



Certificate number : WD 28798/12/W.0

File number : 28798 T 2003

TYPE APPROVAL CERTIFICATE

as per Bureau Veritas Marine & Offshore Classification Rules

This certificate is issued to

TIEN TAI ELECTRODE (KUN SHAN) CO., LTD.

Kunshan City (Jiangsu Province) - CHINA

for the product

Flux-Cored Wire for Semi-Automatic or Automatic Welding with Shielding Gas

Designation	: TWE-712 / CO2
Grade	: SA3Y H5
Description	: Gas Shield CO2 100%
Diameter	: 1.0, 1.2, 1.4, 1.6 mm
Welding current	: DC(+)
Welding position	: 1.0mm : All positions for butt and fillet welding except vertical downwards (PA, PF, PC, PE, PD, PB). 1.2&1.4mm: All positions for butt welding including vertical downwards (PA, PF, PG, PC, PE); All positions for fillet welding except vertical downwards (PA, PB, PD, PF). 1.6mm: Flat butt weld (PA bw), Horizontal vertical butt weld (PC bw), Flat fillet weld (PA fw), Horizontal vertical fillet weld (PB fw).
Remark	: Under the license of Tien Tai Electrode Co.,Ltd. - Taiwanluding

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which has been declared to Bureau Veritas Marine & Offshore as identical to a product already approved in compliance with the relevant requirements of Bureau Veritas Marine & Offshore Rules on Materials and Welding for the Classification of Marine Units.

This certificate will expire on: 15 Jul 2026

For Bureau Veritas Marine & Offshore,

Local office: BV SHANGHAI

Issued on 15 Jul 2025

Surveyor: I. Wang

This certificate was created electronically and is valid without signature



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.