

SOTR FOR 70/30 CU-NI PIPES

70/30 CU-NI PIPES

EXTRACT OF NES 780 Part 3

August
1998

1) PHYSICAL CHARACTERISTICS AND MECHANICAL PROPERTIES

(a) Chemical Composition

The alloy to conform to the chemical composition as detailed below.

<u>Element</u>	<u>Per Cent by Weight</u>	
	<u>Not less Than</u>	<u>Not More than</u>
Nickel	30.0	32.0
Manganese	0.5	1.5
Iron	0.6	1.0
Copper	Balance	
Impurities :-		
Aluminium	-	0.03
Bismuth	-	0.002
Boron	-	0.02
Carbon	-	0.06
Lead	-	0.01
Phosphorus	-	0.01
Silicon	-	0.05
Sulphur	-	0.02
Total Impurities	-	0.30

(b) Mechanical Properties

- i) The density of this alloy at 20 °C is 8950 Kg/m³
- ii) At room temperature the mechanical properties obtained from test pieces from each batch are to be as detailed below.

<u>Class</u>	<u>Tensile Strength</u> <u>N/mm²</u>	<u>0.2% Proof Stress</u> <u>N/Mm²</u>	<u>Elongation on</u> <u>5.65√So</u> <u>Guage</u> <u>Length %</u>	<u>Hardness</u> <u>HV</u>	
	<u>Minimum</u>	<u>Minimum</u>	<u>Minimum</u>	<u>Minimum</u>	<u>Maximum</u>
2,3,4,6,7 & 9	400	140	35	-	110
5 & 8	480	400	16	150	-

70 / 30 Cu. Ni. Pipes To NES 780 PART III.
Dimensions Requirement

<u>SR. NO.</u>	<u>NOMINAL OUTSIDE DIA</u>	<u>THK</u>	<u>WT. KG./MTR (APPROX.)</u>	<u>QTY./SHIP MTRS.</u>	<u>REMARKS</u>
01	8.0	1.5	0.30		
02	12.0	2.5	0.70		
03	16.0	3.0	1.20		
04	20.0	3.5	1.70		
05	30.0	5.0	3.70		
06	38.0	6.5	6.10		

Notes :

- (a) All pipes shall be hydrostatically Tested to test Pressure of **420 Bar**.
- (b) All pipes are to be Eddy current tested as per BS 3889 Part 2B, in addition to all tests referred in the NES specification.
- (c) All pipes are to conform to the chemical composition as per NES 780 Part III.
- (d) The density of this material at 20 deg C is 8950 kg/cu.m.

