OK Flux 10.33 for continuous casting rolls

A neutral flux developed for re-surfacing and manufacturing continuous casting rolls.

OK Flux 10.33 is an agglomerated fluoride -basic flux primarily used for surfacing continuous casting rolls together with flux cored or solid wires. It is a neutral non-alloying flux with a course grain and excellent slag detachabiliy characteristics at elevated temperatures. Single and twin wire processes can be applied.

ESAB OK Tubrodur 15.72S and ESAB OK Tubrodur 15.79S are two modern cored wires suitable for re-surfacing and manufacturing continuous casting rolls with the SAW process. They deposit a martensitic microstructure that resists wear at elevated temperatures. Continuous casting roll diameters from 130 mm and upward are easily welded using these flux/wire combinations. After welding, a smooth and even bead appearance is the result of using OK 10.33 in combination with either of the two cored wires.

XA 00153620

Density
1 kg/dm³

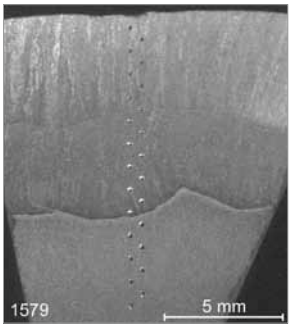
Basicity index
2.6

Flux consumption (kg flux/kg wire)

Voltage	DC+/-
26	0.7
29	0.9
32	1.0
34	1.1

Typical chemical composition all weld metal (%)

	OK Flux 10.33/ OK Tubrodur 15.72S		OK Flux 10.33/ OK Tubrodur 15.79S	
Layer	**Min**	**Max**	**Min**	**Max**
C	0.02	0.1	0.02	0.08
Si	0.2	0.7	0.2	0.8
Mn	0.6	1.2	0.7	1.3
P		0.03		0.030
S		0.03		0.030
Cr	11.0	14.5	16.0	18.0
Ni	3.5	4.5	3.5	4.5
Mo	0.8	1.2	1.5	2.0
V	0.08	0.14	0.1	0.3
Nb	0,08	0.14	0.1	0.3
N	0.04	0.09		
Typical hardness 35-45 HRC			**Typical hardness 43-45 HRC**	



layer 2

layer 1

base metal

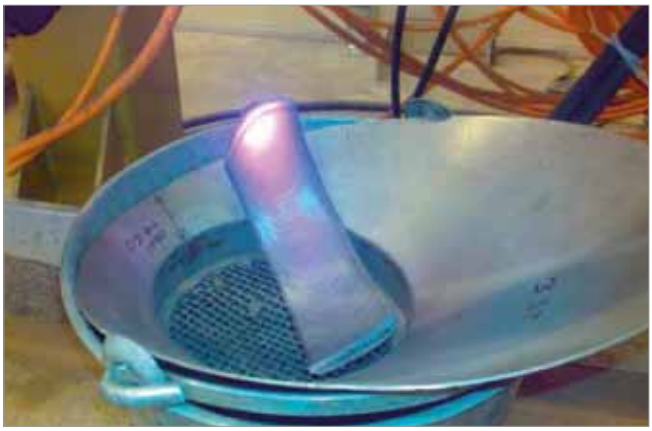
Hardness indentations from base material up to the surface.
Base metal: 42CrMo4
Buffer layer: OK Flux 10.33/OK Tubrodur 15.79S
Top layer: OK Flux 10.33/OK Tubrodur 15.72S

Hardness HV10 of macro above.

	Base Metal	Layer 1	Layer 2
Average	327	529	458
Min	316	500	447
Max	338	577	500

Automatic welding equipment for surfacing continuous casting rolls

Slag detachability is good from the start. The special ESAB spiral bead is performed by oscillating from 5 mm to maximum oscillation width through one revolution of the roll. To achieve this the welding current and arc voltage must have a slope up and slope down function.



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Reg. No: XA 00153620. 01 2011. Printed in the Netherlands.