



## Welding Consumable: Approval Certificate

Office: **Mumbai-Port**

Date: **18 May 2016**

This Certificate is issued to **Senor Metals Pvt. Ltd.** 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 2015. This certificate is issued on the basis of satisfactory test results on the test coupons prepared on 1 March 2016 and subsequently tested on 22 March 2016. Welding consumable is manufactured by Senor Metals Pvt. Ltd. Jamnagar, India.

### Description:

Consumable name : SME 309L-16  
Size : 2.50, 3.15, 4.0 mm  
SFA Classification : SFA 5.4 AWS CL. E309L-16

### Results of test :

	2.50mm	3.15mm	4.00 mm
Yield Strength	Not Required	485 N/mm <sup>2</sup>	477 N/mm <sup>2</sup>
UTS	Not Required	612 N/mm <sup>2</sup>	595 N/mm <sup>2</sup>
% Elongation	Not Required	37.20	34.00
Impact at deg C	Not Required	--	--
Chemical	Acceptable	Acceptable	Acceptable
Radiography	Acceptable	Acceptable	Acceptable
Fillet( H,V, OH )	Not Required	Acceptable	Acceptable

### Chemical Analysis- Size: 2.5mm

	C	Mn	Si	S	P	Ni	Mo	Cr	Cu
	%	%	%	%	%	%	%	%	%
Range	0.04 max	0.5-2.5	1.00	0.03 max	0.04 max	12.0-14.0	0.75 max	22 - 25	0.75max
Result	0.033	0.74	0.95	0.005	0.040	12.18	0.70	22.12	0.31

### Chemical Analysis- Size: 3.15mm

	C	Mn	Si	S	P	Ni	Mo	Cr	Cu
	%	%	%	%	%	%	%	%	%
Range	0.04 max	0.5-2.5	1.00	0.03 max	0.04 max	12.0-14.0	0.75 max	22 - 25	0.75max
Result	0.035	0.77	0.98	0.006	0.029	12.49	0.13	23.13	0.049

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Chemical Analysis- Size: 4mm

	C	Mn	Si	S	P	Ni	Mo	Cr	Cu
	%	%	%	%	%	%	%	%	%
Range	0.04 max	0.5-2.5	1.00	0.03 max	0.04 max	12.0-14.0	0.75 max	22 - 25	0.75max
Result	0.030	0.98	0.95	0.005	0.032	12.13	0.33	23.04	0.11

Certificate is valid until 21 March 2017.

   
Manoj Kumar  
Surveyor to Lloyd's Register Asia

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