

CEWELD FL 165

TYPE	Medium basic SAW flux for Single and multi-wire in layer/counter layer or multiple layers.			
APPLICATIONS	CEWELD® FL 165 for joint welding of low alloy structural steels, fine grained structural steels, boiler steels and especially all pipe and marine steels. Excellent weldability with single and multiple wires (up to 5 wires), in layer/counter-layer or multi-layer passes. Also in combination with cored wire and solid wire FMI (Flux Cored Micro Injection). Typical applications: Shipbuilding, spiral and longitudinal tube production of structural steels from L360 or X52 to L555 or X80. Unalloyed and low alloy structural steels; fine-grained structural steels up to 700 MPa yield strength while retaining material specific properties; boiler structural steels such as 16Mo3 and 13CrMo4-5.			
PROPERTIES	CEWELD® FL 165 is an agglomerated medium basic flux with a very low hydrogen content of less than 5 ml/100 g in the weld metal, an oxygen content of about 350 ppm and a low nitrogen content of less than 70 ppm. This, together with the constant metallurgical flux behaviour, is the main reason for the consistently good mechanical properties with high toughness values at low temperatures. Also suitable for sour gas requirements due to low hardness values (max. 240 HV10). Basicity according to Boniszewski: ~1.7 Flux density: 0.95 kg / dm3 (l) Grain size acc. to ISO 14174: 2 – 20 (Tyler 8 x 65) Current-carrying capacity: up to 1.000 A (DC or AC) using one wire			
CLASSIFICATION	EN ISO	14174: SA FB 1 65 AC H5		
SUITABLE FOR	S355, S420, S460, S690, P500, P550, X65, X70, X80, Weldox 700, Naxtra 70, Hardox 400, Dilimax, P91, P24 A, B, D, E, A 32-E 36 Typical wire combinations: CEWELD® S2 ISO 14171-A: S 38 4 FB S2 ASW 5.17_5.23: F48A4/P4-EM12(K) F7A4/P4-EM12(K) CEWELD® S2Si ISO 14171-A: S 38 4 FB S2Si ASW 5.17_5.23: F48A4/P4-EM12K F7A4/P4-EM12K CEWELD® S3 ISO 14171-A: S 46 4 FB S3 ASW 5.17_5.23: F55A4-EH10K F8A4-EH10K CEWELD® S3Si ISO 14171-A: S 46 4 FB S3Si ASW 5.17_5.23: F55A4-EH12K F8A4-EH12K CEWELD® S2Mo ISO 14171-A: S 46 3 FB S2Mo ASW 5.17_5.23: F55A3/P3-EA2-A2 F8A2/P2-EA2-A2 CEWELD® S3Mo ISO 14171-A: S 50 3 FB S3Mo ASW 5.17_5.23: F62A4-EA4-A4 F9A4-EA4-A4 CEWELD® S3NiMo1 ISO 14171-A: S 50 4 FB S3Ni1Mo ASW 5.17_5.23: F62A4-EF3-F3 F9A4-EF3-F3			
APPROVALS				
WELDING POSITIONS				
TYPICAL CHEMICAL ANALYSIS OF WELD METAL (%)	CaF2	CaO+MgO	SiO2+TiO2	Al2O3+MnO
	17	30	20	30
MECHANICAL PROPERTIES				
REDRYING	300°C / 2 hr			
GAS ACC. EN ISO 14175				