ROLL MATERIAL DATA SHEET

Nodular Cast Iron (Pearlitic Molybdenum)

GRADE

SGP-Mo

01 FIELD OF APPLICATION

Mill Type	Position
Bar and Rebar Mills	Roughing Stands
Light Section Mills	Roughing Stands
Heavy and Medium Section Mills	Roughing and Intermediate Stands

02 MECHANICAL PROPERTIES

HARDNESS RANGE	TENSILE STRENGTH	BENDING STRENGTH	YOUNG'S MODULUS
45-60 ShC	**400-500** MPa	**700-1000** MPa	approx. **170,000** MPa

The microstructure of this material consists of a pearlitic matrix along with carbides and nodular graphite. Bull's eye ferrite is also observed in grades with lower hardness. The presence of nodular graphite in the microstructure enhances fire crack resistance. Compared to conventional pearlitic rolls, these rolls exhibit higher strength, making them more suitable for stands operating under higher rolling force. Pearlitic molybdenum rolls, which are mainly produced by static casting, are well-suited for use in blooming and roughing stands.

PRODUCT HIGHLIGHTS

- Higher strength (compared to SGP)
- Good wear resistance
- Good fire cracking resistance



03 CHEMICAL COMPOSITION

wt. %	C	Mn	Si	P	S	Ni	Cr	Mo
Min	3.10	0.50	1.20	0.00	0.00	1.30	0.20	0.40
Max	3.60	1.00	2.00	0.05	0.05	2.30	0.80	1.00

04 MICROSTRUCTURE



■ *50 X – etched*

05 HARDNESS GRAPH

