CEM II/A-L 42.5 R	08.05.2015	52.7	51.1
57	CEM II/B-L 42.5 N	08.05.2015	51.2	52.4
57	CEM I 52.5 R	08.05.2015	56.3	54.5
57	CEM I 42.5 R	08.05.2015	55.2	54.8
59	CEM IV/B (P) 32.5 R - SR	13.05.2015	33.2	33.2
59	CEM III/A 42.5 N	13.05.2015	52.8	49.3
66	CEM IV/B (V) 32.5 R - SR	14.05.2015	34.7	33
66	CEM II/A-V 42.5 R	14.05.2015	48.3	43.5
59	CEM II/A-M (P-LL) 42.5 R	14.05.2015	53.4	51.2

APPENDIX B

TEST RESULTS OF SPSS

B.1. Normality Test Results

Tests of Normality

		Kolmogorov-Smirnov [a]			Shapiro-Wilk		
	code	Statistic	df	Sig.	Statistic	df	Sig.
strengthclasses	32.5	,118	1636	,000	,873	1636	,000
	42.5	,099	3228	,000	,927	3228	,000
	52.5	,127	173	,000	,910	173	,000

a. Lilliefors Significance Correction

Tests of Normality

		Kolmogorov-Smirnov [a]			Shapiro-Wilk		
	Code	Statistic	df	Sig.	Statistic	df	Sig.
StrengthIntervals	< 42.5 MPa	,110	1440	,000	,897	1440	,000
	42.5- 52.5 MPa	,101	1943	,000	,904	1943	,000
	> 52.5	,097	1654	,000	,927	1654	,000

a. Lilliefors Significance Correction

Tests of Normality

		Kolmogorov-Smirnov [a]			Shapiro-Wilk		
	CODE	Statistic	df	Sig.	Statistic	df	Sig.
OPCVSBLENDEDCEMENT	OPC	,107	1710	,000	,921	1710	,000
	Blended Cements	,103	3327	,000	,904	3327	,000

a. Lilliefors Significance Correction

Tests of Normality

		Kolmogorov-Smirnov [a]			Shapiro-Wilk		
	Code	Statistic	df	Sig.	Statistic	df	Sig.
CementTypes	CEM I	,107	1710	,000	,921	1710	,000
	CEM II	,094	2111	,000	,932	2111	,000
	CEM III	,146	193	,000	,902	193	,000
	CEM IV	,123	918	,000	,861	918	,000
	CEM V	,139	105	,000	,903	105	,000

a. Lilliefors Significance Correction

Tests of Normality

		Kolmogorov-Smirnov [a]			Shapiro-Wilk		
	Code	Statistic	df	Sig.	Statistic	df	Sig.
OPCandConstituentsTypes	OPC	,107	1710	,000	,921	1710	,000
	V(W)- L(LL)	,087	98	,067	,951	98	,001
	P-L(LL)	,095	1097	,000	,929	1097	,000
	S-P	,131	137	,000	,907	137	,000
	P-V(W)	,158	184	,000	,820	184	,000
	S-L(LL)	,110	100	,005	,936	100	,000
	L(LL)	,108	490	,000	,939	490	,000
	P	,120	865	,000	,873	865	,000
	S	,140	246	,000	,916	246	,000

a. Lilliefors Significance Correction

Tests of Normality

		Kolmogorov-Smirnov [a]			Shapiro-Wilk		
	Code	Statistic	df	Sig.	Statistic	df	Sig.
CementTypesandStrengthClass	CEM I 42.5	,106	1560	,000	,922	1560	,000
	CEM I 52.5	,135	143	,000	,897	143	,000
	CEM II 32.5	,109	578	,000	,923	578	,000
	CEM II 42.5	,091	1503	,000	,935	1503	,000
	CEM III 32.5	,177	82	,000	,859	82	,000
	CEM III 42.5	,133	111	,000	,927	111	,000
	CEM IV 32.5	,126	864	,000	,857	864	,000
	CEM IV 42.5	,135	54	,016	,901	54	,000
	CEM V 32.5	,139	105	,000	,905	105	,000

a. Lilliefors Significance Correction

Tests of Normality

		Kolmogorov-Smirnov [a]			Shapiro-Wilk		
	CODE	Statistic	df	Sig.	Statistic	df	Sig.
OPCvsBlendedCementwithStrengthTypes	CEM I 42.5	,106	1560	,000	,922	1560	,000
	CEM I 52.5	,135	143	,000	,897	143	,000
	CEM II-V 32.5	,119	1629	,000	,872	1629	,000
	CEM II-V 42.5	,094	1668	,000	,933	1668	,000

a. Lilliefors Significance Correction

B.2. Nonparametric Tests Results

B.2.1. Nonparametric Tests Results of Strength Classes

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum	Percentiles		
						25th	50th (Median)	75th
Strength Classes	5037	1,6715	1,30152	,00	13,90	,6000	1,4000	2,4000

Ranks

	code	N	Mean Rank	Sum of Ranks
strengthclasses	32.5	1636	2316,32	3789499,00
	42.5	3228	2491,38	8042181,00
	Total	4864		

