ARC FURNACE SLAG- TEST REPORT

Mechanically comprised layers out of Granular material

Property	Test Method	Unit of Measure	Result	Evaluation Criteria
Density	HRN U.B1.014	g/cm^3	3.831	-
Coefficient of nonuniformity, U= d60/ d10	HRN U.B1.018	-	6.58	>4
Share of particles bellow 0.1 mm	HRN U.B1.018	mass %	0	-
Largest grain diameter	HRN U.B1.018	mm	350	<400 (where 15% are allowed to be up to the size 500)
Optimal moisture, W_{opt}	HRN U.B1.038	%	2.2	-
Maximal dry spatial mass	HRN U.B1.038	g/cm^3	2.794	-
Optimal moisture, W_{opt}	HRN U.B1.038	%	2.7	-
Maximal dry spatial mass	HRN U.B1.038	g/cm^3	2.460	-
Maximal dry spatial mass	HRN U.B1.042	g/cm^3	2.780	-
95% value of maximum spatial mass	HRN U.B1.042	g/cm^3	2.641	-
California Bearing Ratio, CBR	HRN U.B1.042	%	198	min. 80
Grain shape	HRN B.B8.048	mass %	6.2	max. 40

Property	Test Method	Unit of Measure	Result	Evaluation Criteria
Water absorption	HRN B.B8.031	mass %	0.8	max. 1,6
Frost stability, by the Na_2SO_4-method	HRN B.B8.044	mass %	0.05	max. 7
Share of worn, low quality grains	HRN B.B8.037	mass %	0.4	max. 12
Wear and impact resistance, by the Los Angeles method	HRN B.B8.045	mass %	17.4	max. 4

Physical-mechanical properties

GRAIN SHAPE:

FRACTION (mm)	UNSUITABLY SHAPED GRAINS mass %	
4/8	14.86	
8/16	3.87	
16/32	0.00	

WATER ABSORPTION

FRACTION (mm)	UNSUITABLY SHAPED GRAINS mass %		

FRACTION (mm)	UNSUITABLY SHAPED GRAINS mass %		
4/8	0.99		
8/16	0.70		
16/32	0.87		

FROST STABILITY, Na2SO4 METHOD

FRACTION (mm)	LOSS OF MASS AFTER 5 CYCLES mass %		
2/4	0.127		
4/8	0.076		
8/16	0.000		
16/32	0.000		

SHARE OF WORN, LOW-QUALITY GRAINS

FRACTION (mm)	WATER ABSORPTION mass %		

FRACTION (mm)	WATER ABSORPTION **mass %**		
4/8	1.13		
8/16	0.00		
16/32	0.00		

CHEMICAL ANALYSIS:

Analysed Component	**Unit of Measure**	**Sample 1 Result / Limit Value**	**Sample 2 Result / Limit Value**
Dry substance	%	99.68/-	99.82/-
H_2O	%	0.32/-	0.18/-
pH (water)	%	12.27/-	12.09/-
Annealed residue (550 °C)	%	98.58/-	98.68/-
Annealing loss (550 °C)	%	1.42/-	1.38/-
Annealing loss (1100°C)	%	8.73/-	8.30/-
Total P_2O_5	%	0.0123/-	0.0126/-

Analysed Component	Unit of Measure	Sample 1 Result / Limit Value	Sample 2 Result / Limit Value
Total K_2O	%	0.034/-	0.033/-
Total Na	%	0.069/-	0.070/-
Fe_2O_3	%	34.34/-	34.32/-
$CaCO_3$	%	8.34/-	8.34/-
Mg CO_3	%	2.52/-	2.72/-
MnO_2	%	0.496/-	0.476/-
Zn	mg/kg	82.50/150.0	82.50/150.0
Cu	mg/kg	59.06/50.0	62.50/50.0
Ni	mg/kg	75.0/30.0	75.0/30.0
Cd	mg/kg	0.85/0.80	0.85/0.80
Pb	mg/kg	25.20/50.0	25.20/50.0
Cr	mg/kg	30.30/50.0	35.10/50.0
Hg	mg/kg	<0.1/0.8	<0.1/0.8
Mo	mg/kg	1.13/10.0	1.10/10.0

Analysed Component	Unit of Measure	Sample 1 Result / Limit Value	Sample 2 Result / Limit Value
Co	mg/kg	11.52/30.0	11.52/30.0
As	mg/kg	1.23/10.0	1.23/10.0