

Product Data HOT STRIP MILL WORK ROLLS

STELLA

Semi High Speed Steel

Chemical composition

	С	Si	Mn	Мо	Cr	Ni	
							Nb
STELLA	-	-	-	2.0 - 8.0	-	0.5 _ 1.5	1-6
URMA	0.8 1.8	0.5 _ 1.5	-	<1	10.0 		<1
SPECRA R	1.1 2.1	-	-	-	3.0 7.0	0.5 _ 1.5	2–10

Properties

Hardness Range	Le	740-775
Tensile strength	(MPa)	800
Thermal conductivity	(W/m x K)	18
Thermal exp. coeff. (20-100C)	(1/Kx10-6)	13
Young's modulus	(GPa)	235
Poisson's ratio	_	0,29
Density	(kg/m³)	7600
Specific heat	(J/kg x K)	475

Comparative properties

		Fire crack resistance		Friction
STELLA	—		—	—
URMA	_		—	
SPECRA R			_	

Description

Double poured semi high speed steel produced by the vertical spin casting process.

The Shell microstructure is primary and finely precipitated secondary carbides of MC, M_2C , and some M_7C_3 carbides in a matrix of tempered martensite. There is less than 3% retained austenite.

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

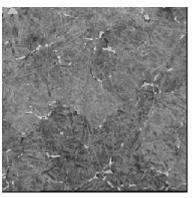
CORE MATERIAL

Nodular iron (SG).

(Properties displayed in a separate product data sheet.)

Applications

Work rolls for the roughing stands of conventional HSM and Steckel mills for all steel rolling.



Microstructure STELLA

Features & Benefits

- Constant material properties throughout the usable shell.
- Very good wear resistance in combination with good operation safety.
- Very good fire crack resistance and very good oxidation behaviour at high temperatures.

Union Electric Åkers www.uniones.com

These data are indicative and can be changed at any time without prior notice © 2018 Union Electric Steel Corporation