TECHNICAL DATA

TRIBALOY™ T-800 ALLOY

TRIBALOY™ COBALT-BASED ALLOYS consist of a hard, intermetallic (Laves) phase dispersed in a softer matrix of eutectic or solid solution. They exhibit outstanding resistance to wear and galling, high corrosion resistance and are particularly suitable where lubrication is a problem. Wear resistance of Tribaloy™ alloys is highly dependent on the volume percentage of Laves phase.

TRIBALOY™ T-800 was designed to resist high temperature wear and abrasion. It has exceptional oxidation and corrosion resistance due to its high Cr content. T-800 is harder and has better abrasive wear resistance than Tribaloy™ T-400. NOTE: Wear resistance of Tribaloy™ alloys is highly dependent on the volume percentage of Laves phase. Therefore, test results vary significantly with dilution and cooling rate and other thermal history. Should be considered for valve trim, mechanical seals and thrust rings.

CORROSION RESISTANCE

T-800 shows excellent corrosion resistance in Acetic Acid (concentration 50%, boiling) and in Phosphoric Acid (concentration 85%, 66°C). Also in Sulphuric Acid (concentration 5%, 66°C) excellent corrosion resistance has been observed.

NOMINAL CHEMICAL COMPOSITION (MASS%)

ALLOY	Co	Cr	Mo	C	Si	Others
T-800	Bal.	17,5	28,5	<0,1	3,5	Ni, Fe

PHYSICAL PROPERTIES

ALLOY	Hardness	Density	Melting Range
T-800	54 - 62 HRC	~ 8,6 g/cm^3	~ 1290 – 1350°C

NOMINAL HOT HARDNESS (HV resp. DPH) AS CAST

20°C	100°C	200°C	300°C	400°C	500°C	600°C	700°C
725	720	710	690	670	630	570	430

EXAMPLE FOR TENSILE PROPERTIES AT ROOM TEMPERATURE

PRODUCT FORM	Ultimate Tensile Strength Rm	Yield Stress Rp (0,2%)	Elongation A
Investment Casting, As cast	~ 710 MPa	N.A.	<< 1%

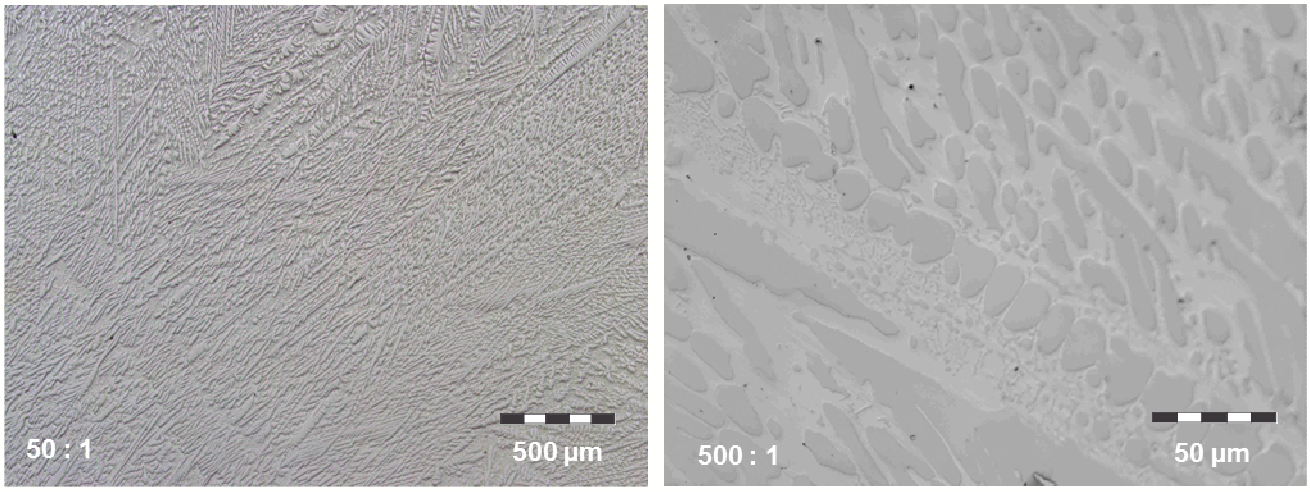
PRODUCT FORMS

Components			
Castings	Cladded / Hardfaced	PM / HIP parts*	ALM parts*

* On special request.

Consumables for Cladding / Hardfacing and Additive Layer Manufacturing (ALM)				
Rods	TIG-Welding		Oxy-Acetylene Welding	
Powder	PTA Cladding	Laser Cladding	HVOF Spraying	ALM

TYPICAL STRUCTURES



Casted T-800 Alloy (Resin Shell Casting)

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