

OK Autrod 12.51 GMAW ER70S-6

Description

OK Autrod 12.51 is a copper-coated, Mn-Si-alloyed G3Si1/ER70S-6 solid wire for the GMAW of non-alloyed steels, as used in general construction, pressure vessel fabrication and shipbuilding. The wire has a carefully controlled wire chemistry and a unique surface technology providing superior weld-metal quality at high wire feed speeds and at high welding currents. The wire can be used with both Ar/CO₂ mixed gas and pure CO₂ shielding gas.

Welding current

DC(+)

Classifications

SFA/AWS A5.18	ER70S-6
EN 440	G3Si1

Wire composition

C	Si	Mn
0.1	0.9	1.5

Typical mech. properties all weld metal

Yield stress, MPa	470
Tensile strength, MPa	560
Elongation, %	26

Charpy V

Test temps, °C	Impact values, J
+20	130
-20	90
-30	70

Approvals

ABS	3SA, 3YSA	UDT	DIN 8559
BV	SA3YM	Ü	42.039/1
CL		VdTÜV	
DB	42.039.06		
DNV	III YMS		
DS	EN 440		
GL	3YS		
LR	3 3YS		
PRS	3YS		
RINA	SG 52 3		
RS	3YMS		
Sepros	UNA 485178		
SFS	EN 440		
SS	EN 440		

Welding parameters

Diameter, mm	Wire feed, m/min	Welding current, A	Arc voltage, V	Deposition rate kg weld metal/hour
0.6	5.5-13	30-100	15-20	0.7-1.7
0.8	3.2-13	60-200	18-24	0.8-3.0
0.9	3.0-12	70-250	18-26	0.9-3.6
1.0	2.7-15	80-300	18-32	1.0-5.6
1.2	2.5-15	120-380	18-34	1.3-8.0
1.4	2.3-12	150-420	22-36	1.6-8.7
1.6	2.3-12	225-550	28-38	2.1-11.4