



# APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:  
**AMMM000034Y**

This is to certify:

That

**Pantech Stainless & Alloy Industries Sdn Bhd**  
PTD 204334, Jalan Platinum Utama, Kawasan Perindustrian Pasir Gudang,  
81700 Pasir Gudang, Johor,  
Malaysia

is an approved manufacturer of  
**Steel Pipes and Fittings**

in accordance with  
**DNV rules for classification – Ships**  
**DNV class programme – DNV-CP-0252 Steel pipes and steel pipe fittings**

and the following particulars:

<b>Product</b>	<b>Pipes and fittings</b>
<b>Application area</b>	<b>Austenitic and ferritic-austenitic steel pipes</b>
<b>Steel type</b>	<b>Piping fittings</b>
<b>Manufacturing method</b>	<b>Austenitic stainless</b>
<b>Max. outer diameter</b>	<b>See page 2</b>
<b>Max. wall thickness</b>	<b>See page 2</b>
<b>Heat treatment condition</b>	<b>See page 2</b>

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 classed object shall fulfill the material requirements in the applicable DNV class rules.

Issued at **Hamburg** on **2024-02-06**

This Certificate is valid until **2027-02-05**.  
DNV local unit: **Kuala Lumpur Verification**

Approval Engineer: **Stefan Röhr**



for **DNV**

This document has been digitally signed and will  
therefore not have handwritten signature  
Christian Wildhagen

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

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.



Form code: AM 311

Revision: 2022-12

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## Particulars of the approval

### Austenitic steel pipes

Steel type /grade <sup>3)</sup>	Manufacturing method <sup>1)</sup>	Max. outer diameter [mm]	Max. wall thickness [mm]	Heat treatment condition <sup>2)</sup>
Austenitic stainless	ERW	408.8	10.71	SHT

### Piping fittings (elbows, tees, reducers, caps, stubs)

Steel type /grade <sup>4)</sup>	Manufacturing method <sup>1)</sup>	Max. outer diameter [mm] <sup>5)</sup>	Max. wall thickness [mm] <sup>5)</sup>	Heat treatment condition <sup>2)</sup>
Austenitic stainless	CFS	410.4	12.34	SHT

#### Remarks:

- 1) EFW: Electric fusion welded  
 CFS: Cold finished seamless (starting material: welded pipes/seamless pipes)  
 HFI: high frequency induction welding
- 2) SHT: Solution Heat Treated (solution annealing)
- 3) Suitable pipe grades shall be selected from the following recognized standards:  
 ISO 9329 Part 4, ISO 9330 Part 6, EN 10216 Part 5, EN 10217 Part 7, ASTM A269, ASTM A312, ASTM A358, ASTM A789, ASTM A790, ASTM A928 or JIS G3459
- 4) Suitable pipe fittings shall be selected from the following recognized standards:  
 EN 10253, ASTM A234, ASTM A403, ASTM A420, ASTM A774, ASTM A815, ASTM A960, ASTM A961, JIS B2312, JIS B2313 or JIS B2316, ASTM A999, ASME B16.9, ASME B36.19M and ASME Section II Part A
- 5) Stub Ends in max. diameter of 411mm and max wall thickness of 10.72mm