

# CRONA

High Chrome Iron

## Chemical composition

	C	Si	Mn	Mo	Cr	Ni	W, V, Nb
<b>CRONA</b>	<b>2.3</b> 3.0	<b>0.6</b> 1.0	<b>0.8</b> 1.2	<b>1.0</b> 1.5	<b>15.0</b> 20.0	<b>1.0</b> 1.5	<b>0.2</b> 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	Ld (ShC)	710-765 (65 - 75)
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 <sup>3</sup> )	7600
Specific heat	(J/kg x K)	450

## Comparative properties

	Wear resistance	Fire crack resistance	Toughness	Product surface
<b>CRONA</b>	—	—	—	—
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 Cr<sub>7</sub>C<sub>3</sub>-carbides.

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

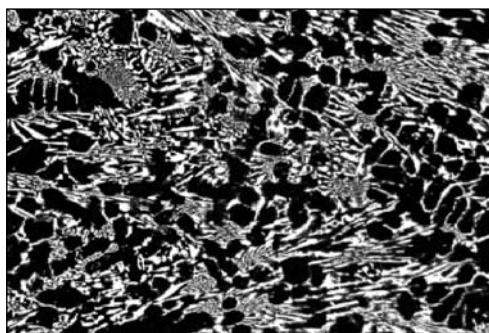
### CORE MATERIAL

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.