



Welding Consumable: Approval Certificate

Office: **Mumbai-Port**

Date: **18 June 2019**

This Certificate is issued to Superon Schweisstechnik India Limited, 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 15 May 2019 and subsequently tested on 07 June 2019. Welding consumable is manufactured by Superon Schweisstechnik India Limited, IMT Manesar, India

Description:

Consumable name : SUPER OPTIMAL 308L

Size : 2, 2.4, 2.5, 3.2, 4.0, 4.8, 5.0 mm

SFA Classification : SFA 5.4 AWS E308L-16

Results of test :

	2.00mm	2.40 mm	2.50 mm	3.20 mm	4.00 mm	4.80 mm	5.00 mm
0.2% Proof stress (N/mm ²)	Not Required	Not Required	Not Required	Not Required	Not Required	Not Required	Not Required
UTS (N/mm ²)	Not Required	Not Required	Not Required	596.15	599.83	610.91	606.02
% Elongation	Not Required	Not Required	Not Required	43.76	42.86	45.36	45.78
Impact at -50deg 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: 2.00 mm

	C	Cr	Ni	Mo	Mn	Si	P	S	Cu
	%	%	%	%	%	%	%	%	%
Range	0.04 max	18 - 21	9 - 11	0.750 max	0.5 - 2.5	1 max	0.04 max	0.03max	0.75 max
Result	0.019	19.24	9.66	0.0194	0.682	0.834	0.025	0.019	0.122

Chemical Analysis- Size: 2.40 mm

	C	Cr	Ni	Mo	Mn	Si	P	S	Cu
	%	%	%	%	%	%	%	%	%
Range	0.04 max	18 - 21	9 - 11	0.750 max	0.5 - 2.5	1 max	0.04 max	0.03max	0.75 max
Result	0.0171	19.10	9.67	0.0221	0.690	0.842	0.0258	0.0189	0.122

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Chemical Analysis- Size: 2.50 mm

	C	Cr	Ni	Mo	Mn	Si	P	S	Cu
	%	%	%	%	%	%	%	%	%
Range	0.04 max	18 - 21	9 - 11	0.750 max	0.5 - 2.5	1 max	0.04 max	0.03max	0.75 max
Result	0.0166	19.17	9.70	0.0208	0.704	0.834	0.0249	0.0186	0.122

Chemical Analysis- Size: 3.20 mm

	C	Cr	Ni	Mo	Mn	Si	P	S	Cu
	%	%	%	%	%	%	%	%	%
Range	0.04 max	18 - 21	9 - 11	0.750 max	0.5 - 2.5	1 max	0.04 max	0.03max	0.75 max
Result	0.0162	19.10	9.64	0.0199	0.664	0.800	0.0256	0.0214	0.122

Chemical Analysis- Size: 4.00 mm

	C	Cr	Ni	Mo	Mn	Si	P	S	Cu
	%	%	%	%	%	%	%	%	%
Range	0.04 max	18 - 21	9 - 11	0.750 max	0.5 - 2.5	1 max	0.04 max	0.03max	0.75 max
Result	0.0201	18.94	9.64	0.0173	0.710	0.853	0.0265	0.0178	0.123

Chemical Analysis- Size: 4.80 mm

	C	Cr	Ni	Mo	Mn	Si	P	S	Cu
	%	%	%	%	%	%	%	%	%
Range	0.04 max	18 - 21	9 - 11	0.750 max	0.5 - 2.5	1 max	0.04 max	0.03max	0.75 max
Result	0.0184	18.94	9.70	0.0168	0.700	0.834	0.0271	0.0182	0.123

Chemical Analysis- Size: 5.00 mm

	C	Cr	Ni	Mo	Mn	Si	P	S	Cu
	%	%	%	%	%	%	%	%	%
Range	0.04 max	18 - 21	9 - 11	0.750 max	0.5 - 2.5	1 max	0.04 max	0.03max	0.75 max
Result	0.0174	19.02	9.67	0.0153	0.676	0.819	0.0266	0.0184	0.123

Refer Report No. N190521017-1/2/3/4 for radiography, results found satisfactory.

Refer Fillet test report No. 1/2/3/4 dated 07/06/2019 for fillet test and results found satisfactory.

Certificate is valid until 18 May 2020.



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