

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Wire/Gas combination**

with trade name

Thermanit 19/15 (H) / M12

Manufacturer

**voestalpine Böhler Welding Germany GmbH
Hamm, Germany**

is found to comply with

DNV GL rules for classification – Ships

with this approval

Grade	VL 5 Ni
Current	DC +
Approved diameter	1,0 - 1,2mm
Positions	All, except vertical-down
Remarks	For Gas metal arc welding (GMAW). Impact test at -120°C average > 47J For VL 1.5 Ni to VL 5 Ni

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.This Certificate is valid until **2020-12-31**.Issued at **Hamburg** on **2016-07-27**DNV GL local station: **Essen**for **DNV GL**Approval Engineer: **Dietmar Liebich**

**Thorsten Lohmann
Head of Section**

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