Test Statistics [a]

	strengthclasses
Mann-Whitney U	2450433,000
Wilcoxon W	3789499,000
Z	-4,109
Asymp. Sig. (2-tailed)	,000

a. Grouping Variable: code

Ranks

	code	N	Mean Rank	Sum of Ranks
strengthclasses	32.5	1636	900,15	1472641,50
	52.5	173	950,89	164503,50
	Total	1809		

Test Statistics [a]

	strengthclasses
Mann-Whitney U	133575,500
Wilcoxon W	1472641,500
Z	-1,216
Asymp. Sig. (2-tailed)	,224

a. Grouping Variable: code

Ranks

	code	N	Mean Rank	Sum of Ranks
strengthclasses	42.5	3228	1702,57	5495884,50
	52.5	173	1671,77	289216,50
	Total	3401		

Test Statistics [a]

	strengthclasses
Mann-Whitney U	274165,500
Wilcoxon W	289216,500
Z	-,402
Asymp. Sig. (2-tailed)	,688

a. Grouping Variable: code

B.2.2. Nonparametric Tests Results of Strength Intervals

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum	Percentiles		
						25th	50th (Median)	75th
Strength Intervals	5037	1,6715	1,30152	,00	13,90	,6000	1,4000	2,4000

Ranks

	Code	N	Mean Rank	Sum of Ranks
StrengthIntervals	< 42.5 MPa	1440	1608,33	2315992,00
	42.5- 52.5 MPa	1943	1754,01	3408044,00
	Total	3383		

Test Statistics [a]

	StrengthIntervals
Mann-Whitney U	1278472,000
Wilcoxon W	2315992,000
Z	-4,291
Asymp. Sig. (2-tailed)	,000

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
StrengthIntervals	< 42.5 MPa	1440	1411,51	2032573,00
	> 52.5	1654	1665,90	2755392,00
	Total	3094		

Test Statistics [a]

	StrengthIntervals
Mann-Whitney U	995053,000
Wilcoxon W	2032573,000
Z	-7,904
Asymp. Sig. (2-tailed)	,000

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
StrengthIntervals	42.5- 52.5 MPa	1943	1734,96	3371026,00
	> 52.5	1654	1874,23	3099977,00
	Total	3597		

Test Statistics [a]

	StrengthIntervals
Mann-Whitney U	1482430,000
Wilcoxon W	3371026,000
Z	-4,010
Asymp. Sig. (2-tailed)	,000

a. Grouping Variable: Code

B.2.3. Nonparametric Tests Results of OPC and Blended Cements

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum	Percentiles		
						25th	50th (Median)	75th
OPC vs BLENDED CEMENT	5037	1,6702	1,29930	,00	13,90	,6000	1,4000	2,4000

Ranks

	CODE	N	Mean Rank	Sum of Ranks
OPCVSBLENDEDCEMENT	OPC	1710	2611,41	4465508,50
	Blended Cements	3327	2471,50	8222694,50
	Total	5037		

Test Statistics [a]

	OPCVSBLENDEDCEMENT
Mann-Whitney U	2686566,500
Wilcoxon W	8222694,500
Z	-3,235
Asymp. Sig. (2-tailed)	,001

a. Grouping Variable: CODE

B.2.4. Nonparametric Tests Results of Cement Types

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum	Percentiles		
						25th	50th (Median)	75th
CementTypes	5037	1,6702	1,29930	,00	13,90	,6000	1,4000	2,4000

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypes	CEM I	1710	1965,20	3360489,50
	CEM II	2111	1867,10	3941441,50
	Total	3821		

Test Statistics [a]

	CementTypes
Mann-Whitney U	1712225,500
Wilcoxon W	3941441,500
Z	-2,734
Asymp. Sig. (2-tailed)	,006

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypes	CEM I	1710	965,24	1650562,00
	CEM III	193	834,68	161094,00
	Total	1903		

Test Statistics [a]

	CementTypes
Mann-Whitney U	142373,000
Wilcoxon W	161094,000
Z	-3,130
Asymp. Sig. (2-tailed)	,002

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypes	CEM I	1710	1331,85	2277462,00
	CEM IV	918	1282,18	1177044,00
	Total	2628		

Test Statistics [a]

	CementTypes
Mann-Whitney U	755223,000
Wilcoxon W	1177044,000
Z	-1,600
Asymp. Sig. (2-tailed)	,110

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypes	CEM I	1710	915,62	1565710,00
	CEM V	105	783,90	82310,00
	Total	1815		

Test Statistics [a]

	CementTypes
Mann-Whitney U	76745,000
Wilcoxon W	82310,000
Z	-2,501
Asymp. Sig. (2-tailed)	,012

a. Grouping Variable: KOD

Ranks

	CODE	N	Mean Rank	Sum of Ranks
CementTypes	CEM II	2111	1160,99	2450844,00
	CEM III	193	1059,67	204516,00
	Total	2304		

Test Statistics [a]

	CementTypes
Mann-Whitney U	185795,000
Wilcoxon W	204516,000
Z	-2,026
Asymp. Sig. (2-tailed)	,043

a. Grouping Variable: KOD

Ranks

	CODE	N	Mean Rank	Sum of Ranks
CementTypes	CEM II	2111	1509,90	3187407,00
	CEM IV	918	1526,72	1401528,00
	Total	3029		

