



NEW PRODUCTS

FOR THE

COPPER INDUSTRY



TRL CRAL 10P SL

Hydration resistant, cost effective Alumina-Chrome bricks for the use in the safety lining of Copper Furnaces

The intensive use of copper cooling elements is creating long term low temperature areas under their base in different types of furnaces. This increases the risk of hydration and volume increase of basic bricks in case they are used in this areas.

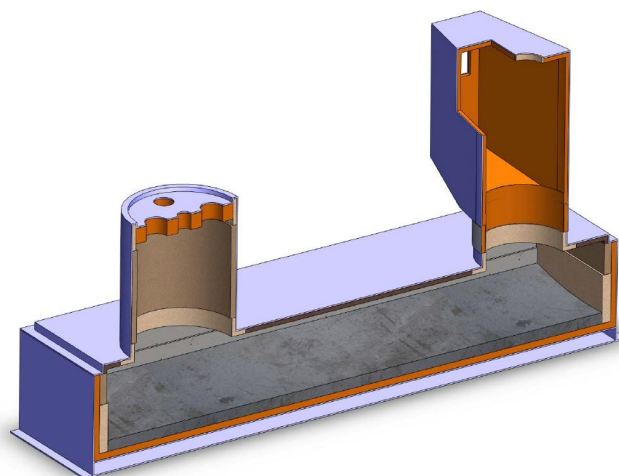
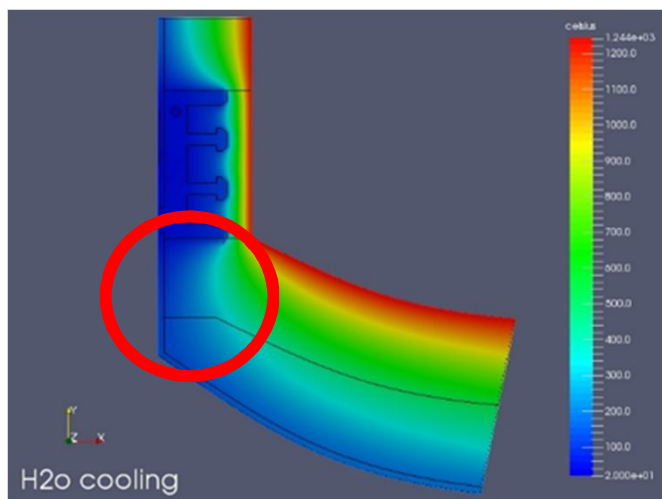
Therefore TRL Krosaki designed an economic alumina-chromic brick especially for back-up linings that are in contact with copper cooling elements in order to avoid the risk of hydration.

Special Features:

- Excellent hydration resistance
- Good thermal shock resistance
- High volume stability

Recommendation for use:

TSL Furnace	- Safety Skew back and bottom safety lining
Flash Smelting Furnace	- Safety Skew back area below cooling elements
Slag Cleaning Furnace	- Safety Skew back area below cooling elements



TECH/FRM/03



(Formerly Tata Refractories Limited)
Product Definition Sheet

TRL CRAL 10P (SL)
 (F310073)

Revision No. : 00

Date: 15.07.2017

Product Name	TRL CRAL 10P (SL)
Product Description	Fired Alumina – Chrome Brick
Application	Back up brick application for Copper, Nickel, Lead, Zinc, Ferro Alloy, Incinerators, Glass tank furnace Regenerator Checkers etc.

CONTROL PROPERTIES

Chemical Analysis (Calcined Basis)	Unit By wt	Value		Test Method
		Typical	Limit	
Al ₂ O ₃	%	60.30	≥ 60.0	By XRF
Fe ₂ O ₃	%	4.93	≤ 6.0	
CaO+MgO	%	3.19	≤ 3.75	
SiO ₂	%	18.92	≤ 20.0	
Cr ₂ O ₃	%	10.45	≥ 9.0	
Physical Properties	Unit			
Bulk Density	Kg/m ³	2780	≥ 2750	ISO 5017 : 1998
Apparent porosity	Vol. %	21.8	≤ 23.0	ISO 5017 : 1998
CCS	N/mm ²	60.0	≥ 55	ISO 10059-2 : 2003

SUPPLEMENTARY PROPERTIES

PLC, 1500°C/2hrs, Min/Max	%	+ 0.64	+ 0.75	ISO 2478 : 1987 (Volumetric Method)
RUL(t _a)	°C	1360	≥ 1350	IS 1528 (Part 2) : 2003
MOR at 1400°C	N/mm ²	8.5	≥ 8.0	ISO 5013 : 1985
Thermal Shock resistance	Cycles	+15	≥ 15	DIN 51068
PCE	OC	+33	≥ 33	ISO 528 : 1983

Control Dimension	AQL 6.5% for critical dimensions (ISO 5022 Table – 3)			
Sampling/Acceptance	ISO 5022, Table 4 or Table 10(AQL4%)			
Shelf Life	36 months from the date of manufacture when stored under shed & free from moisture.			Signature:
Prepared and Issued by	Technology Manager			
Contact Address	TRL Krosaki Refractories Limited P.O – Belpahar, Dist- Jharsuguda Odisha, Pin-768218 ,India Phone: 91-6645-250286 Information department: Technology Division			

Note: 1) The typical technical data shown are based on average results on production samples and are subjected to normal variation on individual tests. Hence, it cannot be taken as specification.

2) The above specification is valid for solid pressed standard items only.