

STEEL



LIBERTY

BS S155 (300M)

A through-hardening,
vacuum-melted alloy
with outstanding strength

Properties combine toughness, fatigue strength and good ductility.
300M is used where fracture toughness and impact strength
are crucial

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Features and benefits

- Ultra-high strength (>1900MPa)
- Good fatigue resistance
- Excellent transverse properties

Typical applications

- Undercarriage Components
- Gears
- Shafts

Heat treatment

- Oil quench from 870°C
- Double temper at 300°C

Related specifications

- AMS 6257, 6417/9
- SAE 4340M
- BMS 7-26
- DMS 1935
- MIL – S - 8844
- MTL 1201 / LAT 1-9042

Chemical analysis

	C	Si	Mn	P	S	S&P	Cr	Mo	Ni	V
Min	0.39	1.50	0.60				0.70	0.30	1.65	0.05
Max	0.44	1.80	0.90	0.015	0.015	0.025	0.95	0.45	2.00	0.10

Mechanical properties of typical specifications

Mechanical properties are BS S155 (300M) limits

	Longitudinal	Transverse
0.2 % Proof Stress MPa	1550	1550
Tensile Strength MPa	1900 - 2100	1900 - 2100
Elongation %	8	5
Reduction of area %	30	20

After heat treatment hardness should be:

- HB: 534 - 601
- HRC: 52 - 55
- HV: 571 - 635

Supply condition and availability

- Supplied as normalised and tempered bright bar
- Stock sizes in range 18mm - 250mm diameter
- Other sizes available on request
- Forging bar

Technical support

We have a comprehensive technical support team available to advise on grade selection and product range to achieve the maximum benefit. Customer Technical support provide specialist advice and help with day-to-day problem solving.

Works based metallurgists and the full resources of our Steel Research and Development Laboratories are available to assist with longer-term developments.

For further information, enquiries or any technical guidance on our range of Aerospace products please contact our experts using the details below.

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