THAMES STOCKHOLDERS
A Division of SMITHS

AMS 5659 (UNS S15500)

PRECIPITATION HARDENED STAINLESS STEEL

Product Overview

AMS 5659 (UNS S15500) is a martensitic precipitation hardening stainless steel which contains 4% copper.

All the same advantages of AMS 5643 (UNS S17400) are present, as well as a single low-temperature treatment. AMS 5659 offers superior uniformity of properties with excellent traverse notch toughness and ductility. Compared with AMS 5643, the alloy displays superior forgeability and mechanical properties in large sections. Produced by the consumable electrode, vacuum arc re-melted route enhances the alloy's toughness and ductility. Our product offers excellent weldability by all commercial welding processes, while forming is also very good.

We stock AMS 5659 stainless steel in round bar.

Key Features

- Good forming characteristics
- Excellent traverse notch toughness
- Excellent weldability
- Heat treatment increases resistance to SCC

Applications

- Aircraft and missile construction
- Valve parts, fasteners, shafts and gears
- Nuclear reactor components
- Landing gear

Chemical Composition (weight, %)

	C	Cr	Mn	Si	P	S	Ni	Cu	Mo	Nb 5xC	Fe
Min.		14.00					3.50	2.50			
Max.	0.07	15.50	1.00	1.00	0.03	0.015	5.50	4.50	0.50	0.45	Bal

* Mechanical Properties

Proof Stress	1,000 min	MPa
Tensile Strength	1,069 min	MPa
Elongation A50	12 min	%
Reduction of Area	45 min	%

* Properties stated for H1025 condition (longitudinal)

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Thames Stockholders
Unit 5W. Woodall Road, Redburn Industrial Estate
Ponders End, Enfield, Middlesex EN3 4LQ

Tel: +44 (0)20 8805 3282

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SCAN ME

sales@thamesstock.com

www.thamesstock.com

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