

Oy Wärtsilä Ab Ylivieska Works P.O.Box 68 84101 YLIVIESKA

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YOUR REF

OUR MET ET/BB

Mr April 3, 1985

PIPE COLLAR MACHINE

We refer to your letter dated 29th June 1984.

The flanging method may be accepted for the low pressure auxiliary systems up to 16 bar in ships and mobile offshore units.

This includes pipes as

Material	Demension	Standard
Carbon stee) Austenitic stainless steel Al brass Copper - nickel	NS 40 NS 400 NS 40 NS 400 NS 40 NS 400 NS 40 NS 400	DIN 1629 SS 2333, SS 2343 BS 2871 DIN 17671, DIN 17664

Loose flanges acc. to DIN 2642, DIN 2576 AS, 1984.

Regarding thickness of the pipes reference is made to our Rules for the materials involved, steel, austentic steel, copper-alloys for the different application categories.

We have no Rules as regards pipes with flare, However the NVI-4 groupes may be cold bend with bending radius 2.5 x D without subsequent heat treatment, corresponding to 20% cold deformation. The cold deformation, with thickness referred to in DIN 2642 with max 10PN gives deformation in excess of 20% in the radius. For small diameters for ex. DN 40 the cold deformations in d4 position will be almost 70%. Consequently we will not accept cold flaring of tubes in grades NV 1 to NV 4, which have to be hot flared in the normalizing range for the

Austenitic stainless steel tubes may be coldformed, except dimension less than DN 50, which may be hotformed at 350°C as proposed by the manufacturer. Aluminium brase tubes must be stressrelieved after coldforming according to DnV rules, or hotformed.

The acceptance for the end product, pipe with flare, for conformance to specified standars can be given to the company operating with the machine end producing the laps.

We are also enclosing our invoice no. 3637 amounting to FIM 1.025.-.

Yours faithfully, for DEL NORSKE VEGITAS Bill Mikender Station manager

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## **NORSKE VERITAS**

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CABLE ADDRESS:

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HELSINGFORS AKTIEBANK

YOUR REF.

OUR REF. AD/BB

HELSINGFORS. 16th January, 1984

Dear Sirs,

Re. Pipe Collar Machine

We refer to your letter dated 29th April 1983 with enclosures and the survey carried out at your Works on the 4th January 1984 concerning your pipe collar machine.

The flanging method may be accepted for low pressure auxiliary systems up to 16 bar in ships and on offshore installations but not for gas or other process fluid systems on offshore.

This includes for pipes as,

Material	Dimension	Standard
Carbon steel	NS 50 to NS 400 S = 1 to 10 mm	DIN 1629
Stainless steel	NS 50 to NS 400 S = 1 to 6 mm	SIS 2333 SIS 2343
Al-brass	NS 50 to NS 400 S = 1 to 10 mm	BS 2871
Copper nickel	NS 50 to NS 400 S = 1 to 10 mm	DIN 17671 DIN 17664

and the loose flanges with the yards standards WT-stand. no. 628.9.4 and TES 8164.

The end product may be accepted for conformance to given standards. This acceptance may be given to the company operating the machine and producing the laps.

Yours faithfully

Göran Cedercreutz