

The Davy Roll Company Limited

Description

This roll quality was developed for applications where good surface finish as well as a high resistance to breakage are required.

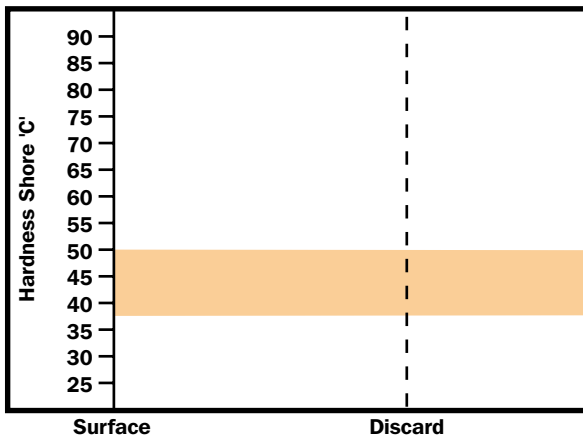
Tungsten is added to the rolls to refine the grain and to increase the hot strength of the steel. It also produces harder carbides which give the rolls improved wear properties.

The rolls are normally air hardened and tempered to produce a tough, hard structure which in the higher carbon grades consists of well dispersed free carbide in a matrix of very fine pearlite. The amount of carbide and thus the wear resistance increases with the carbon content.

Applications

Product	Type of Mill	Position
Sheet	2 and 3 High	Roughing
Billet	2 and 3 High	Roughing
Beam	Universal	Vertical
Tube	Pilger	
Medium Sections	Continuous	Intermediate and Finishing
Medium Sections	2 and 3 High	All Positions
Medium and Light Section	Cogging	

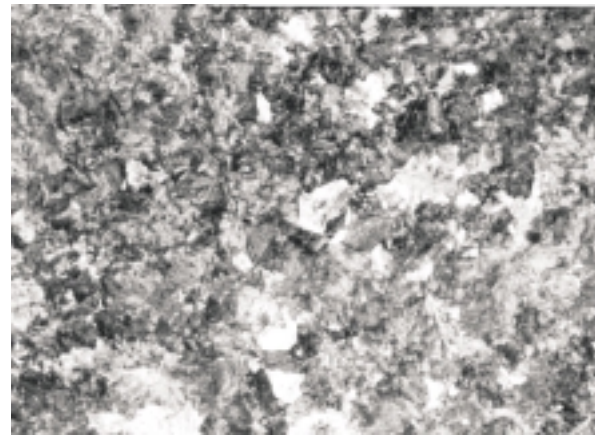
Typical Hardness Gradient



Typical Mechanical Properties

Property	N/mm ²	
	Low Carbon	High Carbon
Tensile Strength	785	640
Bending Strength	1080	885

Micrograph x100



Typical Analysis

Code	Leeb E	Shore C	C	Si	Mn	Ni	Cr	Mo	W
K3	510-570	37-47	0.6/0.7	0.3/0.8	0.5/1.0	0.5max	1.5/2.5	0.25max	0.4/1.2
K4	510-570	37-47	0.7/0.8	0.3/0.8	0.5/1.0	0.5max	1.5/2.5	0.25max	0.4/1.2
K6	540-590	42-50	1.0/1.2	0.3/0.8	0.5/1.0	0.5max	1.5/2.5	0.25max	0.4/1.2
K7	540-590	42-50	1.2/1.4	0.3/0.8	0.5/1.0	0.5max	1.5/2.5	0.25max	0.4/1.2

