

PROPERTIES AND APPLICATIONS OF INOXYDA® NICKEL ALUMINIUM BRONZE

	ENVIRONMENT	SPECIFICATION	APPLICATION
RESISTANCE TO CORROSION	Seawater	INOXYDA 3P - 91 - 90 53H - 154 3P AMA 53 AMA	Pumps (bodies, wheels, shafts) - Brass fittings - Piping - Compressor - Salt water cooled boosters - Propeller hubs - Blades - Noses for propellers - Propeller shafts - Rudders - Bearings - Condensers - Boilers - Tube plates - Water or Oil Coolers - Water Boxes - Bolting - Desalination units - Salt work - installations - Parts for locks - Butterfly valve gates.
	Mineral & organic acids, especially sulfuric, acetic, citric, phosphoric, fluohydric acids	3P - 90 - 91 53H	Pumps - Anti-acid brass works - Piping - Bolting - Pickling hooks.
	Bases - Soda Potash - (except Ammonia)	3P - 90 - 91 53H	Pumps - Piping - Mixers - Crushers.
	Salts - Chlorides - Chlorates with free acids - Sulfates - Nitrates - Avoid iron, copper, mercury salts & hydrochlorites	3P - 90 - 91 53H	Pumps - Piping - Mixers - Crushers.
	Hydrocarbons	3P - 90 - 91 53H	Heat exchangers - Plates - Circulation boxes - Covers - Brass fittings - Piping - Ties.
	Fresh water	3P - 91 - 90 53H	Pumps - Brass fittings - Piping Heat exchangers.
	Demineralized water	3P - 91 - 90	Pumps - Brass fittings - Piping.
RESISTANCE TO WEAR AND TO FRICTION	Speeds up to about 7m/sec (on the screw) under heavy load with shocks	18 - 53 272R	Gear wheels - Worm wheel.
	Wear with mechanical resistance	53 - 18 - 72 - 154 172 S - 272R	Gibs - Guides - Toothed segments - Female threaded screws - Racks - Pressure screw nuts - Knuckle joints - Thrust discs - Bearings - Machine-tool parts - Packing nuts - Nuts for fibre removers for paper mills - Collector rings - Crane pivots - Spring supports.
	Very heavy load on alloyed steel	72M	Flanging dies - Punches - Forming rolls.
CAVITATION	Higher resistance than stainless steel	53 H	Pump wheels - Francis-Pelton-Kaplan turbines - Directional wheels - Propeller blades - Propellers.
THERMIC PROPERTIES	Thermic conductivity 38 W/(m.k) to 20° C	3P - 91 - 53H	Moulds for plastic equipment - Heat exchangers.
	Mechanical and plastic characteristics could be maintained to -192°C	3 Cryogenic - 91	Brass fittings - Pumps - Cold circuits - Compressors for N.L.G.
	Resistance to high temperature oxydation, resistance to combustion	3P - 53H - 154	Pure oxygen circuits - Brass fittings - Fire Shield - Compressors.
WELDABILITY	INOXYDA/low carbon steel INOXYDA/Copper INOXYDA/Copper-Nickel INOXYDA/brass	3P - 91 - 90 53H	Welded sheet joints - Cast part assemblies or mixed assemblies - Coolers - Boilers - Desalination units.
NON MAGNETIC PROPERTIES	Magnetic permeability from 1.002 to 1.1	3 - 91 - 3P AMA 53 AMA	Electronic or electrical equipment - Parts for mine detectors.