

Material Grade: **605M36**
 Material Condition(s): **Untreated / Annealed / Quench and tempered**
 Surface Finish: **As rolled / As forged / Bright drawn / Bright turned**

Associated Standard: **BS970**

Description:

A manganese-molybdenum through hardening steel used for parts requiring a tensile strength around 770 N/mm² in medium sections but capable of achieving up to 930 N/mm² in smaller sections. This material has good resistance to shock and excellent ductility. Freedom from temper embrittlement is attainable with this grade.

Typical applications: **Crankshafts, low endurance connecting rods, high tensile bolts and nuts, hub spindles, welded structures, lifting gear, spindles.**

1. STEELMAKING

	<u>C</u>	<u>Si</u>	<u>Mn</u>	<u>S</u>	<u>P</u>	<u>Cr*</u>	<u>Ni*</u>	<u>Mo</u>
Min	0.32	0.10	1.20					0.22
Max	0.40	0.35	1.60	0.040	0.035	0.30	0.40	0.32

(* denotes residual element)

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/mm ²		N/mm ²	%	%	HB	J
Annealed	Min						
	Max					235	
Q + T + Drawn, condition 'T'	Min	700	850	9		248	50
	Max		1000			302	
Q + T to condition 'R'	Min	525	700	17		201	50
	Max		850			255	
Q + T to condition 'S'	Min	585	755	15		223	50
	Max		925			277	
Q + T to condition 'T'	Min	680	850	13		248	50
	Max		1000			302	