CARBOWELD 686

International standards

Material No.	
(EN) ISO 14172	E NiCr21Mo16W4
AWS A5.11	E NiCrMo-14
DIN 8555	E 23-UM-250-CKNPTZ

Characteristics

CARBOWELD 686 is a lime coated, high NiCrMoW alloyed nickel based electrode for joining duplex, super-duplex and super austenitic stainless steels as well as similar nickel alloys
The resulting deposit is resistant to corrosion on a high level.
Overlays of the alloy are extraordinarily tough and harden with impact stress and high temperatures to about 400 HB without deforming the deposit.

Typical applications

Chemical, petrochemical, oil and gas, process, and marine industries.

Welding instructions

The electrode provides excellent operability for groove and fillet welding in the downhand position, all position welding is possible using the smaller diameters.

Mechanical properties of all-weld metal

(typical values**)**

Tensile strength R_m N/mm²	**Elongation $_{(4}d)$ %**
690	30

Weld metal analysis (typical, wt. %)

C	**Mn**	**Si**	**Cr**	**Mo**	**W**	**Fe**	**Ni**
0,02	< 1.0	< 0,25	19-23	15-17	3-4,4	< 5	Bal.

Current

= +

Welding positions

PA, PB, PC, PD, PE, PF

Rebaking

1 h, 200 °C +/ - 10 °C (if required)

Diameter/Length mm	**Inch**	**Amperage (A)**	
2,4 x 229	3/32 x 9	40-65	
3,2 x 356	1/8 x 14	65-95	
4,0 x 356	5/32 x 14	95-125	
4,8 x 356	3/16 x 14	125-165	

RRev. 000