TYPE APPROVAL CERTIFICATE

Certificate no.:
TAW00005C6
Revision No:
1

This is to certify:

that the Electrode

with trade name
ESB 48

Manufacturer
Oerlikon Kaynak Elektrodlari ve Sanayi A.S.
ISTANBUL, **Turkey**

is found to comply with
DNV rules for classification – Ships
DNV class programme DNV-CP-0069 – Type approval – Welding consumables

with this approval

Grade	**3 YH10**
Current	**DC(+)**
Approved diameter	**2.5 mm - 5.0 mm**
Positions	**All, except vertical downwards**
Remarks	**---**

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

Issued at **Hamburg** on **2026-11-10**

This Certificate is valid until **2031-12-31**.
DNV local unit: **Istanbul**

Approval Engineer: **Christine Löll**

for **DNV**

Digitally Signed By:
Ludger Hachmöller
Location: DNV Hamburg, Germany

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