CORODUR® TS 312

CLASSIFICATION:

ASME IIC SFA 5.22/ AWS A 5.22	:	E312T0-4 – E312T0-1
EN ISO 17633-A	:	T 29 9 R M 3 – T29 9 R C 3
EN ISO 17633-B	:	TS312-FB0
Equivalent Material number	:	1.4337
ASME IX Qualification	:	QW432 F-N°6 QW442 A-N° 8

GENERAL CHARACTERISTICS:

Rutile flux cored stainless steel wire for gas shielded arc welding with 29% chromium and 9% nickel. Attractive bead appearance, easy slag release, very good penetration, high productivity and excellent X-ray soundness. The maximum performances in the horizontal and downhand position are welded with classical economical Ar-CO_2 mixtures or CO_2.

APPLICATION:

Its high alloy content and high ferrite ratio allow CORODUR TS 312 to benefit from extreme tolerance to hot cracking and to dilution with a wide range of base materials. Preheat can often be avoided or minimised. The weld deposit workhardens and gives good wear and friction resistance.

Examples of alloys to be welded

Welding stainless steels of similar composition or ferritic stainless steels and joining of stainless steels to mild and low-alloyed steels. Buffer layers before hardsurfacing and maintenance on “hard-to-weld steels”. Welding of high carbon hardenable steels, of known or unknown composition and generally most of steels subject to cracking such as tool steels, manganese steels, spring steels and high-speed steels.

TYPICAL ALL WELD METAL ANALYSIS (%):

C	Si	Mn	Cr	Ni	Mo
0,10	0,80	1,30	29,0	8,60	0,40

Typical ferrite level : 40%

TYPICAL ALL-WELD METAL MECHANICAL PROPERTIES

R_m [MPa]	**$R_{p0.2}$ [Mpa]**	**A_5 [%]**	**KCV [J]**
860	650	25	+20 °C : 40

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SHIELDING GAS

M21 (Ar + 5 -25% CO_2) or C1 (CO_2) according to EN 439 / ISO 14175

OPERATING CONDITIONS

Diameter [mm]	**Current type**	**Current [A]**	**Voltage [V]**	**Stick-out [mm]**	**Gas flow [l/min.]**
1,2	DC (+)	100 - 270	23 - 33	12 - 25	12 – 20
1,6	DC (+)	150 - 400	23 - 37	12 - 25	12 – 20

WELDING POSITIONS

EN ISO 6947. PA, PB,

ASME IX: 1G, 1F, 2F

PACKAGING

FORMS OF DELIVERY:

Diameter / mm	Sales units
1,2	BS 300
1,6	BS 300