

# SF-1A

AWS A5.20 E71T-1M H4 / AWS A5.36 E71T1-M21A2-CS1  
EN ISO 17632-A: T 42 2 ZMn P M21 1 H5  
EN ISO 9606-1: FM1



## General purpose flux cored wire for shipbuilding and structures with impact test req. at -20 °C.

### General description:

SF-1A is a seamless rutile flux cored wire for welding with Argon/CO<sub>2</sub> mixed shielding gas. Being seamless it provides welds with very low diffusible hydrogen content, typical 2.8ml/100g weld metal. The flux cored wire has excellent weldability in all positions and is extremely efficient in the root pass against ceramic backing. Good penetration in vertical down greatly reduces the risk of imperfections. It also gives excellent performance against porosity on primed steel plates when using automated welding

such as a fillet welding tractor. SF-1A has a stable welding arc with less spatter and perfect bead surface. The flux cored wire has a clean, copper coated surface. Together with exact diameter and roundness it provides a stable and even wire feeding. This reduces wear and tear of liners and contact tips. The wire is classified as a grade 3 (-20 °C).

### Welding positions:



### Welding current:

DC+

### Type of gas / flow:

Ar+18-25% CO<sub>2</sub>

18-25 l/min.

### Typical chemical composition of all-weld-metal:

C	Si	Mn	P	S	Cu				
0,05	0,41	1,36	0,010	0,008	0,26				

### Diffusible hydrogen content (ml/100g):

≤5 ml/100g (2,8 ml/100g typical).

### Typical mechanical properties of all-weld-metal:

Yield and Tensile Strengths			Charpy Impact Test	
Yield Mpa	Tensile Mpa	Elongation %	Charpy V (J) -20 °C	
530	590	28	95	

### Guidance - Ampere (DC+):

Wire diameter	1,2 mm	1,4 mm	1,6 mm
Ampere / Volt	180-300A / 22-32V	250-350A / 25-33V	300-400A / 25-35V

### Packaging information:

1,0mm x 5,0kg spool D200  
1,2mm x 5,0kg spool D200  
1,2mm x 12,5kg spool D300  
1,2mm x 250kg drum Ø51cm  
1,4mm x 12,5kg spool D300  
1,4mm x 250kg drum Ø51cm  
1,6mm x 12,5kg spool D300  
1,6mm x 250kg drum Ø51cm

### Approvals:

DNV-GL, LR, ABS, CWB, BV, PRS,  
RINA, CE

### Reference / date:

SF-1A, English, 05.07.2023.