

# NAVINIC10

CuNi10Fe1Mn

## Applications properties:

Excellent resistance to seawater corrosion

- By pitting corrosion in stagnant water
- By erosion-corrosion and cavitation in circulation (3,5m/s max)
- By stress corrosion
- By fouling corrosion

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

## Physical properties:

Specific gravity	8,9
Coefficient of expansion 20 to 300° C x 10 <sup>-6</sup>	17
Young's modulus N/mm <sup>2</sup>	130 000
Thermal conductivity W/(m K)	50
Resistivity micro ohm.cm	19
Electrical conductivity (%IACS)	9
Magnetic permeability	1,01 to 1,7

## Alloy properties:

Copper Nickel Iron 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 (cooling, fire-circuit)
- Offshore platform (fire-circuit)
- Desalination plant

## Nominal composition:

Weight %

Ni	10
Fe	1,6
Mn	0,7
Cu	Balance

