AH 276

Nicrofer S 5716 hMo W
N10276 (UNS)
Material No.: 2.4886

Designations & standards

ISO 18274	S Ni 6276, NiCr15Mo16Fe6W4
AWS A5.14	ERNiCrMo-4, ABS
VdTÜV	Data sheet no. 05582, 05583

Typical main alloy properties, values in %

Ni	Cr	Mo	Fe	W	Mn	V	C
Bal.	16	16	6	3.5	0.5	0.2	< 0.01

Mechanical properties at ambient temperature

Yield strength $R_{p\,0.2}$ (MPa)	Tensile strength R_m (MPa)	Elongation A_5 (%)	ISO V-notch impact strength (J)
> 450	> 750	> 30	> 90

Applications

Filler material for the welding of VDM® AlloyC-276 to itself as well as for mixed welds with suitable high- and low-alloyed steels. Particularly suitable also for weld cladding on carbon steel due to its excellent corrosion properties.

Special notes for the welding process
A low heat input and fast heat removal must be ensured. The interpass temperature should not exceed 120°C. When using the gas-shielded metal-arc process, pulsed welding is the preferable method. No preheating or reheating is required to achieve the weld metal properties.

Example welding processes and parameters for homogeneous seam welding in Position 1G

Welding process as per ISO 4063	Shielding gas as per ISO 14175	Welding parameters		
		U (V)	I (A)	V (cm / min.)
m-TIG 141, 145	I1, R1 max. 3% H_2	10-11	90-120	10-15
Comment	*Root welding at 110 A*			
v-TIG 141, 145	I1, R1 max. 3% H_2	11-12	≈ 150	≈ 25
v-TIG HW 141 H, 145 H	I1, R1 max. 3% H_2	10-12	180-250	40-80
MSGp (MIG/MAG) 131, 135	I1, R1 max. 3% H_2	23-27	130-150	20-30
Comment	*from approx. 8 mm work piece thickness*			
Plasma (PAW) 15	I1, R1 max. 3% H_2	≈ 25	165-200	≈ 25
Comment	*up to approx. 8 mm work piece thickness*			