Test Statistics [a]

	CementTypes
Mann-Whitney U	958191,000
Wilcoxon W	3187407,000
Z	-,487
Asymp. Sig. (2-tailed)	,627

a. Grouping Variable: KOD

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypes	CEM II	2111	1113,57	2350739,00
	CEM V	105	1006,64	105697,00
	Total	2216		

Test Statistics [a]

	CementTypes
Mann-Whitney U	100132,000
Wilcoxon W	105697,000
Z	-1,672
Asymp. Sig. (2-tailed)	,094

a. Grouping Variable: KOD

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypes	CEM III	193	511,41	98702,50
	CEM IV	918	565,37	519013,50
	Total	1111		

Test Statistics [a]

	CementTypes
Mann-Whitney U	79981,500
Wilcoxon W	98702,500
Z	-2,125
Asymp. Sig. (2-tailed)	,034

a. Grouping Variable: Code

Ranks

	CODE	N	Mean Rank	Sum of Ranks
CementTypes	CEM III	193	150,31	29009,50
	CEM V	105	148,01	15541,50
	Total	298		

Test Statistics [a]

	CementTypes
Mann-Whitney U	9976,500
Wilcoxon W	15541,500
Z	-,220
Asymp. Sig. (2-tailed)	,826

a. Grouping Variable: KOD

Ranks

	CODE	N	Mean Rank	Sum of Ranks
CementTypes	CEM IV	918	517,57	475130,00
	CEM V	105	463,30	48646,00
	Total	1023		

Test Statistics [a]

	CementTypes
Mann-Whitney U	43081,000
Wilcoxon W	48646,000
Z	-1,784
Asymp. Sig. (2-tailed)	,074

a. Grouping Variable: KOD

B.2.5. Nonparametric Tests Results of Constituents' Types

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum	Percentiles		
						25th	50th (Median)	75th
Constituents' Types	4927	1,6734	1,29957	,00	13,90	,7000	1,4000	2,4000

Ranks

	Code	N	Mean Rank	Sum of Ranks
AdditivesAndOPC	OPC	1710	901,37	1541340,50
	V(W)-L(LL)	98	959,14	93995,50
	Total	1808		

Test Statistics [a]

	AdditivesAnd OPC
Mann-Whitney U	78435,500
Wilcoxon W	1541340,500
Z	-1,066
Asymp. Sig. (2-tailed)	,287

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
AdditivesAndOPC	OPC	1710	1446,00	2472661,00
	P-L(LL)	1097	1338,53	1468367,00
	Total	2807		

Test Statistics [a]

	AdditivesAnd OPC
Mann-Whitney U	866114,000
Wilcoxon W	1468367,000
Z	-3,429
Asymp. Sig. (2-tailed)	,001

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
AdditivesAndOPC	OPC	1710	929,86	1590064,00
	S-P	137	850,83	116564,00
	Total	1847		

Test Statistics [a]

	AdditivesAnd OPC
Mann-Whitney U	107111,000
Wilcoxon W	116564,000
Z	-1,670
Asymp. Sig. (2-tailed)	,095

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
AdditivesandOPC	OPC	1710	953,83	1631046,50
	P-V(W)	184	888,69	163518,50
	Total	1894		

Test Statistics [a]

	Additivesand OPC
Mann-Whitney U	146498,500
Wilcoxon W	163518,500
Z	-1,536
Asymp. Sig. (2-tailed)	,125

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
AdditivesAndOPC	OPC	1710	906,72	1550487,50
	S-L(LL)	100	884,68	88467,50
	Total	1810		

Test Statistics [a]

	AdditivesAnd OPC
Mann-Whitney U	83417,500
Wilcoxon W	88467,500
Z	-,410
Asymp. Sig. (2-tailed)	,682

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
AdditivesAndOPC	OPC	1710	1101,48	1883538,50
	L(LL)	490	1097,06	537561,50
	Total	2200		

Test Statistics [a]

	AdditivesAnd OPC
Mann-Whitney U	417266,500
Wilcoxon W	537561,500
Z	-,136
Asymp. Sig. (2-tailed)	,892

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
AdditivesAndOPC	OPC	1710	1307,13	2235185,50
	P	865	1250,19	1081414,50
	Total	2575		

Test Statistics [a]

	AdditivesAnd OPC
Mann-Whitney U	706869,500
Wilcoxon W	1081414,500
Z	-1,836
Asymp. Sig. (2-tailed)	,066

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
AdditivesAndOPC	OPC	1710	992,26	1696770,50
	S	246	882,83	217175,50
	Total	1956		

Test Statistics [a]

	AdditivesAnd OPC
Mann-Whitney U	186794,500
Wilcoxon W	217175,500
Z	-2,843
Asymp. Sig. (2-tailed)	,004

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
AdditivesAndOPC	V(W)-L(LL)	98	675,96	66244,50
	P-L(LL)	1097	591,04	648365,50
	Total	1195		

Test Statistics [a]

	AdditivesAnd OPC
Mann-Whitney U	46112,500
Wilcoxon W	648365,500
Z	-2,335
Asymp. Sig. (2-tailed)	,020

