

**BRASS-NAVAL 18KSI (124 MPa) HO2 TEMPER BAR, ROD, AND
MILL SHAPES, SUBSEA COMPATIBLE FOR SHEAR PIN**

Rev	Reason of Change	Date	Made By	Reviewed By	Approved By	Status
0	Initial release	24-07-2014	ALOK	DPR	KCR	Released
1	Reduction area & hardness value added in Table 2	2-12-2017	MN	AS	KKD	Released

Summary:

This specification covers corrosion resistant naval brass (UNS C46400). This specification shall apply to mill shapes, plates, and bars with diameters and thicknesses less than 3”.

1.0 Scope

This specification covers corrosion resistant naval brass (UNS C46400). This specification shall apply to mill shapes, plates, and bars with diameters and thicknesses less than 3".

2.0 Reference Specifications

Documents	Descriptions
ASTM B21	Standard specification for Naval Brass Rod, Bar and shapes
BS 2874	Specification for Copper and Copper Alloy Rods and Sections (other than forging stock)

3.0 Chemical Composition

The chemical composition shall conform to one of the following:

ASTM B21 Alloy 464	BS2874 CZ112
Copper.....59.00-62.0%	61.0-66%
Lead. Max.....0.20%	-
Iron, max.....0.10%	-
Tin.....0.50-1.0%	0.9-1.5%
Zinc.....Reminder	Reminder

4.0 Mechanical Properties

The material shall meet the mechanical properties listed in Table 2, irrespective of any industry standard followed for chemistry. Mechanical properties verification shall be obtained from a coupon or test block whose size shall be approximately the maximum thickness of the production material. The test coupon shall accompany the production material during heat treatment.

Table 2: Mechanical Requirements. (All are minimums unless otherwise specified)

Tensile Strength	50,000psi (344 MPa)
Yield Strength (0.2% offset)	18,000 psi (124 MPa)
Elongation in 2" or 4D	20%
Reduction of area	35%
Hardness ¹	60-80 HRB

¹The reduction of area and hardness values not required to be reported.

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	Section: SES 26 – 780		
Issue:	“A”	Rev No:	“1”
Eff. Date:	02-12-2017	Page:	3 of 3

5.0 Heat Treatment

Material shall be heat treated in a condition to meet the mechanical properties given in Table 2.

6.0 Weld Repair

Weld repair of this material is not permitted.

7.0 Markings

Material shall be identified with the heat number in a non-machined surface.

8.0 INSPECTION

Material shall be inspected and free of defects that would be detrimental to the intended service.