BÖHLER alform® 900-MC

Metal cored wire, high strength

Classifications

EN ISO 18276-A	EN ISO 18276-B	AWS A5.28	AWS A5.28M
T 89 2 ZMn2NiCrMo M M 1 H5	TZ942T15-1MA-GN4C1M2-UH5	E120C-GH4	E83C-GH4

Characteristics and typical fields of application

The alform® 900-MC metal cored wire is developed for shielded arc welding of thermo mechanically produced fine grained structural steels. A high sophisticated metallurgy combined with a very precise production technology results in high strength combined with very good toughness behaviour. This tubular wire possesses higher rigidity – as a result it offers exact ignition and excellent feeding characteristic. Due to the technology metal cored wire ensures low diffusible hydrogen content of < 3 ml / 100g. This metal cored wire is designed for welding under mixture gas (Ar + CO_2) in PA and PB-position. Good results were also achieved after using alternative gases CO_2, 8 – 10 % CO_2 + Ar and different welding positions (PG). This filler material is used for high strength steel constructions, crane and vehicle manufacturing, for ship building, offshore applications and also for penstocks.

Base materials

S890 and higher strength grades, thermo mechanically treated fine grain steels

S890Q, S890QL, XABO 90, QX 1002, alform® 900 x-treme (wire is especially balanced for this plate steel).

ASTM A 709 Gr. 100 Type B, E, F, H, Q, HPS 100W

Typical analysis of all weld metal (wt.-%)

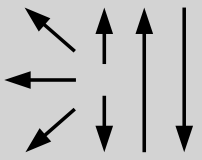
	C	Si	Mn	Cr	Ni	Mo
wt.-%	0.06	0.7	1.9	0.6	2.1	0.5

Mechanical properties of all-weld metal

Condition	Yield strength $R_{p0,2}$	Tensile strength R_m	Elongation A (L_0=5d_0)	Impact work ISO-V KV J	
	MPa	MPa	%	+20 °C	–40 °C
u	**950** (≥ 890)	**1010** (940 – 1180)	**16** (≥ 15)	**80**	≥ 47

u untreated, as welded – shielding gas Ar + 18 % CO_2

Operating data



Polarity	Shielding gases:	Redrying if necessary:	ø (mm)
DC (+)	Argon + 15 – 25 % CO_2	150 °C / 24h	1.2

Preheating and interpass temperature as required by the base metal.

Approvals

TÜV (12828.), DB (42.014.53), CE

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.