



# TYPE APPROVAL CERTIFICATE

Certificate No:  
**TAW00003WJ**  
Revision No:  
**1**

## This is to certify:

That the Wire/Flux combination

with trade name  
**TSW-E31(2x) / TF-250**

Manufacturer

**Tien Tai Electrode (Kunshan) Co., Ltd.**  
**Kunshan, Jiangsu, China**

is found to comply with

**DNV rules for classification – Ships**

**DNV class programme DNV-CP-0069 – Type approval – Welding consumables**

with this approval

<b>Grade</b>	<b>V Y46M(H5)</b>
<b>Current</b>	<b>DC(+), AC</b>
<b>Approved diameter</b>	<b>3.2 mm - 5.0 mm</b>
<b>Positions</b>	<b>Flat</b>
<b>Remarks</b>	<b>Welding with two wires</b>

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.**

Issued at **Hamburg** on **2023-08-17**

for **DNV**

This Certificate is valid until **2028-08-02**.

DNV local unit: **Shanghai**

Approval Engineer: **Dietmar Liebich**

**Thorsten Lohmann**  
**Head of Section**

Any significant change in design or construction may render this Certificate invalid.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

