ROLL MATERIAL DATA SHEET

Nodular Cast Iron (Acicular)

GRADE

SGA

01 FIELD OF APPLICATION

Mill Type	Position
Bar and Rebar Mills	Intermediate and Finishing Stands
Light Section Mills	Intermediate and Finishing Stands

02 MECHANICAL PROPERTIES

HARDNESS RANGE	TENSILE STRENGTH	BENDING STRENGTH	YOUNG'S MODULUS
60-75 ShC	**350-450** MPa	**600-900** MPa	approx. **170,000** MPa

The microstructure of these rolls consists of a bainitic matrix containing carbides and nodular or compact graphite. Owing to the bainitic matrix and the relatively high volume fraction of carbides, these rolls exhibit good wear resistance. At the same time, presence of graphite improves resistance to thermal shocks. Moreover, addition of alloying elements, inducing MC-carbides such as Nb and V, leads to the development of enhanced acicular grades with higher wear resistance.

These rolls are mainly produced through centrifugal casting; however, static casting can also be employed when producing grades with lower hardness.

PRODUCT HIGHLIGHTS

- Good Wear Resistance
- Good Fire Cracking Resistance

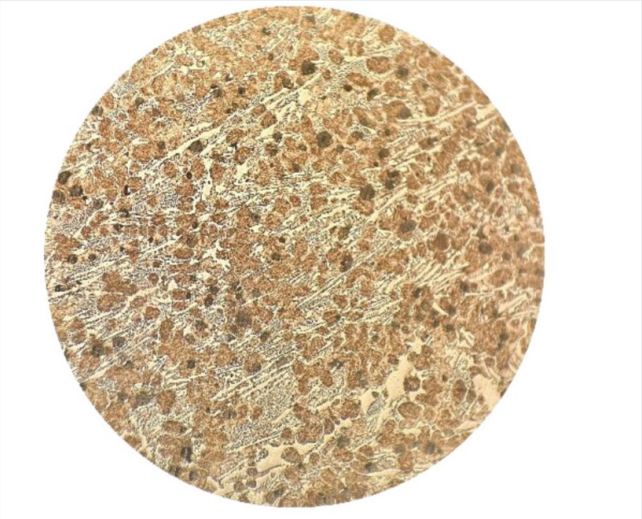


Roll Nova İzmir Demir Çelik San. Tic. A.Ş.
Maltepe SB Mah. Gelincik Sk. No: 9 İç Kapı No: 1, Menemen / İzmir, Türkiye
sales@rollnova.com | www.rollnova.com

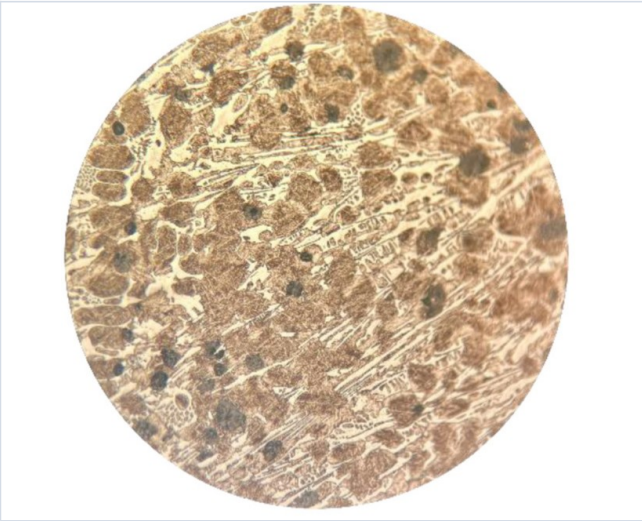
03 CHEMICAL COMPOSITION

wt. %	C	Mn	Si	P	S	Ni	Cr	Mo	Nb + V
Min	3.10	0.30	1.20	0.00	0.00	2.50	0.30	0.30	0.00
Max	3.60	1.00	2.20	0.05	0.05	3.70	1.20	1.00	1.50

04 MICROSTRUCTURE



■ *100 X – etched*



■ *200 X – etched*

05 HARDNESS GRAPH (SHELL – INTERFACE – CORE)

