Welding Consumable: Approval Certificate

Office: **Mumbai**

Date: **26 June 2018**

This Certificate is issued to **Superon Schweisstechnik India Ltd., India, to certify that the undernoted welding consumable is recommended for entry in the supplementary list of certified welding consumable in accordance with ASME Section II, Part C, SFA 5.4, specification of the year 2017. This certificate is issued on the basis of satisfactory test results on the test coupons prepared on 21 May 2018 and subsequently tested on 12 June 2018. Welding consumable is manufactured by Superon Schweisstechnik India Ltd, IMT Manesar, India**

Description:

Consumable name : Super Optimal 308L
Size : 2.00, 2.40, 2.50, 3.20, 4.00, 4.80, 5.00 mm
SFA Classification : SFA 5.4 AWS E308L-16
Results of test :

	2.00mm	2.40mm	2.50mm	3.20mm	4.00mm	4.80mm	5.00 mm
0.2% Proof stress	Not Required	Not Required	Not Required	Not Required	Not Required	Not Required	Not Required
UTS	Not Required	Not Required	Not Required	617 N/mm2	602 N/mm2	596 N/mm2	604 N/mm2
% Elongation	Not Required	Not Required	Not Required	48.20	45.86	46.36	45.38
Impact at °C	Not Required	Not Required	Not Required	Not Required	Not Required	Not Required	Not Required
Chemical	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable
Radiography	Not Required	Not Required	Not Required	Acceptable	Acceptable	Acceptable	Acceptable
Fillet(H,V, OH)	Not Required	Not Required	Not Required	Acceptable	Acceptable	Acceptable	Acceptable

Chemical Analysis- Size: 2.00mm

	C	Cr	Ni	Mo	Mn	Si	P	S	Cu
	%	%	%	%	%	%	%	%	%
Range	0.04 max	18.0-21.0	9.0-11.0	0.75 max	0.5-2.5	1.00 max	0.04 max	0.03 max	0.75max
Result	0.021	18.98	9.55	0.05	0.67	0.38	0.017	0.022	0.075

Chemical Analysis- Size: 2.40mm

	C	Cr	Ni	Mo	Mn	Si	P	S	Cu
	%	%	%	%	%	%	%	%	%
Range	0.04 max	18.0-21.0	9.0-11.0	0.75 max	0.5-2.5	1.00 max	0.04 max	0.03 max	0.75max
Result	0.025	18.84	9.81	0.071	0.65	0.91	0.018	0.02	0.08

Chemical Analysis- Size: 2.50mm

	C	Cr	Ni	Mo	Mn	Si	P	S	Cu
	%	%	%	%	%	%	%	%	%
Range	0.04 max	18.0-21.0	9.0-11.0	0.75 max	0.5-2.5	1.00 max	0.04 max	0.03 max	0.75max
Result	0.025	18.63	9.68	0.07	0.69	0.93	0.020	0.018	0.088

Chemical Analysis- Size: 3.20mm

	C	Cr	Ni	Mo	Mn	Si	P	S	Cu
	%	%	%	%	%	%	%	%	%
Range	0.04 max	18.0-21.0	9.0-11.0	0.75 max	0.5-2.5	1.00 max	0.04 max	0.03 max	0.75max
Result	0.018	18.91	9.58	0.054	0.56	0.95	0.020	0.017	0.043

Chemical Analysis- Size: 4.00mm

	C	Cr	Ni	Mo	Mn	Si	P	S	Cu
	%	%	%	%	%	%	%	%	%
Range	0.04 max	18.0-21.0	9.0-11.0	0.75 max	0.5-2.5	1.00 max	0.04 max	0.03 max	0.75max
Result	0.026	19.11	9.55	0.14	0.69	0.91	0.018	0.019	0.075

Chemical Analysis- Size: 4.80mm

	C	Cr	Ni	Mo	Mn	Si	P	S	Cu
	%	%	%	%	%	%	%	%	%
Range	0.04 max	22.0-25.0	12.0-14.0	0.75 max	0.5-2.5	1.00 max	0.04 max	0.03 max	0.75max
Result	0.015	23.41	12.30	0.06	0.65	0.88	0.02	0.016	0.069

Chemical Analysis- Size: 5.00mm

	C	Cr	Ni	Mo	Mn	Si	P	S	Cu
	%	%	%	%	%	%	%	%	%
Range	0.04 max	22.0-25.0	12.0-14.0	0.75 max	0.5-2.5	1.00 max	0.04 max	0.03 max	0.75max
Result	0.015	23.46	12.34	0.0435	0.67	0.89	0.019	0.014	0.08

- **Refer Report No.: D180528009-5/6/7/8 for radiography result found satisfactory.**
- **Refer Fillet Test Report No. 05/06/07/08 dtd:12.06.2018 for fillet test result found satisfactory.**

Certificate is valid until 18 May 2019.

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