



Certificate for Welding Consumable CM-A106

Project: **Supplementary List of Certified Welding Consumables**

Client: **Kobe Steel, Ltd.
Saijo Plant**

Office: **Yokohama**

Clients Order Number: -

Date: **18 October 2024**

Order Status: **Completed**

Inspection Dates

First: **27 June 2024**

Final: **24 September 2024**

This certificate is issued to the above Client to certify that the undersigned Surveyor to this Society did at their request attend their Saijo Plant and Fujisawa Plant on and between the dates shown above for the purpose of examining and testing below noted welding consumable.

Trade Name: **CM-A106**
Welding Process: Manual Electrode
Welding Position: DVuO
Joint Type: BF
Specification: CM-A106 [M – Manufacturer's specification]

A weld metal assembly was prepared using the welding consumable of lot number D002/ D003, and specimens machined from the assembly according to the specification were tested using calibrated measuring and testing equipment in the presence of the undersigned with results satisfying the requirements of the specification as follows.

Mechanical Properties of Deposit Metal

| | Dia. [mm] | Re [N/mm ²] | Rm [N/mm ²] | A [%] | CVN Impact [J] | Test Temp. | Stress Relief |
|-----------------|------------|-------------------------|-------------------------|--------|----------------|------------|---------------|
| Spec. | 3.2 to 5.0 | ≥ 531 | ≥ 621 | ≥ 17 | - | - | - |
| Obtained | 4.0/ 5.0 | 670/ 655 | 760/ 750 | 22/ 22 | - | - | - |

Chemical Analysis of Deposit Metal [WT %]

| | C | Si | Mn | P | S | Ni | Cr | Mo | Cu |
|-----------------|------------|------------|------------|--------------|--------------|----|------------|------------|----|
| Spec. | 0.05-0.12 | 0.60 max | 0.90 max | 0.030 max | 0.030 max | - | 2.00-2.50 | 0.90-1.20 | - |
| Obtained | 0.08/ 0.08 | 0.41/ 0.40 | 0.74/ 0.76 | 0.006/ 0.006 | 0.001/ 0.001 | - | 2.27/ 2.28 | 1.02/ 1.02 | - |

The works of the manufacturer was inspected and found in satisfactory order. The process of manufacture, including supervision, quality control and record keeping were of adequate standard and storage condition and facilities were found to be satisfactory as well.



M. Wakamori
Surveyor to Lloyd's Register Group Limited

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