Coreweld 70

Coreweld 70 is a tubular wire containing ingredients primarily comprised of metal powder along with additional arc stabilizers and alloying elements. The net result is a high efficiency (90 to 98%) wire. Arc characteristics, weld metal transfer, spatter levels are improved, while silica islands are minimized with the use of Argon mixtures up to 92% Argon. Due to the high level of iron powder and low slag components, the only slag formed by this wire are small islands of silica. Coreweld 70 was designed for multipass welding in robotic applications where slag removal between passes is difficult. This metal cored product is intended for use on carbon steels having tensile strengths up to 70 ksi (485 MPa). Coreweld 70 wires from .045 in. (1.2 mm) up to 1/16 in. (1.6 mm) are capable of being welded out-of-position.

Specifications	
Classifications	AWS A5.36 : E70T15-M20A2-CS1-H4 AWS A5.36 : E70T15-M21A2-CS1-H4 AWS A5.18 : E70C-6M-H4
Approvals	CWB : CSA W48 E491C-6M-H4 DB
Industry	Automotive Mobile Equipment Industrial and General Fabrication Power Generation Bridge Construction Civil Construction Pipeline Ship/Barge Building Railcars

Approvals are based on factory location. Please contact ESAB for more information.

Typical Tensile Properties				
Condition	**Yield Strength**	**Tensile Strength**	**Elongation**	**Reduction in Area**
75% Ar - 25% CO2				
As Welded	460 MPa	550 MPa	28 %	67 %
92% Ar - 8% CO2				
As Welded	545 MPa	585 MPa	26 %	65 %

Typical Charpy V-Notch Properties		
Condition	**Testing Temperature**	**Impact Value**
75% Ar - 25% CO2		
As Welded	-18 °C	68 J
As Welded	-29 °C	54 J
92% Ar - 8% CO2		
As Welded	-29 °C	68 J
As Welded	-18 °C	81 J

Typical Weld Metal Analysis %				
C	**Mn**	**Si**	**S**	**P**
75% Ar - 25% CO2				
0.06	1.4	0.6	0.019	0.010
92% Ar - 8% CO2				
0.06	1.5	0.6	0.019	0.009

Deposition Data					
Diameter	**Current**	**Voltage**	**Wire Feed Speed**	**Efficiency (%)**	**Deposition Rate**
0.9 mm	200 A	27 V	1199 cm/min	92 %	3.0 kg/h
0.9 mm	250 A	29 V	1727 cm/min	92 %	4.3 kg/h
1.2 mm	250 A	28 V	838 cm/min	90 %	3.6 kg/h
1.2 mm	275 A	30 V	1092 cm/min	94 %	5.0 kg/h

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Deposition Data					
Diameter	**Current**	**Voltage**	**Wire Feed Speed**	**Efficiency (%)**	**Deposition Rate**
1.2 mm	300 A	32 V	1179 cm/min	94 %	5.3 kg/h
1.2 mm	350 A	32 V	1300 cm/min	96 %	5.8 kg/h
1.4 mm	275 A	29 V	665 cm/min	92 %	3.4 kg/h
1.4 mm	300 A	29 V	792 cm/min	93 %	4.4 kg/h
1.4 mm	325 A	30 V	833 cm/min	93 %	4.6 kg/h
1.6 mm	300 A	30 V	460 cm/min	89 %	3.9 kg/h
1.6 mm	350 A	30 V	612 cm/min	94 %	5.4 kg/h
1.6 mm	400 A	32 V	744 cm/min	94 %	6.6 kg/h
1.6 mm	450 A	34 V	846 cm/min	94 %	7.4 kg/h
2.4 mm	400 A	31 V	292 cm/min	95 %	5.2 kg/h
2.4 mm	450 A	31 V	350 cm/min	97 %	6.6 kg/h
2.4 mm	500 A	32 V	394 cm/min	97 %	7.5 kg/h
2.4 mm	550 A	32 V	500 cm/min	98 %	9.5 kg/h
2.0 mm	350 A	27 V	406 cm/min	94 %	5.3 kg/h
2.0 mm	400 A	28 V	470 cm/min	95 %	6.0 kg/h
2.0 mm	450 A	28 V	533 cm/min	97 %	7.2 kg/h
2.0 mm	500 A	29 V	711 cm/min	97 %	9.3 kg/h

Recommended Welding Parameters				
Current	**Wire Diameter**	**TTW Dist.**	**Voltage**	**Wire Feed Speed**
75% Ar - 25% CO2				
200-400 A	1.4 mm	9.5-19 mm	26-32 V	665.5-833 cm/min
300-500 A	1.6 mm	9.5-19 mm	26-34 V	460-846 cm/min
350-550 A	2.4 mm	19-31.75 mm	27-33 V	406-711 cm/min
130-260 A	0.9 mm	9.5-19 mm	23-29 V	813-1727 cm/min
400-580 A	2.0 mm	19-31.75 mm	28-34 V	292-500 cm/min
150-350 A	1.2 mm	9.5-19 mm	24-32 V	838-1453 cm/min