

APPROVAL OF MANUFACTURER CERTIFICATE

This is to certify:

That

FERRUM S.A.
Katowice, Poland

is an approved manufacturer of
Steel Pipes and Fittings

in accordance with
DNV GL rules for classification – Ships

and the following particulars:

Product	Pipe
Application area	Pipes for pressure systems
Steel type	Carbon, carbon-manganese
Manufacturing method	SAW-welded (helical)
Outer diameter	See page 2
Wall thickness	See page 2

Manufacturer(s) approved by this certificate is/are accepted to deliver according to DNV GL, DNV and GL rules. Materials to be applied to DNV GL classed object shall fulfill the material requirements in the applicable DNV GL class rules.

Issued at **Hamburg** on **2018-04-06**

for **DNV GL**

This Certificate is valid until **2021-04-30**.

DNV GL local station: **Katowice**

Approval Engineer: **Stefan Röhr**

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Thorsten Lohmann
Head of Section



Job Id: **263.11-008766-1**
Certificate No: **AMMM0000210**

Particulars of the approval

Pipes for pressure systems

Steel type	Grade ³⁾	Manufacturing method ¹⁾	Outer diameter [mm]	Wall thickness [mm]	Delivery condition ²⁾
C and C-Mn	L485M (X70ME) acc. to ISO 3183 (API 5L)	EFW	1016	16	AW

Remarks:

- 1) EFW: Electric Fusion Welded
Welding method: SAWH (Submerged Arc Welding Helical)
- 2) AW: As welded (no heat treatment after welding)
- 3) Possible application and certification of pipes in grade L485M (X70ME) acc. to ISO 3183 (API 5L) to classed object is subject to case by case approval