

# Cast Steel Roll Specifications

## GRADE: Special Alloy Cast Steel

**Union Electric Åkers**  
Forged and Cast Rolls



### DESCRIPTION

These are high alloy rolls which have been developed to meet the conditions in specific applications including structural and vertical edging rolls.

The rolls are alloyed with manganese, chromium and molybdenum and are given a sophisticated heat treatment to produce the combination of properties most appropriate for the mill duty.

The structure produced depends upon the hardness and the carbon content and varies from a fine pearlite to a very fine pearlite with some bainite. With the higher carbon rolls there will also be some free carbide present.

The high strength associated with good resistance to wear and firecracking make Special Alloy Cast Steel rolls very suitable for use in a range of structural mill work rolls and edging applications.

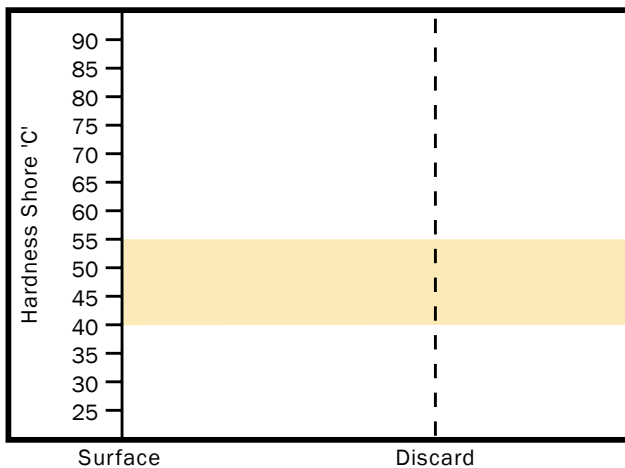
### APPLICATIONS

Product	Type of Mill	Position
Wide Strip	2, 3 and 4 High	Roughing
Wide Strip	4 High Continuous	Vertical Edgers
Medium Section	2 and 3 High	Roughing and Intermediate
Heavy Section	2 and 3 High	Roughing, Finishing and Intermediate

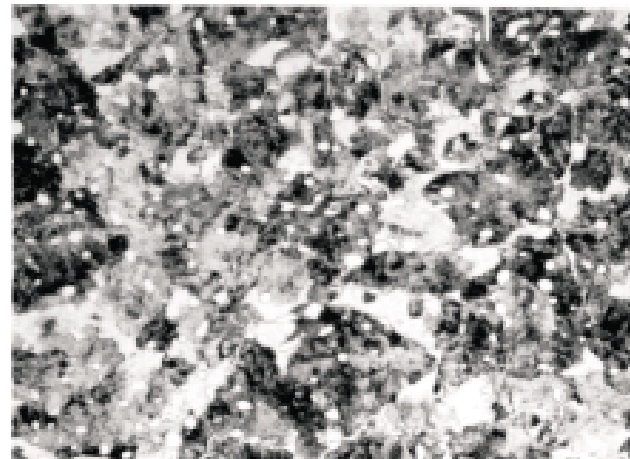
### TYPICAL MECH. PROPERTIES

Property	N/mm <sup>2</sup>	
	Low Carbon	High Carbon
Tensile Strength	900	650
Bending Strength	1300	1000

### DEPTH OF HARDNESS



### MICROSTRUCTURE X500



### AIM CHEMISTRY (WT%)

Code	Leeb E	Shore C	C	Si	Mn	Ni	Cr	Mo
AS4	530/565	40/46	0.7/0.8	0.3/0.8	0.8/1.4	0.5 max	1.3/1.9	0.2/0.6
AS5	535/575	42/48	0.8/1.0	0.3/0.8	0.8/1.4	0.5 max	1.3/1.9	0.2/0.6
AS6	545/585	43/49	1.0/1.2	0.3/0.8	0.8/1.4	0.5 max	1.3/1.9	0.2/0.6
AS7	555-595	44/51	1.2/1.4	0.3/0.8	0.8/1.4	0.5 max	1.3/1.9	0.2/0.6
AS8	570-610	47/53	1.4/1.6	0.3/0.8	0.8/1.4	0.5 max	1.3/1.9	0.2/0.6