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
AdditivesAndOPC	V(W)-L(LL)	98	128,41	12584,00
	S-P	137	110,55	15146,00
	Total	235		

Test Statistics [a]

	AdditivesAnd OPC
Mann-Whitney U	5693,000
Wilcoxon W	15146,000
Z	-1,986
Asymp. Sig. (2-tailed)	,047

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
AdditivesAndOPC	V(W)-L(LL)	98	154,11	15103,00
	P-V(W)	184	134,78	24800,00
	Total	282		

Test Statistics [a]

	AdditivesAnd OPC
Mann-Whitney U	7780,000
Wilcoxon W	24800,000
Z	-1,896
Asymp. Sig. (2-tailed)	,058

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
AdditivesAndOPC	V(W)-L(LL)	98	103,71	10164,00
	S-L(LL)	100	95,37	9537,00
	Total	198		

Test Statistics [a]

	AdditivesAnd OPC
Mann-Whitney U	4487,000
Wilcoxon W	9537,000
Z	-1,025
Asymp. Sig. (2-tailed)	,305

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
AdditivesAndOPC	V(W)-L(LL)	98	310,13	30392,50
	L(LL)	490	291,37	142773,50
	Total	588		

Test Statistics [a]

	AdditivesAnd OPC
Mann-Whitney U	22478,500
Wilcoxon W	142773,500
Z	-,998
Asymp. Sig. (2-tailed)	,318

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
AdditivesAndOPC	V(W)-L(LL)	98	528,76	51818,50
	P	865	476,70	412347,50
	Total	963		

Test Statistics [a]

	AdditivesAnd OPC
Mann-Whitney U	37802,500
Wilcoxon W	412347,500
Z	-1,757
Asymp. Sig. (2-tailed)	,079

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
AdditivesAndOPC	V(W)-L(LL)	98	194,89	19099,00
	S	246	163,58	40241,00
	Total	344		

Test Statistics [a]

	AdditivesAndOPC
Mann-Whitney U	9860,000
Wilcoxon W	40241,000
Z	-2,637
Asymp. Sig. (2-tailed)	,008

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
AdditivesAndOPC	P- L(LL)	1097	618,53	678523,50
	S-P	137	609,28	83471,50
	Total	1234		

Test Statistics [a]

	AdditivesAndOPC
Mann-Whitney U	74018,500
Wilcoxon W	83471,500
Z	-,286
Asymp. Sig. (2-tailed)	,775

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
AdditivesAndOPC	P-L(LL)	1097	640,88	703049,50
	P-V(W)	184	641,69	118071,50
	Total	1281		

Test Statistics [a]

	AdditivesAndOPC
Mann-Whitney U	100796,500
Wilcoxon W	703049,500
Z	-,027
Asymp. Sig. (2-tailed)	,978

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
AdditivesAndOPC	P-L(LL)	1097	596,30	654144,00
	S-L(LL)	100	628,59	62859,00
	Total	1197		

Test Statistics [a]

	AdditivesAnd OPC
Mann-Whitney U	51891,000
Wilcoxon W	654144,000
Z	-,895
Asymp. Sig. (2-tailed)	,371

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
AdditivesAndOPC	P-L(LL)	1097	775,61	850844,50
	L(LL)	490	835,17	409233,50
	Total	1587		

Test Statistics [a]

	AdditivesAnd OPC
Mann-Whitney U	248591,500
Wilcoxon W	850844,500
Z	-2,393
Asymp. Sig. (2-tailed)	,017

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
AdditivesAndOPC	P-L(LL)	1097	969,26	1063279,50
	P	865	997,02	862423,50
	Total	1962		

Test Statistics [a]

	AdditivesAnd OPC
Mann-Whitney U	461026,500
Wilcoxon W	1063279,500
Z	-1,078
Asymp. Sig. (2-tailed)	,281

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
AdditivesAndOPC	P-L(LL)	1097	676,65	742281,50
	S	246	651,28	160214,50
	Total	1343		

Test Statistics [a]

	AdditivesAnd OPC
Mann-Whitney U	129833,500
Wilcoxon W	160214,500
Z	-,928
Asymp. Sig. (2-tailed)	,354

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
AdditivesAndOPC	S-P	137	159,63	21869,50
	P-V(W)	184	162,02	29811,50
	Total	321		

Test Statistics [a]

	AdditivesAnd OPC
Mann-Whitney U	12416,500
Wilcoxon W	21869,500
Z	-,228
Asymp. Sig. (2-tailed)	,820

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
AdditivesAndOPC	S-P	137	115,79	15863,00
	S-L(LL)	100	123,40	12340,00
	Total	237		

Test Statistics [a]

	AdditivesAnd OPC
Mann-Whitney U	6410,000
Wilcoxon W	15863,000
Z	-,845
Asymp. Sig. (2-tailed)	,398

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
AdditivesAndOPC	S-P	137	294,20	40306,00
	L(LL)	490	319,53	156572,00
	Total	627		

Test Statistics [a]

	AdditivesAnd OPC
Mann-Whitney U	30853,000
Wilcoxon W	40306,000
Z	-1,448
Asymp. Sig. (2-tailed)	,148

