

Reinforcement ring of stainless steel pipes for vacuum systems

Scope

This standard provides recommendations for reinforcement rings of stainless steel pipes for vacuum systems. The document is used in industries as a base for design, manufacture and installation of pipe systems with an internal underpressure. This standard replaces SSG 1374E.

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1 Reinforcement ring dimensions

This standard is verified and approved with respect to materials and strength by notified body (AO) 0409 Kiwa Inspecta AB, certificate No 20-1013779-100.

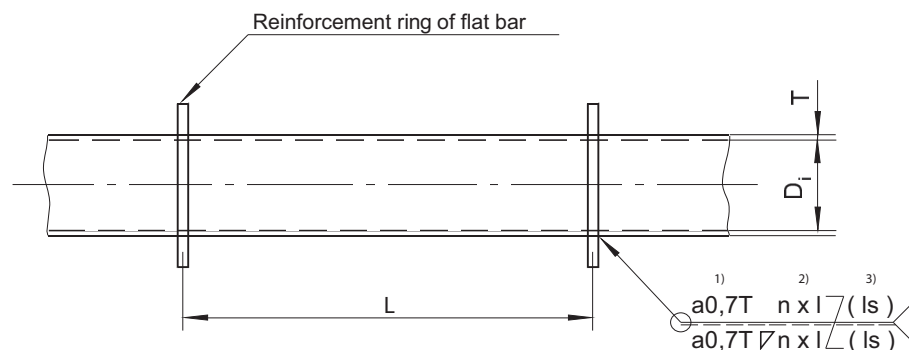


Fig. 1 Dimension sketch.

- 1) Min. a-dimension shall not be less than 2 mm.
- 2) Min. total weld length on each side of the reinforcement ring $0.5 \times \pi \times D_y$ ($D_y = D_i + 2T$).
- 3) The distance between two internal welds shall be $50 \leq l_s \leq 3 \times \text{ring height}$, but shall not exceed $8T$.

Calculations are carried out in compliance with SS-EN 13480-3:2017 – *Metallic industrial piping – Part 3: Design and calculation* and SS-EN 13445-3:2014+C5:2019 – *Unfired pressure vessels – Part 3: Design*.

In the calculations of max. lengths (L) the additional pressure stresses of bending in compliance with max. support distances in [SSG 7270E](#) have been taken into account for.

Calculation pressure = 100% vacuum.

Calculation temperature, max. permissible temperature = 300 °C.

L refers to the maximum permissible spacing.

Important! Do not use intermittent welds if crevice corrosion may occur.