BÖHLER 3 NiMo 1-UP // BB 24

SAW wire/flux combination, low-alloyed, high strength

Classifications

SAW solid wire		SAW flux	
EN ISO 26304-A	**AWS A5.23**	**EN ISO 14174**	
S3Ni1Mo	EF3	SA FB 1 65 DC H5	
SAW wire/flux combination			
EN ISO 26304-A	**EN ISO 26304-B**	**AWS A5.23**	**AWS A5.23M**
S 55 4 FB S3Ni1Mo	SU 62A4 FB (SUN2M2) H5	F9A4-EF3-F3	F62A4-EF3-F3

Characteristics and typical fields of application

Wire / Flux combination for joint welding of high strength and low temperature steels.

The flux reacts metallurgical Mn-neutral.

The sub-arc wire/flux combination produces very good low temperature impact properties down to –40 °C. Excellent slag detachability, smooth beads, good wetting and low hydrogen contents (≤ 5 ml / 100 g) are further important features. The combination is ideally suited for multi-pass welding of thick plates.

For information regarding the sub-arc welding flux BÖHLER BB 24 see our detailed data sheet.

Base materials

Quenched and tempered fine-grained steels

S460N, S460M, S460NL, S460ML, S460Q-S555Q, S460QL-S550QL, S460QL1-S550QL1, P460N, P460NH, P460NL1, P460NL2, 20MnMoNi4-5, 15NiCuMoNb5-6-4, L415NB, L415MB-L555MB, L415QB-L555QB, alform 500 M, 550 M, aldur 500 Q, 500 QL, 500 QL1, aldur 550 Q, 550 QL, 550 QL1. ASTM A 572 Gr. 65; A 633 Gr. E; A 738 Gr. A; A 852; API 5 L X60, X65, X70, X80, X60Q, X65Q, X70Q, X80Q

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

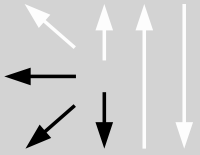
	C	Si	Mn	Ni	Mo
SAW wire wt-%	0.13	0.15	1.7	0.95	0.55
all-weld metal %	0.09	0.25	1.65	0.9	0.55

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	0 °C	-20 °C	– 40 °C
u	**600** (≥ 550)	**690** (640 – 820)	**22** (≥ 18)	**180**	**160**	**100**	**60** (≥ 47)

u untreated, as welded

Operating data



Polarity	Redrying of sub-arc flux:	ø (mm)
DC (+) / DC (–)	300 – 350 °C / 2 – 10 h	2.5 3.0 4.0

Preheating and interpass temperature as required by the base metal.

Approvals

Wire/flux combination: TÜV (07807.) Wire: CE, NAKS