HILLFOOT
METALS | SUPPLY CHAIN | INNOVATION

MATERIAL DATASHEET

Title:

835M30

Material Grade: **835M30**
Material Condition(s): **Annealed / Quench and tempered**
Surface Finish: **As rolled / As forged**

Associated Standard: **BS970**

Description:

A 4.5% Nickel-Chromium-Molybdenum Through Hardening Steel which has the ability to harden in fairly large sections giving strengths of over 1550N/mm². Due to its high hardenability these strength are achievable by air from the hardening temperature. This steel is used for applications requiring high tensile strengths where more drastic quenches would produce distortion or cracking, especially in parts of intricate design

Typical applications: **High duty gears, pinions, aero engine connection rods, differential shafts and other transmission components, air frame forgings, heavy roller bearings, breech mechanisms and small arms**

1. STEELMAKING

	C	Si	Mn	S	P	Cr	Ni	Mo
Min	**0.26**	**0.10**	**0.45**			**1.10**	**3.90**	**0.20**
Max	**0.34**	**0.35**	**0.70**	**0.025**	**0.025**	**1.40**	**4.30**	**0.35**

2. TYPICAL MECHANICAL PROPERTIES

Test type		Tensile and hardness test (at room temperature)						Impact test (KV)
		Yield (Re)	0.2 % proof	UTS (Rm)	Elong (A)	R of A (Z)	Hardness	Room Temp
Unit		*N/mm2*	*N/mm2*	*N/mm2*	*%*	*%*	*HB*	J
Annealed	**Min**							
	Max						**277**	
Q + T to condition 'Z'	**Min**	**1235**		**1550**	**7**		**444**	**16**
	Max							