

Table 11.3.2-1 — Additional symbols for the purposes of 11.3

Symbol	Description	Unit
A_w	total fillet weld throat area	mm ²
d_i	attachment inside diameter for circular hollow attachment	mm
d_o	attachment outside diameter for circular hollow attachment	mm
D_o	outside diameter of run pipe	mm
e_{ord}	nominal attachment wall thickness	mm
L_1	half length of attachment in circumferential direction of the run pipe for rectangular attachment	mm

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and

$$D_o / e_{ord} \leq 100 \quad \leftarrow \text{It seems it is pipe wall thickness.} \quad (11.3.3-7)$$

$$A_m = A_T / 2 \quad (11.3.4-4)$$

$$\gamma = D_o / (2e_{ord}) \quad (11.3.4-5)$$

$$\tau = e_{ord,T} / e_{ord} \quad \leftarrow \text{Can anyone explain this formula. What is T for? Does it represent attachment?} \quad (11.3.4-6)$$

$$\beta = d_o / D_o \quad (11.3.4-7)$$

$$C = A_o (2\gamma)^{0.1} \beta^{0.2} \tau^{0.3} \text{ but not less than } 1,0 \quad (11.3.4-8)$$

$$J = \min \left\{ Z_T ; \pi \left(\frac{d_o}{2} \right)^2 e_{ord} \right\} \quad \leftarrow \text{Is this Jbar used in the calculations in 11.3.5 a) ?} \quad (11.3.4-9)$$

a) Hollow circular attachments

$$\sigma_{MT} = \frac{B_W W}{A_T} + \frac{B_N M_N}{Z_T} + \frac{B_L M_L}{Z_T} + \frac{Q_1}{A_m} + \frac{Q_2}{A_m} + \frac{B_T M_T}{J} \quad (11.3.5-1)$$

$$\sigma_{NT} = \frac{C_W W}{A_T} + \frac{C_N W}{Z_N} + \frac{C_L M_L}{Z_T} + \frac{Q_1}{A_m} + \frac{Q_2}{A_m} + \frac{C_T M_T}{J} \quad (11.3.5-2)$$

$$\sigma_{PT} = K_T \sigma_{NT} \quad (11.3.5-3)$$

$$\sigma_{NT}'' = \frac{C_W W''}{A_T} + \frac{C_N M_N''}{Z_T} + \frac{C_L M_L''}{Z_T} + \frac{Q_1''}{A_m} + \frac{Q_2''}{A_m} + \frac{C_T M_T''}{J} \quad (11.3.5-4)$$

This should be $C_N * M_N / Z_T$

Is this Jbar and J given by formula (11.3.4-9) are the same?

In addition to the modified equations above, the following equations shall be also satisfied:

$$\sigma_{NT}^{**} \leq 2.0R_{eH}, \text{ at temperature}$$

f) With hollow round cross section

$$\frac{Q_1^{**}}{2L_1L_a} + \frac{Q_2^{**}}{2L_2L_b} + \frac{M_T^{**}}{J} \leq R_{eH}, \text{ at temperature} \quad (11.3.7-7)$$

See this formula is for rectangular attachment. Confusing, require clarification

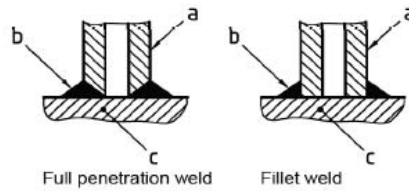
g) With rectangular cross section

$$\frac{Q_1^{**} + Q_2^{**}}{A_W} + M_{TT}^{**} \leq R_{eH}, \text{ at temperature} \quad (11.3.7-8)$$

This formula might be for hollow round cross sections?

11.4 Alternative calculation methods

If 11.3 gives no satisfactory results, or in case of non-compliance with the div



Key

- a attachment
- b weld
- c pipe wall

Notations are not used anywhere, cause confusion. Any use of them?

Figure 11.3.3-1 — Hollow circular attachment welds

11.3.3.2 Rectangular attachments