



Indian Register of Shipping

Port: KANDLA
Date: 18.04.2017
Report No: KND17W001

(R) Electrode **SME 312 -16** as described below, manufactured as per **ASME SECTION II SECTION C, EDITION 2015**

DESCRIPTION:

| | |
|-------------------------|----------------------------------|
| NAME OF MANUFACTURE | :M/S. SENOR METALS PVT. LTD. |
| TYPE OF ELECTRODE | :C.S. ELECTRODE FOR SMAW WELDING |
| BRAND NAME | :SME 312 -16 |
| AWS CLASS | :SFA 5.4, E 312 -16 |
| WELDING POSITION | :QUALIFIED FOR ALL POSITION |
| SIZE (mm) | :Ø 2.0 to Ø 5.0 mm |
| APPLICABLE CURRENT TYPE | :AC and DC +ve |

Visual Inspection carried out , reviewed chemical analysis report, tensile test(Deposited weld), weld chemistry, Fillet weld testing witnesses and radiography film reviewed .All examined with satisfactory results.

Description of results as follows :

Required test as per ASME SECTION II PART "C" EDITION- 2015, SFA 5.4
Chemical Analysis:

| Electrode Size (MM) | %C | %Mn | %Si | %P | %S | %Cr | %Ni | %Mo | %Cu |
|---------------------|------|---------|------|-------|-------|-----------|----------|-------|-------|
| Req. Value | 0.15 | 0.5-2.5 | 1.0 | 0.04 | 0.03 | 28.0-32.0 | 8.0-10.5 | 0.75 | 0.75 |
| Dia 2.50 | 0.11 | 0.80 | 0.60 | 0.028 | 0.009 | 29.22 | 9.28 | 0.016 | 0.040 |
| Dia 3.15 | 0.12 | 0.80 | 0.60 | 0.028 | 0.008 | 29.24 | 9.26 | 0.016 | 0.040 |
| Dia 4.0 | 0.11 | 0.77 | 0.65 | 0.027 | 0.008 | 29.02 | 9.24 | 0.016 | 0.041 |

Groove Weld for Soundness & Usability of Electrodes as per ASME SECTION II PART C EDITION-2015 – SFA 5.4

| Electrode Size(MM) | Welding Position / Mechanical test / Radiography | Remark |
|--------------------|--|--|
| Dia 3.15 mm | Tensile Test, Overhead (Fillet), Vertical(Fillet),Radiography Satisfactory | *Radiography Test report of No. AM /01657 & 1658 Dtd. 31.01.2017 of M/s. Accurate Metaweld Services. |
| Dia 4.0 mm | Horizontal (Fillet) Radiography Satisfactory | |



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All Weld Metal Tension Test :

| Electrode Size (MM) | | Tensile Strength(Mpa) | Yield Strength at 0.2 % offset (Mpa) | Elongation (%) | Impact at -Deg C |
|---------------------|-------------|-----------------------|--------------------------------------|----------------|------------------|
| | Reqd. Value | 660 min. | NS | 22 % | NR |
| Dia.3.15 | | 800.18 | 796.55 | 24.28 | |
| Dia.4.0 | | 773.60 | 666.50 | 24.0 | |



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