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
AdditivesAndOPC	S-P	137	483,27	66208,00
	P	865	504,39	436295,00
	Total	1002		

Test Statistics [a]

	AdditivesAnd OPC
Mann-Whitney U	56755,000
Wilcoxon W	66208,000
Z	-,794
Asymp. Sig. (2-tailed)	,427

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
AdditivesAndOPC	S-P	137	195,10	26729,00
	S	246	190,27	46807,00
	Total	383		

Test Statistics [a]

	AdditivesAnd OPC
Mann-Whitney U	16426,000
Wilcoxon W	46807,000
Z	-,409
Asymp. Sig. (2-tailed)	,682

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
AdditivesAndOPC	P-V(W)	184	140,22	25800,50
	S-L(LL)	100	146,70	14669,50
	Total	284		

Test Statistics [a]

	AdditivesAnd OPC
Mann-Whitney U	8780,500
Wilcoxon W	25800,500
Z	-,635
Asymp. Sig. (2-tailed)	,525

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
AdditivesAndOPC	P-V(W)	184	321,37	59132,50
	L(LL)	490	343,56	168342,50
	Total	674		

Test Statistics [a]

	AdditivesAnd OPC
Mann-Whitney U	42112,500
Wilcoxon W	59132,500
Z	-1,318
Asymp. Sig. (2-tailed)	,187

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
AdditivesAndOPC	P-V(W)	184	514,56	94679,50
	P	865	527,22	456045,50
	Total	1049		

Test Statistics [a]

	AdditivesAnd OPC
Mann-Whitney U	77659,500
Wilcoxon W	94679,500
Z	-,515
Asymp. Sig. (2-tailed)	,607

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
AdditivesAndOPC	P-V(W)	184	220,05	40488,50
	S	246	212,10	52176,50
	Total	430		

Test Statistics [a]

	AdditivesAnd OPC
Mann-Whitney U	21795,500
Wilcoxon W	52176,500
Z	-,656
Asymp. Sig. (2-tailed)	,512

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
AdditivesAndOPC	S-L(LL)	100	290,37	29036,50
	L(LL)	490	296,55	145308,50
	Total	590		

Test Statistics [a]

	AdditivesAnd OPC
Mann-Whitney U	23986,500
Wilcoxon W	29036,500
Z	-,331
Asymp. Sig. (2-tailed)	,741

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
AdditivesAndOPC	S-L(LL)	100	492,71	49271,00
	P	865	481,88	416824,00
	Total	965		

Test Statistics [a]

	AdditivesAnd OPC
Mann-Whitney U	42279,000
Wilcoxon W	416824,000
Z	-,368
Asymp. Sig. (2-tailed)	,713

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
AdditivesAndOPC	S-L(LL)	100	184,18	18417,50
	S	246	169,16	41613,50
	Total	346		

Test Statistics [a]

	AdditivesAnd OPC
Mann-Whitney U	11232,500
Wilcoxon W	41613,500
Z	-1,266
Asymp. Sig. (2-tailed)	,205

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
AdditivesAndOPC	L(LL)	490	696,12	341098,50
	P	865	667,74	577591,50
	Total	1355		

Test Statistics [a]

	AdditivesAnd OPC
Mann-Whitney U	203046,500
Wilcoxon W	577591,500
Z	-1,283
Asymp. Sig. (2-tailed)	,199

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
AdditivesAndOPC	L(LL)	490	381,75	187056,00
	S	246	342,11	84160,00
	Total	736		

Test Statistics [a]

	AdditivesAnd OPC
Mann-Whitney U	53779,000
Wilcoxon W	84160,000
Z	-2,387
Asymp. Sig. (2-tailed)	,017

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
AdditivesAndOPC	P	865	564,13	487974,50
	S	246	527,40	129741,50
	Total	1111		

Test Statistics [a]

	AdditivesAnd OPC
Mann-Whitney U	99360,500
Wilcoxon W	129741,500
Z	-1,585
Asymp. Sig. (2-tailed)	,113

a. Grouping Variable: Code

B.2.6. Nonparametric Tests Results of Cement Types and Strength Classes

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum	Percentiles		
						25th	50th (Median)	75th
CementTypesandStrengthClass	5000	1,6692	1,30051	,00	13,90	,6000	1,4000	2,4000

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypesandStrengthClass	CEM I 42.5	1560	854,89	1333627,50
	CEM I 52.5	143	820,48	117328,50
	Total	1703		

Test Statistics [a]

	CementTypesandStrengthClass
Mann-Whitney U	107032,500
Wilcoxon W	117328,500
Z	-,801
Asymp. Sig. (2-tailed)	,423

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypesandStrengthClass	CEM I 42.5	1560	1106,09	1725506,50
	CEM II 32.5	578	970,73	561084,50
	Total	2138		

Test Statistics [a]

	CementTypesandStrengthClass
Mann-Whitney U	393753,500
Wilcoxon W	561084,500
Z	-4,505
Asymp. Sig. (2-tailed)	,000

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypesandStrengthClass	CEM I 42.5	1560	1551,11	2419727,00
	CEM II 42.5	1503	1512,17	2272789,00
	Total	3063		

Test Statistics [a]

