


Date:04/11/30		Material Specification for External Nozzle		 IRAN ALLOY STEEL CO.																															
Rev.: 00																																			
ID code : 7005030005		Area : Ladle		Storage site : PU17																															
General properties																																			
Basic Components: Tabular Alumina - Spinel				Bonding System: Ceramic																															
Classification: Precast Shape (Low Cement Castable)																																			
<u>Chemical composition (wt. %) :</u>  <table> <tr> <td>Al<sub>2</sub>O<sub>3</sub></td> <td>90-94</td> </tr> <tr> <td>SiO<sub>2</sub></td> <td>0.2-0.5</td> </tr> <tr> <td>Mgo</td> <td>5-7</td> </tr> <tr> <td>Cao</td> <td>2-2.3</td> </tr> </table>			Al <sub>2</sub> O <sub>3</sub>	90-94	SiO <sub>2</sub>	0.2-0.5	Mgo	5-7	Cao	2-2.3	<u>Fig.</u>  																								
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<u>Sieve analysis /Dimension:</u> <u>Physical properties :</u> <table> <tr> <td>Bulk Density</td> <td>2.8-3.0</td> <td>kg/m<sup>3</sup></td> </tr> <tr> <td>Appearance Porosity</td> <td>14-16</td> <td>%</td> </tr> </table> <u>Mechanical/Thermal properties:</u> <table> <tr> <td>Permanent Linear Shrinkage at 1600 ° C</td> <td>(-0.26)</td> <td>%</td> </tr> <tr> <td>Cold Crushing Strength</td> <td>Min 500</td> <td>kg/cm<sup>2</sup></td> </tr> <tr> <td>Refractoriness Under Load</td> <td></td> <td>° C</td> </tr> <tr> <td>Hot Modulus of Rupture</td> <td></td> <td>kg/cm<sup>2</sup></td> </tr> <tr> <td>Thermal Conductivity</td> <td></td> <td>W/m .° k</td> </tr> <tr> <td>Thermal Expansion</td> <td></td> <td>%</td> </tr> <tr> <td>Thermal Shock Resistance</td> <td></td> <td>cycle</td> </tr> <tr> <td>Max Service Point</td> <td>1750</td> <td>° C</td> </tr> </table>						Bulk Density	2.8-3.0	kg/m <sup>3</sup>	Appearance Porosity	14-16	%	Permanent Linear Shrinkage at 1600 ° C	(-0.26)	%	Cold Crushing Strength	Min 500	kg/cm <sup>2</sup>	Refractoriness Under Load		° C	Hot Modulus of Rupture		kg/cm <sup>2</sup>	Thermal Conductivity		W/m .° k	Thermal Expansion		%	Thermal Shock Resistance		cycle	Max Service Point	1750	° C
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<u>Remark:</u> <u>Packing: Pallet/in the Box</u>  Shelf life: <input checked="" type="checkbox"/> 1 Year      NA <input type="checkbox"/> <u>Life time: 12month</u> <u>Quality Check:</u> Certificate from supplier and laboratory test																																			
Edited: Ehsan Zarezadeh		Checked: Eslampour Mahdi		Approved: Saffarzadeh Vahid																															

کد فرم : F1242000