

Material Grade: **150M19**
 Material Condition(s): **Untreated / Normalised / Drawn**
 Surface Finish: **As rolled / As forged / Bright drawn / Bright turned**

Associated Standard: **BS970**

Description:

A medium tensile, low carbon manganese steel which is readily weldable and possess good impact resistance. The material is capable of through hardening by quenching and tempering on limited sections but is more commonly supplied in the untreated or normalized condition. Machinability is similar to that of mild steel.

Typical applications: **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 | 0.15 | 0.10 | 1.30 | | | | | |
| Max | 0.23 | 0.40 | 1.70 | 0.05 | 0.05 | 0.30 | 0.40 | 0.15 |

(* 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 | <i>N/mm2</i> | <i>N/mm2</i> | <i>N/mm2</i> | % | % | <i>HB</i> | <i>J</i> |
| Normalized | Min | 325 | 550 | 18 | | 152 | 35 |
| | Max | | | | | 207 | |
| Drawn | Min | 600 | 750 | 7 | | | |
| | Max | | | | | | |
| Q + T to condition 'P' | Min | 340 | 550 | 18 | | 152 | 50 |
| | Max | | 700 | | | 207 | |