	CementTypesandStrengthClass
Mann-Whitney U	1142533,000
Wilcoxon W	2272789,000
Z	-1,219
Asymp. Sig. (2-tailed)	,223

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypesandStrengthClass	CEM I 42.5	1560	828,41	1292322,50
	CEM III 32.5	82	690,01	56580,50
	Total	1642		

Test Statistics [a]

	CementTypesandStrengthClass
Mann-Whitney U	53177,500
Wilcoxon W	56580,500
Z	-2,577
Asymp. Sig. (2-tailed)	,010

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypesandStrengthClass	CEM I 42.5	1560	842,41	1314157,00
	CEM III 42.5	111	745,94	82799,00
	Total	1671		

Test Statistics [a]

	CementTypesandStrengthClass
Mann-Whitney U	76583,000
Wilcoxon W	82799,000
Z	-2,036
Asymp. Sig. (2-tailed)	,042

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypesandStrengthClass	CEM I 42.5	1560	1232,53	1922749,00
	CEM IV 32.5	864	1176,33	1016351,00
	Total	2424		

Test Statistics [a]

	CementTypesandStrengthClass
Mann-Whitney U	642671,000
Wilcoxon W	1016351,000
Z	-1,894
Asymp. Sig. (2-tailed)	,058

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypesandStrengthClass	CEM I 42.5	1560	804,63	1255224,50
	CEM IV 42.5	54	890,38	48080,50
	Total	1614		

Test Statistics [a]

	CementTypesandStrengthClass
Mann-Whitney U	37644,500
Wilcoxon W	1255224,500
Z	-1,330
Asymp. Sig. (2-tailed)	,184

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypesandStrengthClass	CEM I 42.5	1560	840,67	1311444,50
	CEM V 32.5	105	719,05	75500,50
	Total	1665		

Test Statistics [a]

	CementTypesandStrengthClass
Mann-Whitney U	69935,500
Wilcoxon W	75500,500
Z	-2,510
Asymp. Sig. (2-tailed)	,012

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypesandStrengthClass	CEM I 52.5	143	387,95	55477,00
	CEM II 32.5	578	354,33	204804,00
	Total	721		

Test Statistics [a]

	CementTypesandStrengthClass
Mann-Whitney U	37473,000
Wilcoxon W	204804,000
Z	-1,729
Asymp. Sig. (2-tailed)	,084

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypesandStrengthClass	CEM I 52.5	143	811,29	116014,00
	CEM II 42.5	1503	824,66	1239467,00
	Total	1646		

Test Statistics [a]

	CementTypesandStrengthClass
Mann-Whitney U	105718,000
Wilcoxon W	116014,000
Z	-,322
Asymp. Sig. (2-tailed)	,748

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypesandStrengthClass	CEM I 52.5	143	118,76	16982,00
	CEM III 32.5	82	102,96	8443,00
	Total	225		

Test Statistics [a]

	CementTypesandStrengthClass
Mann-Whitney U	5040,000
Wilcoxon W	8443,000
Z	-1,753
Asymp. Sig. (2-tailed)	,080

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypesandStrengthClass	CEM I 52.5	143	131,70	18832,50
	CEM III 42.5	111	122,09	13552,50
	Total	254		

Test Statistics [a]

	CementTypesandStrengthClass
Mann-Whitney U	7336,500
Wilcoxon W	13552,500
Z	-1,034
Asymp. Sig. (2-tailed)	,301

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypesandStrengthClass	CEM I 52.5	143	508,13	72662,00
	CEM IV 32.5	864	503,32	434866,00
	Total	1007		

Test Statistics [a]

	CementTypesandStrengthClass
Mann-Whitney U	61186,000
Wilcoxon W	434866,000
Z	-,183
Asymp. Sig. (2-tailed)	,855

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypesandStrengthClass	CEM I 52.5	143	94,93	13575,00
	CEM IV 42.5	54	109,78	5928,00
	Total	197		

Test Statistics [a]

	CementTypesandStrengthClass
Mann-Whitney U	3279,000
Wilcoxon W	13575,000
Z	-1,631
Asymp. Sig. (2-tailed)	,103

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypesandStrengthClass	CEM I 52.5	143	130,42	18650,00
	CEM V 32.5	105	116,44	12226,00
	Total	248		

Test Statistics [a]

	CementTypesandStrengthClass
Mann-Whitney U	6661,000
Wilcoxon W	12226,000
Z	-1,517
Asymp. Sig. (2-tailed)	,129

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypesandStrengthClass	CEM II 32.5	578	963,93	557150,50
	CEM II 42.5	1503	1070,64	1609170,50
	Total	2081		

Test Statistics [a]

	CementTypesandStrengthClass
Mann-Whitney U	389819,500
Wilcoxon W	557150,500
Z	-3,630
Asymp. Sig. (2-tailed)	,000

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypesandStrengthClass	CEM II 32.5	578	332,24	192036,00
	CEM III 32.5	82	318,22	26094,00
	Total	660		

Test Statistics [a]

	CementTypesandStrengthClass
Mann-Whitney U	22691,000
Wilcoxon W	26094,000
Z	-,624
Asymp. Sig. (2-tailed)	,533

