

# NAVINIC30

CuNi30Mn1Fe



lebronze alloys

## Applications properties:

Excellent resistance to seawater corrosion

- By pitting corrosion in stagnant water
- By erosion-corrosion and cavitation in circulation (4,5m/s max)
- By stress corrosion
- By fouling corrosion

Suitable for cold working (manufacturing of thin pipes and fittings)

Non magnetic

## Physical properties:

Specific gravity	8,9
Coefficient of expansion 20 to 300° C x 10 <sup>-6</sup>	16
Young's modulus N/mm <sup>2</sup>	130 000
Thermal conductivity W/(m K)	30
Resistivity micro ohm.cm	34
Electrical conductivity (%IACS)	5
Magnetic permeability	1,01

## Alloy properties:

Copper Nickel alloy

Transformation by extrusion, forging or die stamping

Transformation for pipes by cold drawing plus heat treatment to obtain an annealed condition

Suitable for hot working

Very suitable for cold working (bending, expending, drawing)

Suitable for welding (TIG, MIG, arc)

Suitable for hard and soft brazing

Machinability: 20 % free-cutting brass

## Applications:

### Seawater pipeline system:

- Shipbuilding (submarine pressurized circuit )
- Exchanger pipes

## Nominal composition:

Weight %

Ni	30
Fe	1
Mn	0,5
Cu	Balance

## International standards:

ASTM B151-B171-B466-B467: C71500, C71520

MIL T 16420 K, MIL C 15726, MIL C 24679

SAE J 463 CA 71500

BS 2871, BS 2874 CN 107

DGS 320, NES 780

DIN 17664 wn 2.0882

DIN 17671, DIN 17672

NFA 51-102, GAM MM11

INDRET IT-108

ISO 429

SIS 1456-82

JISH 3300 C7150

NES 780 70/30

EN 12163, EN 12420, EN 12165 EN 12449 CW354H

## Available forms, mechanical properties:

Size/condition	forms/process				Mechanical properties							Available forms													
	Rods		Tubes		Tensile strength		Yield strength 0,2% offset or 0,5% E.U.L. (*)		Elongation 5.65 %S	Hardness			Impact strength KCU (*) or IZOD (e)												
	Extruded or forged	Drawn	extruded	Drawn	Mpa ≥ ; * = Mpa ≤	ksi ≥ ; * = Mpa ≤	Mpa ≥	ksi ≥	% ≥	HB	HRB	HV5													
	Forgings or stamped parts												Semi-finished products					parts							
													Rounds	Squares	Flats	Hexagones	Section	Tubes	Plates	Discs	Rings	Forged blanks	stamped	machined	
					350	51	130	19	30	80	90														
Annealed condition					350	51	130	19	30	80	90		▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Cold worked condition					460	65	300	43	15	120															

All information is intended as a general guide to performance and application suitability.

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