

# TYPE APPROVAL CERTIFICATE

## This is to certify:

that the Wire/Flux combination

with trade name  
**TSW-14HE (2x) / TF-650**

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>IV Y40TM(H5)</b>
<b>Current</b>	<b>Lead: DC(+) / Trail: AC</b>
<b>Approved diameter</b>	<b>2.4 mm - 5.0 mm</b>
<b>Positions</b>	<b>Flat</b>
<b>Remarks</b>	<b>Tandem welding</b>

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

Issued at **Hamburg** on **2025-01-06**

This Certificate is valid until **2030-01-05**.

DNV local unit: **Shanghai**

Approval Engineer: **Ludger Hachmöller**

for **DNV**



Digitally Signed By:  
**Martin Wenning**  
Location: **DNV Hamburg,**  
**Germany**

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

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