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypesandStrengthClass	CEM II 32.5	578	344,25	198979,00
	CEM III 42.5	111	348,88	38726,00
	Total	689		

Test Statistics [a]

	CementTypesandStrengthClass
Mann-Whitney U	31648,000
Wilcoxon W	198979,000
Z	-,225
Asymp. Sig. (2-tailed)	,822

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypesandStrengthClass	CEM II 32.5	578	688,72	398080,00
	CEM IV 32.5	864	743,43	642323,00
	Total	1442		

Test Statistics [a]

	CementTypesandStrengthClass
Mann-Whitney U	230749,000
Wilcoxon W	398080,000
Z	-2,446
Asymp. Sig. (2-tailed)	,014

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypesandStrengthClass	CEM II 32.5	578	310,24	179319,50
	CEM IV 42.5	54	383,49	20708,50
	Total	632		

Test Statistics [a]

	CementTypesandStrengthClass
Mann-Whitney U	11988,500
Wilcoxon W	179319,500
Z	-2,821
Asymp. Sig. (2-tailed)	,005

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypesandStrengthClass	CEM II 32.5	578	343,19	198365,50
	CEM V 32.5	105	335,43	35220,50
	Total	683		

Test Statistics [a]

	CementTypesandStrengthClass
Mann-Whitney U	29655,500
Wilcoxon W	35220,500
Z	-,371
Asymp. Sig. (2-tailed)	,711

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypesandStrengthClass	CEM II 42.5	1503	799,07	1201002,00
	CEM III 32.5	82	681,74	55903,00
	Total	1585		

Test Statistics [a]

	CementTypesandStrengthClass
Mann-Whitney U	52500,000
Wilcoxon W	55903,000
Z	-2,261
Asymp. Sig. (2-tailed)	,024

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypesandStrengthClass	CEM II 42.5	1503	812,72	1221521,00
	CEM III 42.5	111	736,79	81784,00
	Total	1614		

Test Statistics [a]

	CementTypesandStrengthClass
Mann-Whitney U	75568,000
Wilcoxon W	81784,000
Z	-1,657
Asymp. Sig. (2-tailed)	,098

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypesandStrengthClass	CEM II 42.5	1503	1193,92	1794463,50
	CEM IV 32.5	864	1166,74	1008064,50
	Total	2367		

Test Statistics [a]

	CementTypesandStrengthClass
Mann-Whitney U	634384,500
Wilcoxon W	1008064,500
Z	-,932
Asymp. Sig. (2-tailed)	,351

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypesandStrengthClass	CEM II 42.5	1503	775,53	1165619,00
	CEM IV 42.5	54	875,63	47284,00
	Total	1557		

Test Statistics [a]

	CementTypesandStrengthClass
Mann-Whitney U	35363,000
Wilcoxon W	1165619,000
Z	-1,608
Asymp. Sig. (2-tailed)	,108

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypesandStrengthClass	CEM II 42.5	1503	811,02	1218966,00
	CEM V 32.5	105	711,14	74670,00
	Total	1608		

Test Statistics [a]

	CementTypesandStrengthClass
Mann-Whitney U	69105,000
Wilcoxon W	74670,000
Z	-2,132
Asymp. Sig. (2-tailed)	,033

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypesandStrengthClass	CEM III 32.5	82	93,32	7652,00
	CEM III 42.5	111	99,72	11069,00
	Total	193		

Test Statistics [a]

	CementTypesandStrengthClass
Mann-Whitney U	4249,000
Wilcoxon W	7652,000
Z	-,788
Asymp. Sig. (2-tailed)	,431

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypesandStrengthClass	CEM III 32.5	82	422,10	34612,00
	CEM IV 32.5	864	478,38	413319,00
	Total	946		

Test Statistics [a]

	CementTypesandStrengthClass
Mann-Whitney U	31209,000
Wilcoxon W	34612,000
Z	-1,783
Asymp. Sig. (2-tailed)	,075

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypesandStrengthClass	CEM III 32.5	82	60,93	4996,50
	CEM IV 42.5	54	79,99	4319,50
	Total	136		

Test Statistics [a]

	CementTypesandStrengthClass
Mann-Whitney U	1593,500
Wilcoxon W	4996,500
Z	-2,762
Asymp. Sig. (2-tailed)	,006

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypesandStrengthClass	CEM III 32.5	82	93,13	7636,50
	CEM V 32.5	105	94,68	9941,50
	Total	187		

Test Statistics [a]

	CementTypesandStrengthClass
Mann-Whitney U	4233,500
Wilcoxon W	7636,500
Z	-,195
Asymp. Sig. (2-tailed)	,846

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypesandStrengthClass	CEM III 42.5	111	459,15	50965,50
	CEM IV 32.5	864	491,71	424834,50
	Total	975		

Test Statistics [a]

	CementTypesandStrengthClass
Mann-Whitney U	44749,500
Wilcoxon W	50965,500
Z	-1,147
Asymp. Sig. (2-tailed)	,251

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypesandStrengthClass	CEM III 42.5	111	76,99	8546,00
	CEM IV 42.5	54	95,35	5149,00
	Total	165		

