



Elgacore DWA 51B

FCAW - Flux cored arc welding
Un-alloyed

Date: 2013-05-27
Revision: 14

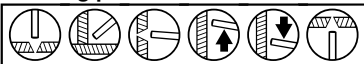
Description:

Elgacore DWA 51B is a basic flux cored wire with excellent operating characteristics and is suitable for steels with a tensile strength up to 600 N/mm². It produces weld metal with superior crack resistance under difficult conditions of high restraint and exhibits good low temperature fracture toughness. Weld deposit hydrogen levels are typically 3 ml/100 g. Elgacore DWA 51B welds with a stable arc and gives high deposition rates with low spatter levels in the flat and horizontal-vertical positions.

Applications:

Recommended for multipass welding of medium and thick section carbon-manganese steels used for shipbuilding, bridge construction and heavy machinery and plant.

Welding positions:



Welding current:

DC -/+

Deposition efficiency:

86%

Shielding gas:

M21, 80% Ar + 20% CO₂, 22-25 l/min

Stick-out:

15-25 mm

Hydrogen content / 100 g weld metal

≤ 5 ml

Chemical composition, wt.%

	C	Si	Mn	P	S	Cr	Ni
Min							
Typical	0.08	0.5	1.5	0.015	0.008		
Max	0.18	0.90	1.75	0.03	0.03	0.20	0.50

	Mo	Cu	V	Nb
Min				
Typical				
Max	0.20	0.30	0.08	0.05

Mechanical properties

	Specified	Typical	PWHT Typical
Yield strength, Re:	≥ 420 MPa	490 MPa	420 MPa
Tensile Strength, Rm:	500-640 MPa	600 MPa	530 MPa
Elongation, A5	≥ 22%	30%	28%
Impact energy, CV:	-20 °C • 47 J -40 °C • 27 J	-20 °C • 100 J -40 °C • 65 J	-20 °C • 100 J
			580 °C X 2h

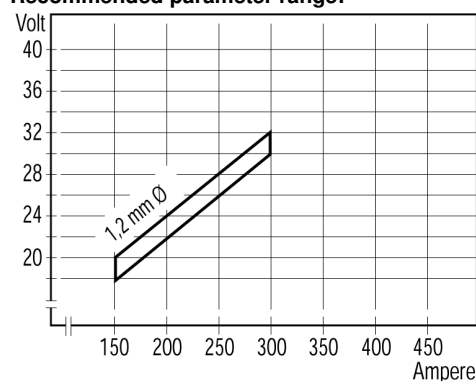
Classification:

EN 758 T 42 2 B M 1 H5
AWS A5.20 E 71T-5MJ
ISO 17632-A T 42 2 B M 1 H5

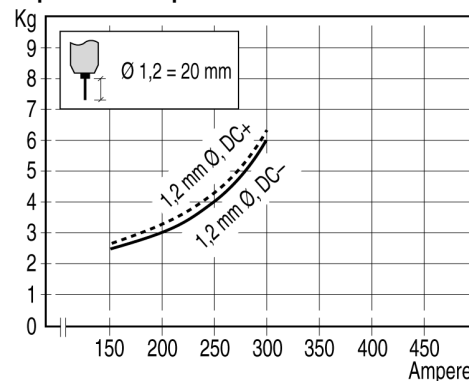
Approvals:

TÜV 07658.00
DB 42.042.07
CE

Recommended parameter range:



Deposition rate per hour:



Product data:

Diam.mm	Product code	Spool weight
1,2	95572012	15 kg D300

Note

Welding current: DC- is recommended.

Strip:

S ≤ 0.012%
P ≤ 0.015%
N ≤ 0.004%