

# Cast Steel Roll Specifications

## GRADE: Hiten Special Steel Base

**Union Electric Åkers**  
Forged and Cast Rolls



### DESCRIPTION

Hiten is a more highly alloyed high performance steel base material which was developed to meet the requirements of modern continuous section mills where long production runs are necessary for efficient operation.

The carbon content can be high which ensures that the structure contains sufficient quantities of hard, wear resistant carbides and the rolls are normally heat treated to produce a matrix of very fine pearlite. The higher alloy content permits the production of higher hardness grades than are possible with normal steel base.

Hiten rolls can be substituted for conventional steel base to give an improvement in output and surface finish. Experience has shown that in many applications where breakage is a problem it can be used as a replacement for the softer grades of chilled iron rolls without significant loss of wear resistance. The rolls require good cooling for best results.

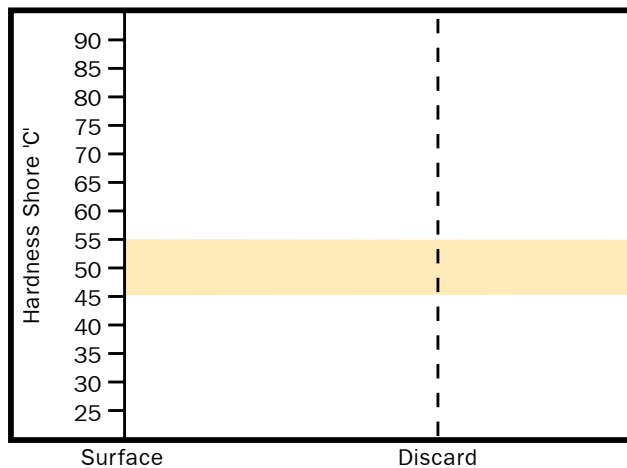
### APPLICATIONS

Product	Type of Mill	Position
Rails	2 High	Finishing
Beams	Universal	Horizontal Finishing
Medium Sections	2 and 3 High	Intermediate & Finishing
Wide Strip	4 High	Roughing

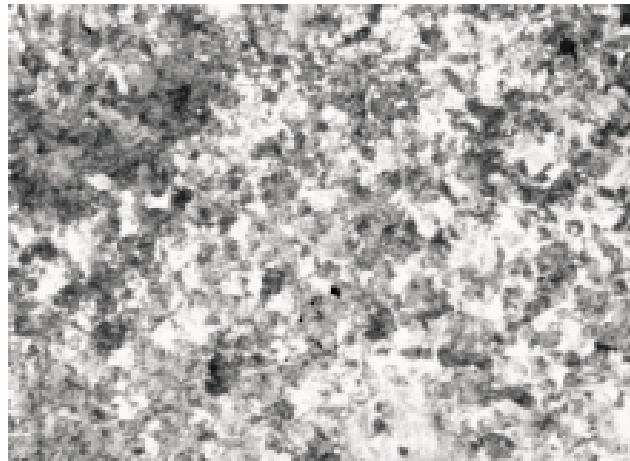
### TYPICAL MECH. PROPERTIES

Property	N/mm <sup>2</sup>	
	Low Carbon	High Carbon
Tensile Strength	490	395
Bending Strength	690	540

### DEPTH OF HARDNESS



### MICROSTRUCTURE X100



### AIM CHEMISTRY (WT%)

Code	Leeb E	Shore C	C	Si	Mn	Ni	Cr	Mo
HNS8	560/590	45/50	1.4/1.6	0.3/0.8	0.7/1.2	1.5/2.0	0.8/1.3	0.2/0.6
HNS10	590-620	50-55	1.8/2.0	0.3/0.8	0.7/1.2	1.5/2.0	0.8/1.3	0.2/0.6