




COMBINED CONFORMITY CERTIFICATE																																																																																																																																																																			
Regen Ground Granulated Blastfurnace Slag Produced at Despatched From Sample Period		IJMUIDEN	Works																																																																																																																																																																
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		March 2017																																																																																																																																																																	
Certificate of Conformity of Regen GGBS to EN 15167-1:2006		Certificate of Conformity of Combinations of Regen GGBS and CEM I Portland Cement to Annex A of BS 8500-2:2015																																																																																																																																																																	
Spot samples of Regen GGBS were taken and tested to determine conformity to the autocontrol requirements of EN 15167-1:2006 "Ground granulated blastfurnace slag for use in concrete, mortar and grout" following the methods given in that standard. The values reported are mean values for the monthly production period.		Portland Cement Source: AGGREGATE INDUSTRIES : GLASGOW																																																																																																																																																																	
<table border="1"> <thead> <tr> <th>Results</th> <th>Product</th> <th colspan="2">EN Limit</th> </tr> </thead> <tbody> <tr> <td colspan="4" style="text-align: center;">Regen GGBS ONLY</td> </tr> <tr> <td>Fineness m²/kg</td> <td style="text-align: center;">380</td> <td colspan="2">min. 275</td> </tr> <tr> <td>Magnesia MgO %</td> <td style="text-align: center;">9</td> <td colspan="2">max. 18</td> </tr> <tr> <td>Sulfate SO₃ %</td> <td style="text-align: center;">0.21</td> <td colspan="2">max 2.5</td> </tr> <tr> <td>Sulfide S²⁻ %</td> <td style="text-align: center;">0.89</td> <td colspan="2">max 2.0</td> </tr> <tr> <td>Chloride Content Cl⁻ %</td> <td style="text-align: center;">0.04</td> <td colspan="2">max 0.10</td> </tr> <tr> <td>Moisture Content %</td> <td style="text-align: center;">0.00</td> <td colspan="2">max 1.0</td> </tr> <tr> <td>Alumina Al₂O₃ %</td> <td style="text-align: center;">14.5</td> <td colspan="2">to 1 dec</td> </tr> <tr> <td colspan="4"> Note: If the value is ≥ 14.5% the '+SR' restriction will be exceeded if the C₃A of the CEM I is >10%. </td> </tr> <tr> <td colspan="4" style="text-align: center;"><i>Alkalis as Na₂O equ. 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(acid soluble)</i>				Guaranteed Alkali limit %	≤ 1.0			Certified Average Alkali (Last 25) %	0.81			Declared Mean : Mean last 25 + (SD last 25 x 1.64) %	0.90			COMBINATION OF 50% LABORATORY STOCK CEM I PORTLAND CEMENT AND 50% Regen GGBS				Initial Setting Time min.	180	not > than 2 x PC		Activity Index %	7 days	69	min. 45	28 days	95	min. 70	LABORATORY STOCK CEM I PORTLAND CEMENT ONLY				<i>The stock CEM I Portland cement used in these tests was supplied by Hanson Ribblesdale works and the following results were obtained from that sample</i>				Initial Setting Time min	140			Compressive Strength N/mm ²	7 days	52.7		28 days	62.8		The Regen GGBS contained no additional materials other than those permitted. 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