Select 78

Description:

Select 78 is a self-shielded, carbon steel, flux cored electrode. It is intended for the welding without a shielding gas of carbon and certain low alloy steels where excellent low temperature toughness is required. A fast freezing slag facilitates welding in all positions. It has a smooth globular transfer, excellent bead shape and easily removed slag. **Select 78** is designed for structural applications such as bridge fabrication, ship and barge construction, as well as other general fabrication.

Classification & Approvals:

- E71T-8-H8, E71T-8-JH8 per AWS A5.20, ASME SFA 5.20
- E71T8-A2-CS3-H8 per AWS A5.36, ASME SFA 5.36
- EN ISO 17632-B:2015 T 49 3 T8-1 No A-H15, T 55 3 T8-1 No A-H15
- T42 2 Y NO 2 H10 per EN ISO 17632-A
- DNV DNVGL-CP-0069 III YMS (H10), CWB CSA W48-18 E491T8-A3-CS3-H8 (E491T-8-H8), AWS D1.8

Applications:

- Select 78 is used in general fabrication and construction applications
- Used to weld most mild steel base metals such as ASTM A36, A285 and A516 as well as fine grained EN10025 parts 3 and 4 steel types S275, S355, S420 and S460

Advantages:

- Operates on straight polarity (DCEN) with no external shielding gas
- Fast freezing slag facilitates excellent weldability in all positions
- Exhibits a smooth globular transfer, minimal spatter and easily removed slag

Typical Mechanical Properties:

Ultimate Tensile Strength (MPa)	607
Yield Strength (MPa)	490
Percent Elongation	26
CVN (Joules) @ -7°C	73

Typical Deposit Composition (wt%):

C	Mn	Si	P	S	Al
0.18	1.0	0.14	0.004	0.005	0.32

Recommended Welding Parameters (DCEN):

Diameter	WFS (cm/min)	Amperage	Voltage	CTWD (mm)
1.6mm	305	165	17-18	16
	432	200	18-19	19
	559	235	20-21	25
	686	270	21-22	25
	889	310	23-24	25
1.9mm	318	185	18-19	16
	445	220	20-21	25
	508	245	21-23	25
	572	265	22-24	25
	635	275	22-24	25
2.0mm	152	140	16-17	16
	254	210	18-19	19
	381	255	21-22	25
	508	300	22-23	25
	635	330	23-24	25

*These parameters may be used in all positions. The ability to weld out of position at the higher current levels will depend on plate thickness and welder skill.

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