

CRONA

High Chrome Iron

Chemical composition

	C	Si	Mn	Mo	Cr	Ni	W, V, Nb
CRONA	2.3 3.0	0.6 1.0	0.8 1.2	1.0 1.5	15.0 20.0	1.0 1.5	0.2 0.6
ICRA	3.0 4.0	0.5 1.5	0.5 1.6	0.2 0.8	1.0 2.0	3.0 4.0	<0.5
MICRA	3.0 4.0	0.5 1.5	0.5 1.6	0.2 0.8	1.0 2.0	3.0 4.0	1-4
CICRA	2.2 2.9	0.7 0.8	1.0 1.2	1.0 1.5	15.0 20.0	1.0 1.5	1-2
URMA	1.0 2.0	0.7 0.8	0.5 1.5	0.2 0.8	10.0 14.0	0.5 1.5	0.2 0.6

Properties

Hardness Range	Le	700-730
Tensile strength	(MPa)	650
Thermal conductivity	(W/m x K)	19
Thermal exp. coeff. (20-100C)	(1/Kx10-6)	13,5
Young's modulus	(GPa)	220
Poisson's ratio	-	0,31
Density	(kg/m ³)	7600
Specific heat	(J/kg x K)	450

Comparative properties

	Wear resistance	Fire crack resistance	Toughness	Product surface
CRONA	—	—	—	—
ICRA	-	—	—	—
MICRA	—	—	—	—
CICRA	—	—	—	—
URMA	—	—	—	—

Description

Double poured high chrome iron produced by the vertical spin casting process.

The microstructure consists of a tempered bainitic/martensitic matrix with Cr₇C₃-carbides.

The roll is heat treated at elevated temperatures to obtain optimum material properties, favourable stress levels and homogeneous hardness.

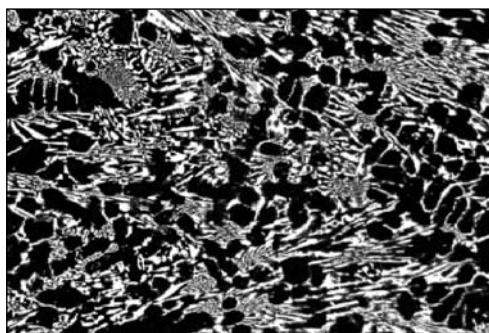
CORE MATERIAL

High strength flake iron (HS) or Nodular iron (SG).

(Properties displayed in a separate product data sheet.)

Applications

Work rolls for single or double stand plate mills.



Microstructure CRONA

Features & Benefits

- Very good wear resistance in combination with good operation safety.
- Very good fire crack resistance and consistent oxidation properties at elevated temperatures.
- Constant material properties throughout the usable shell.