Test Statistics [a]

	CementTypesandStrengthClass
Mann-Whitney U	2330,000
Wilcoxon W	8546,000
Z	-2,318
Asymp. Sig. (2-tailed)	,020

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypesandStrengthClass	CEM III 42.5	111	110,56	12272,50
	CEM V 32.5	105	106,32	11163,50
	Total	216		

Test Statistics [a]

	CementTypesandStrengthClass
Mann-Whitney U	5598,500
Wilcoxon W	11163,500
Z	-,499
Asymp. Sig. (2-tailed)	,618

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypesandStrengthClass	CEM IV 32.5	864	455,48	393534,00
	CEM IV 42.5	54	523,83	28287,00
	Total	918		

Test Statistics [a]

	CementTypesandStrengthClass
Mann-Whitney U	19854,000
Wilcoxon W	393534,000
Z	-1,839
Asymp. Sig. (2-tailed)	,066

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypesandStrengthClass	CEM IV 32.5	864	490,16	423499,00
	CEM V 32.5	105	442,53	46466,00
	Total	969		

Test Statistics [a]

	CementTypesandStrengthClass
Mann-Whitney U	40901,000
Wilcoxon W	46466,000
Z	-1,647
Asymp. Sig. (2-tailed)	,099

a. Grouping Variable: Code

Ranks

	Code	N	Mean Rank	Sum of Ranks
CementTypesandStrengthClass	CEM IV 42.5	54	93,42	5044,50
	CEM V 32.5	105	73,10	7675,50
	Total	159		

Test Statistics [a]

	CementTypesandStrengthClass
Mann-Whitney U	2110,500
Wilcoxon W	7675,500
Z	-2,637
Asymp. Sig. (2-tailed)	,008

a. Grouping Variable: Code

B.2.7. Nonparametric Tests Results of OPC and Blended Cements according to Strength Class

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum	Percentiles		
						25th	50th (Median)	75th
OPC vs Blended Cement with Strength Types	5000	1,6692	1,30051	,00	13,90	,6000	1,4000	2,4000

Ranks

	CODE	N	Mean Rank	Sum of Ranks
OPCBLENDEDSTRENGTHTYPE	CEM I 42.5	1560	854,89	1333627,50
	CEM I 52.5	143	820,48	117328,50
	Total	1703		

Test Statistics [a]

	OPCBLENDEDSTRENGTHTYPE
Mann-Whitney U	107032,500
Wilcoxon W	117328,500
Z	-,801
Asymp. Sig. (2-tailed)	,423

a. Grouping Variable: CODE

Ranks

	CODE	N	Mean Rank	Sum of Ranks
OPCBLENDEDSTRENGTHTYPE	CEM I 42.5	1560	1666,21	2599282,50
	CEM II-V 32.5	1629	1526,81	2487172,50
	Total	3189		

Test Statistics [a]

	OPCBLENDEDSTRENGTHTYPE
Mann-Whitney U	1159537,500
Wilcoxon W	2487172,500
Z	-4,276
Asymp. Sig. (2-tailed)	,000

a. Grouping Variable: CODE

Ranks

	CODE	N	Mean Rank	Sum of Ranks
OPCBLENDEDSTRENGTHTYPE	CEM I 42.5	1560	1637,15	2553948,50
	CEM II-V 42.5	1668	1593,32	2657657,50
	Total	3228		

Test Statistics [a]

	OPCBLENDEDSTRENGTHTYPE
Mann-Whitney U	1265711,500
Wilcoxon W	2657657,500
Z	-1,336
Asymp. Sig. (2-tailed)	,182

a. Grouping Variable: CODE

Ranks

	CODE	N	Mean Rank	Sum of Ranks
OPCBLENDEDSTRENGTHTYPE	CEM I 52.5	143	929,25	132883,00
	CEM II-V 32.5	1629	882,75	1437995,00
	Total	1772		

Test Statistics [a]

	OPCBLENDEDSTRENGTHTYPE
Mann-Whitney U	110360,000
Wilcoxon W	1437995,000
Z	-1,043
Asymp. Sig. (2-tailed)	,297

a. Grouping Variable: CODE

Ranks

	CODE	N	Mean Rank	Sum of Ranks
OPCBLENDEDSTRENGTHTYPE	CEM I 52.5	143	893,91	127829,50
	CEM II-V 42.5	1668	907,04	1512936,50
	Total	1811		

Test Statistics [a]

	OPCBLENDEDSTRENGTHTYPE
Mann-Whitney U	117533,500
Wilcoxon W	127829,500
Z	-,288
Asymp. Sig. (2-tailed)	,773

a. Grouping Variable: CODE

Ranks

	CODE	N	Mean Rank	Sum of Ranks
OPCBLENDEDSTRENGTHTYPE	CEM II-V 32.5	1629	1597,08	2601640,50
	CEM II-V 42.5	1668	1699,71	2835112,50
	Total	3297		

Test Statistics [a]

	OPCBLENDEDSTRENGTHTYPE
Mann-Whitney U	1274005,500
Wilcoxon W	2601640,500
Z	-3,096
Asymp. Sig. (2-tailed)	,002

a. Grouping Variable: CODE