

CRONA

High Chrome Iron

Chemical composition

	C	Si	Mn	Mo	Cr	Ni	W, V, Nb
CRONA	2.0 3.0	0.6 1.0	0.8 1.2	1.0 1.5	15.0 20.0	1.0 1.5	<0.5
CICRA	2.0 3.0	0.7 0.8	1.0 1.2	1.0 1.5	15.0 20.0	1.0 1.5	1-2
ICRA	3.0 4.0	0.5 1.5	0.5 1.6	0.2 0.8	1.5 2.5	4.0 5.0	<0.5
MICRA	3.0 4.0	0.5 1.5	0.5 1.6	0.2 0.8	1.5 2.5	4.0 5.0	1-4
SPECRA F	1.0 2.0	0.5 1.0	0.5 1.5	2.0 5.0	3.0 7.0	0.5 1.5	2-8

Properties

Hardness Range	Le	710-740 730-770 765-795
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	Oxidation behaviour	Product surface
CRONA	—	—	—	—
CICRA	—	—	—	—
ICRA	—	—	—	—
MICRA	—	—	—	—
SPECRA F	—	—	—	—

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.

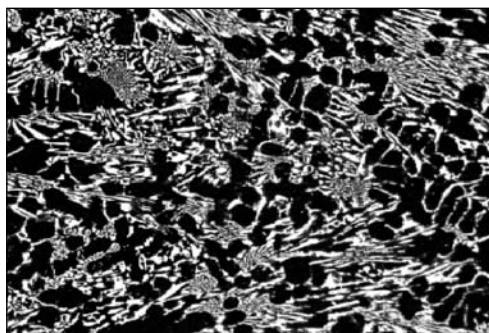
CORE MATERIAL

Nodular iron (SG)

(Properties displayed in a separate product data sheet.)

Applications

Work rolls for the early finishing stands F1-3(4) of conventional HSM.



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.