

Technical data sheet

180614

**Cored welding wire
CAVITALLOY****CLASSIFICATION**

EN ISO 17633-A: T Z 18 10 10 CrCoMnN M M12 3
 EN 14700: T Z Fe9

DESCRIPTION

Metal cored, gas shielded wire for cavitation, corrosion and erosion resistant surfacing. CAVITALLOY deposit is a nitrogen strengthened austenitic stainless steel with superior cavitation resistance, comparable to that of Co-base alloys. The weld metal has a high strain hardening rate which favours the formation of a hard surface layer on exposure to cavitation. This works in combination with the softer substrate to absorb cavitation stresses very efficiently, drastically reducing damage rate.

APPLICATIONS

CAVITALLOY is used for the rebuilding of hydro-turbines when increased corrosion resistance and fatigue properties are required compared to martensitic stainless steels or austenitic stainless steels of the 300 series. Other applications include pumps, valves and ducts for various liquids in industry, agriculture and water distribution, and propellers.

Examples of materials to be surfaced:

EN Symbol	Material number	UNS designation
X4 CrNi 13 4 - X3 CrNi 13-4	1.4313	J91540
GX5 CrNi 13 4	1.4313	J91540
GX5 CrNiMo 13-4	1.4407	J91550
X6 Cr 13	1.4000	S40300
X6 CrAl 13	1.4002	S40500
X4 CrNiMo 16 5	1.4418	

TYPICAL ALL-WELD METAL ANALYSIS

C	Mn	Si	Cr	Co	Mo	N	S	P	Fe
0.20	9.50	1.30	19.0	10.5	0.25	0.3	0.010	0.020	Bal.

TYPICAL ALL-WELD METAL MECHANICAL PROPERTIES

Hardness, as welded: 240 HB
 Hardness, work-hardened: 50 HRC

CONDITIONS OF USE

Current type	Shielding gas
DC+ Pulsed current	ISO 14175
	M12 : 0.5 - 5 % CO ₂
	M11 : Ar + 0.5-5 % CO ₂ + 0.5 - 5 H ₂
	M20 : Ar + 5 - 15 % CO ₂

OPERATING CONDITIONS

Diameter [mm]	Amperage [A]		Tension [V]		Stick-out [mm]	
	Range	Optimum	Range	Optimum	Range	Optimum
1.6	120 - 350	250	17 - 33	28	10 - 20	15

Recovery: 98 %

WELDING POSITIONS

CAVITALLOY is primarily used in the flat and horizontal positions. However, welds in other positions are also possible using the short-circuiting or pulsed arc modes of transfer in automatic.

STANDARD DIAMETERS (mm)

ø1.6. Other diameters: please consult us

PACKAGING

Diameter	1.6 mm
Spool type	EN ISO 544 : BS300
Weight	15 kg

Other packaging: please consult us

Welding products and techniques evolve constantly. All descriptions, illustrations and properties given in this data sheet are subject to change without notice and can only be considered as suitable for general guidance. This document is intended to help the user make the correct choice of product. It is his responsibility to assess its suitability for his intended application.