Product Data

TERMA5 D (ESR)

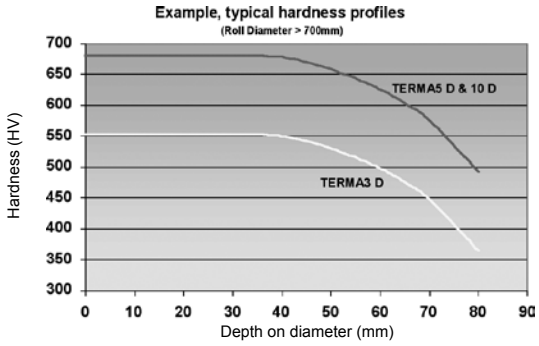
Forged Semi High Speed Steel

Chemical composition

	C	Mn	Si	Cr	Mo	Ni
TERMA5 D	**0.4 – 0.7**	**0.2 – 0.6**	**0.1 – 1.0**	**4.5 – 5.5**	**0.8 – 1.4**	**0.1 – 0.5**
TERMA3 D	0.5 – 0.7	0.2 – 0.7	0.1 – 0.4	2.7 – 3.9	0.8 – 1.5	0.1 – 0.3
TERMA10 D	0.65 – 0.95	0.4 – 0.8	0.4 – 1.0	8.0 – 11.0	0.5 – 1.5	0.1 – 1.0

Properties

Max hardness	HV	725
Yield strength (Core)	(MPa)	500-700
Young's modulus	(GPa)	210



Comparative properties

	Wear resistance	Grindability	Resistance to incidents
TERMA5 D	▬	▬	▬
TERMA3 D	▬	▬	▬
TERMA10 D	▬	▬	▬

Description

Forged semi high speed steel with 5% chromium manufactured according to Union Electric Åkers specification.

Martensitic structure tempered at high temperature (500°C) with homogenous distribution of fine carbides.

The steel is refined in an electric arc furnace (EAF) followed by ladle metallurgy and vacuum degassing. When required, the EAF ingot can be further refined by ESR (Electro Slag Remelting).

The ingot is forged with high forging ratio. Homogenizing and normalizing heat treatment are applied on the forged blank to obtain suitable mechanical properties in the core and necks.

The roll barrel is then induction hardened and tempered to obtain a hard and wear resistant surface layer, the depth of which can be varied according to requirements, by careful selection of the hardening parameters.

Applications

Work rolls for hot rolling of non ferrous metals in reversing rougher and tandem mills.

Features & Benefits

- Well tailored for aluminium hot rolling to operate in safe conditions thanks to high yield strength in the hardened layer.
- Improved roughness retention and resistance to indentation allow longer campaigns.

Union Electric Åkers
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