ROLL MATERIAL DATA SHEET

Adamite Steel Base

GRADE

Adamite

01 FIELD OF APPLICATION

Mill Type	Position
Rail, Heavy and Medium Section Mills	Roughing and Intermediate Stands and Universal Rings
Small Section Mills	Roughing Stands
Bar and Rebar Mills	Roughing Stands

02 MECHANICAL PROPERTIES

HARDNESS RANGE	TENSILE STRENGTH	BENDING STRENGTH	YOUNG'S MODULUS
45-60 ShC	**500-650** MPa	**900-1300** MPa	approx. **200,000** MPa

Adamite steel based rolls and rings are classified as high-carbon steels, typically containing 1.4-2.2 wt. % carbon. Their microstructure consists of a pearlitic matrix with primary carbides formed during solidification. A homogeneous distribution of fine secondary carbides is also developed within the matrix as a result of normalization heat treatment. In addition to providing adequate wear resistance, the presence of a discontinuous carbide network contributes to high toughness, making these products particularly suitable for stands operating under high rolling forces. Adamite rolls are generally manufactured by static casting, whereas Adamite rings can be produced by both static and centrifugal casting methods.

PRODUCT HIGHLIGHTS

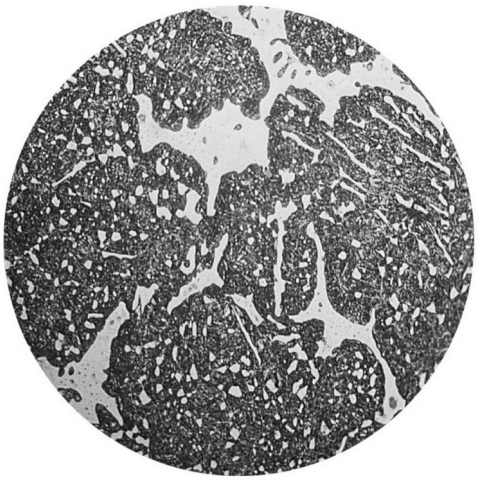
- Spall resistant
- High strength
- Low hardness drop through depth



03 CHEMICAL COMPOSITION

wt. %	C	Mn	Si	P	S	Ni	Cr	Mo
Min	1.40	0.40	0.30	0.00	0.00	0.50	0.70	0.20
Max	2.20	1.00	1.00	0.05	0.05	1.70	1.80	0.80

04 MICROSTRUCTURE



■ *400 X – etched*

05 HARDNESS GRAPH

