

MICRA

*Enhanced Indefinite Chill
(Åkers National Roll – ICON)*

Chemical composition

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

Properties

Hardness	Ld (ShC)	765-815 (75-85)
Tensile strength	(MPa)	375
Thermal conductivity	(W/m x K)	20
Thermal exp. coeff. (20-100C)	(1/Kx10-6)	12
Young's modulus	(GPa)	185
Poisson's ratio	-	0,31
Density	(kg/m ³)	7500
Specific heat	(J/kg x K)	500

Comparative properties

	Wear resistance	Fire crack resistance	Oxidation behaviour	Product surface
MICRA	—	—	—	—
ICRA	—	—	—	—
CRONA	—	—	—	—
CICRA	—	—	—	—
SPECRA F	—	—	—	—

Description

Double poured indefinite chill iron with carbide additions produced by the vertical spin casting process.

The microstructure consists of a bainitic/martensitic matrix with Fe₃C-carbides, free graphite flakes and homogeneously distributed MC-carbides.

The roll is heat treated at low temperatures to obtain favourable stress levels and the required hardness range.

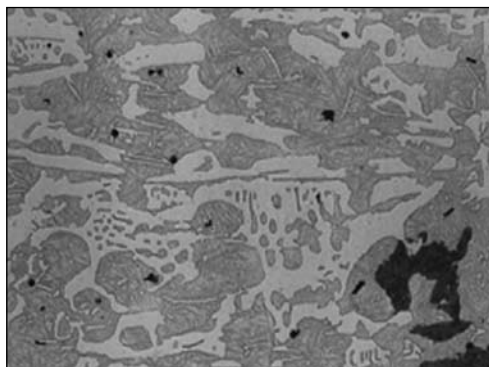
CORE MATERIAL

Standard flake iron (FG), high strength flake iron (HS) or nodular iron (SG).

(Properties displayed in a separate product data sheet.)

Applications

Work rolls for the late finishing stands F4-6(7) of conventional HSM or Steckel mill finishing stands.



Microstructure MICRA.

Features & Benefits

- Very good wear resistance in combination with good operation safety.
- The material properties provide good resistance against thermal and mechanical impacts due to rolling incidents.
- The characteristic hardness drop of Indefinite Chill rolls is minimized by the manufacturing process.