UTP AF 6808 Mo PW

gas shielded flux cored wire

Classifications

EN ISO 17633-A	AWS A5.22
T 22 9 3 N L P M21 1 / T 22 9 3 N L P C1 1	E2209T1-4 / E2209T1-1

Characteristics and field of use

UTP AF 6808 Mo PW is a strip alloyed, duplex steel rutile flux cored wire for position welding of duplex steels in the chemical apparatus, plant and container construction, for chemical tankers and in the offshore industry. The support provided by the fast-hardening slag allows out-of-position welding with high current magnitudes and high welding speeds. The advantage of the slag is its supporting effect on the weld pool. This permits, for example, welding with the stringer bead technique at a correspondingly high welding speed even in difficult pipe welding positions (5G, 6G). The fine droplet, low-spatter, very powerfully welding spray arc, the reliable fusion penetration, the self-releasing slag and the effectively wetting seam formation result in a high weld quality at the same time as short welding times. Additional advantages to its application result from the ease of handling, the low heat input due to the high welding speed, and the small amounts of cleaning and pickling required.

The structure of the weld metal consists of austenite and ferrite (FN 30-50). The pitting resistance equivalent is PRE_N ≥35 (%Cr+3.3%Mo+16%N). Testing the weld metal in accordance with ASTM G48 Method A resulted in a CPT (critical pitting temperature) of 25 °C. Also suited to joining different materials and to weld cladding. Usable between -46 °C and +250 °C.

Base materials

Same-type duplex steels and similar-alloy, ferritic-austenitic materials of increased strength, as well as for dissimilar joints between duplex steels and unalloyed or low-alloy, creep resistant and austenitic steels.

1.4462 X2CrNiMoN22-5-3, 1.4362 X2CrNiN23-4,
1.4462 X2CrNiMoN22-5-3 with 1.4583 X10CrNiMoNb18-12,
1.4462 X2CrNiMoN22-5-3 with P235GH/ P265GH, S255N, P295GH, S460N,
16Mo3, UNS S31803, S32205

Typical analysis in %

C	Si	Mn	Cr	Ni	Mo	N	PRE_N	Fn
≤0,03	0,8	0,9	22,7	9,0	3,2	0,13	≥35	30-50

Mechanical properties of the weld metal

Welded condition	Yield strength $R_{P0,2}$	Tensile strength R_m	Elongation A	Impact strength K_V			
	MPa	MPa	%	J [RT]	– 20 °C	– 40 °C	– 46 °C
untreated	600	800	27	80	65	55	45

shielding gas Ar + 18% CO_2

All information provided is based upon careful investigation and intensive research.
However, we do not assume any liability for correctness and information is subject to change without notice.

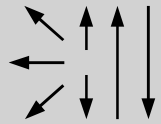
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Welding instruction

Welding with conventional MAG devices, slightly trailing torch position (angle of incidence about 80°) ; slight weaving of the torch is recommended in all positions; with 100% CO_2 the voltage must be 2 V higher. The gas quantity should be 15-18l/min.

Welding positions



Current type DC (+)
Shielding gases: M1 – M3, C1

Approvals

TÜV-D (07666.), ABS (E 22 09 T1-4(1)), CWB (E2209T1-1(4)), DNV (X (M21;C1)), GL (4462S (M21)), LR (X (M21,C1)), RINA (2209 S), SEPROZ, CE

Recommended welding parameters

Wire diameter [mm]	Amperage [A]	Voltage [V]
1,2	100-220	20-31

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