

# Cast Steel Roll Specifications

## GRADE: SG Pearlitic Chill

**Union Electric Åkers**  
Forged and Cast Rolls



### DESCRIPTION

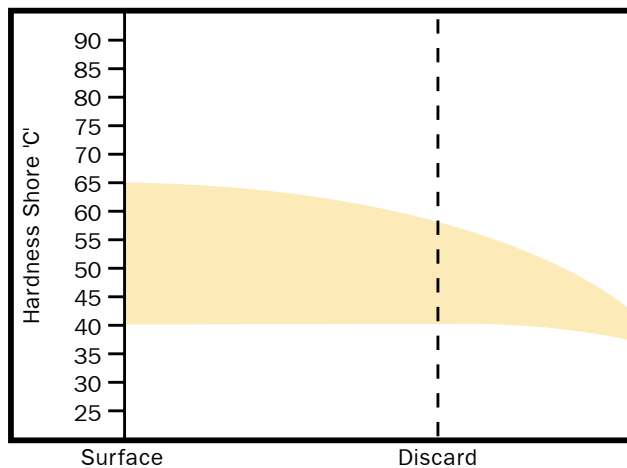
SG Pearlitic Chill rolls are basically an indefinite chill type of roll deriving good wear resistance from a combination of free carbide and hard matrix. However, the graphite is changed from flake to nodular in form. The internal notch effect of nodular graphite is relatively small and therefore SG rolls have a much higher strength and allow the use of an iron roll in applications which would represent too high a duty for a flake graphite quality.

Their indefinite chill characteristics give the rolls good hardness penetration so that they are suitable for small to medium sections and billets although they can also give good results when rolling flat products.

### APPLICATIONS

Product	Type of Mill	Position
Plate	2 High	Finishing
Plate	3 High	All Positions
Plate	4 High	Roughing and Finishing
Wide Strip	2 and 4 High	Roughing
Billet	2 and 3 High	Finishing
Billet	Continuous	Intermediate and Finishing
Beams	Universal	Vertical and Edgers
Medium Sections	2 and 3 High	Intermediate and Finishing

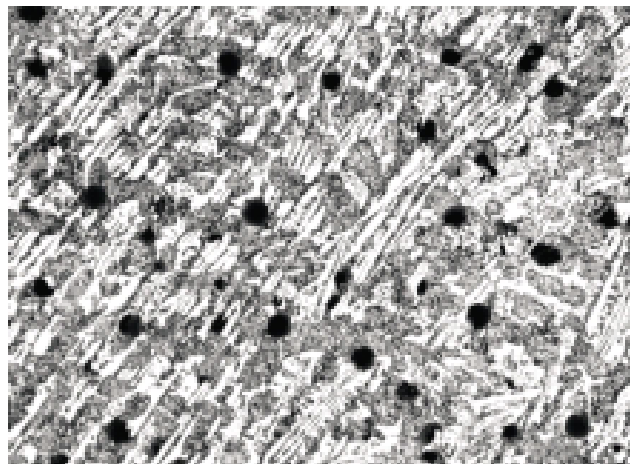
### DEPTH OF HARDNESS



### TYPICAL MECH. PROPERTIES

Property	N/mm <sup>2</sup>
Tensile Strength	400
Bending Strength	785

### MICROSTRUCTURE X100



### AIM CHEMISTRY (WT%)

Code	Leeb E	Shore C	C	Si	Mn	Ni	Cr	Mo
SG34A	525/555	40/45	2.8/3.4	1.5/2.5	0.5/0.9	1.2/1.9	0.1/0.5	0.5max
SG34G	620/650	55/60	3.2/3.5	1.0/1.6	0.5/0.9	2.0/4.0	0.1/0.5	0.2/1.0
SG34J	555/590	45/50	3.2/3.5	1.0/2.0	0.5/0.9	1.5/2.5	0.1/0.5	0.5max
SG34M	640/675	58/64	3.2/3.5	1.0/1.6	0.5/0.9	1.5/3.5	0.4/0.8	0.2/1.0