

## **Duplex Cast Steel Back-Up Rolls**

Duplex cast steel back-up rolls are made with double poured process with the addition of Ni, Cr, Mo and other adopting special heat treatment the shell structure is tempered sorbite, bainite and a small amount of uniformly distributed fine carbide. The material of core and neck of these duplex cast steel back-up rolls are of high quality low carbon steel and low alloy steel. Therefore it possesses the advantage of high resistance to wear, sufficient resistance to spalling and of high toughness.

**化学成分** Chemical composition(%)

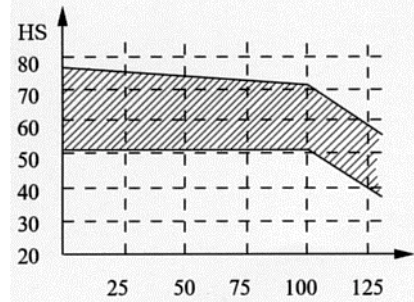
代号 Symbol	C	Si	Mn	Cr	Ni	Mo
DCS-1	0.6-1.0	0.3-0.8	1.4-2.4	1.4-2.0	0.8-1.2	0.2-0.6
DCS-2	0.6-1.0	0.3-0.8	1.4-2.4	1.6-2.2	0.8-1.2	0.2-0.6
DCS-3	0.6-1.0	0.3-0.8	1.4-2.4	1.8-2.4	0.8-1.2	0.2-0.6
DCS-4	0.3-0.8	0.3-0.8	0.4-0.8	2.5-3.5	0.6-1.2	0.4-1.0

**硬度** Hardness (HS)

代号 Symbol	DCS-1	DCS-2	DCS-3	DCS-4
辊身 Barrel	50-60	55-65	60-70	65-75
辊颈 Neck	25-45	25-45	25-45	25-45

**硬度分布曲线示例:**

Example of typical hardness profile:



距表面距离 (mm)  
Depth from surface

**机械性能** Mechanical properties

类别 Type	单位 Unit	辊身 Shell	辊颈 Neck
抗拉强度 Tensile Strength	MPa	1200-2000	Min 400
屈服强度 Yield Strength	MPa	1000-1400	Min 200
延伸率 Elongation	%	2-10	10-30
断面收缩率 Contraction	%	--	15-40
冲击韧性 Impact Value	kgf.m/cm <sup>2</sup>	Min 7	Min 24

**金相组织** Microstructure:

辊身工作层金相组织为:

回火索氏体

贝氏体 + 回火索氏体

The microstructure of working layer is:

Temper sorbite

Bainite +Temper sorbite

**用途** Application:

用于各种冷热带钢轧机的粗轧和精轧机架, 也可用于各种中厚板和宽厚板轧机及炉卷轧机。

Duplex cast steel back-up rolls are suitable for the roughing and finishing stands of all types of cold and hot strip mills. This kind of rolls is also applied in various types of plate and heavy plate mills and Steckel mills.

**承制范围** The capacity of making:

辊身直径(mm) Diameter of barrel	辊身长度(mm) Length of barrel	净重(t) Net weight
Φ 900- Φ 1800	1000-3200	80



基体 Matrix 500X