

APPROVAL OF MANUFACTURER CERTIFICATE

This is to certify:

That
AB Sandvik Materials Technology
Sandviken, Sweden

is an approved manufacturer of
Steel Pipes and Fittings

in accordance with
DNV GL rules for classification – Ships

and the following particulars:

Steel types	Austenitic stainless, Duplex stainless,
Process	Seamless
Dimensions	Outer diameter max. 270 mm Wall thickness max. 50 mm
Remarks	Including steelmaking, Including automated non-destructive testing in place of hydraulic testing according to relevant piping standard for wall thickness below 6.35 mm, Including low temperature service for austenitic stainless steel.

Manufacturer approved by this certificate is 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 **Høvik** on **2017-01-19**

This Certificate is valid until **2019-12-31**.

DNV GL local station: **Stockholm**

Approval Engineer: **Shylate Mahachi**

for **DNV GL**



Digitally Signed By: Gran, Terje
Location: DNV GL Høvik, Norway
Signing Date: 20.01.2017, on behalf of

Hanne Anita Hjerpetjønn
Head of Section

Job Id: **263.11-006795-1**
Certificate No: **AMMM0000169**

Particulars of the approval

Grades according to international standards

Grade	Standard	Delivery condition ¹⁾	Max. Wall thickness (mm)	Max. Outer diameter (mm)
1.4301	EN 10216-5	ST	50	270
1.4306	EN 10216-5	ST	50	270
1.4307	EN 10216-5	ST	50	270
1.4311	EN 10216-5	ST	50	270
1.4541	EN 10216-5	ST	50	270
1.4401	EN 10216-5	ST	50	270
1.4404	EN 10216-5	ST	50	270
1.4429	EN 10216-5	ST	50	270
1.4435	EN 10216-5	ST	50	270
1.4436	EN 10216-5	ST	50	270
1.4571	EN 10216-5	ST	50	270
1.4362	EN 10216-5	ST	50	270
1.4410	EN 10216-5	ST	50	270
1.4424	EN 10216-5	ST	50	270
1.4462	EN 10216-5	ST	50	270
TP304	ASTM A312	ST	50	270
TP304L	ASTM A312	ST	50	270
TP304LN	ASTM A312	ST	50	270
TP321	ASTM A312	ST	50	270
TP316	ASTM A312	ST	50	270
TP316L	ASTM A312	ST	50	270
TP316LN	ASTM A312	ST	50	270
TP316Ti	ASTM A312	ST	50	270
S31500	ASTM A789	ST	50	270
S31803	ASTM A789	ST	50	270
S32205	ASTM A789	ST	50	270
S32304	ASTM A789	ST	50	270
S32750	ASTM A789	ST	50	270

Remarks

¹⁾ ST: Solution heat treated