POLSKI KOMITET NORMALIZACYJNY

POPRAWKA do POLSKIEJ NORMY

ICS 23.040.60;

PN-EN 1591-1+A1:2009/AC

grudzień 2010

Wprowadza
EN 1591-1:2001+A1:2009/AC:2010, IDT

Dotyczy
PN-EN 1591-1+A1:2009

Kołnierze i ich połączenia -- Zasady projektowania połączeń kołnierzowych okrągłych z uszczelką -- Część 1: Metoda obliczeniowa

Na wniosek Komitetu Technicznego nr 210
ds. Armatury Przemysłowej i Rurociągów Przemysłowych
Poprawka do Normy Europejskiej EN 1591-1:2001+A1:2009/AC:2010 Flanges and their joints - Design rules for gasketed circular flange connections - Part 1: Calculation method
ma status Poprawki do Polskiej Normy

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 1591-1:2001+A1:2009/AC

September 2010
Septembre 2010
September 2010

ICS 23.040.60

English version
Version Française
Deutsche Fassung

Flanges and their joints - Design rules for gasketed circular flange connections - Part 1: Calculation method

Brides et leurs assemblages - Règles de calcul des assemblages à brides circulaires avec joint - Partie 1: Méthode de calcul

Flansche und Flanschverbindungen - Regeln für die Auslegung von Flanschverbindungen mit runden Flanschen und Dichtung - Teil 1: Berechnungsmethode

This corrigendum becomes effective on 29 September 2010 for incorporation in the three official language versions of the EN.

Ce corrigendum prendra effet le 29 septembre 2010 pour incorporation dans les trois versions linguistiques officielles de la EN.

Die Berichtigung tritt am 29.September 2010 zur Einarbeitung in die drei offiziellen Sprachfassungen der EN in Kraft.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Ref. No.:EN 1591-1:2001+A1:2009/AC:2010 D/E/F

1 Modifications to Clause 3

3.3, line with symbol n_B
Replace "Number of bolts, equations (1), (4), (33), (34)" *with* "Number of bolts, Equations (1), (4), (33), (34), (56a), (56b), (58a), (58b), (D.1), (D.2), (D.8), (D.9), (D.10)".

3.3, line with symbols Φ_B, Φ_F, Φ_G, Φ_L, Φ_X
Replace "(72)" *with* "(72c)".

2 Modifications to Clause 4

4.1.3.3, Note
Replace "h_N" *with* "h_H".

4.1.4.1, Equation (19)
Replace "γ" *with* "λ".

4.1.4.1, Equation (20)
Replace Equation (20) completely with the following editorially improved one: "

$$c_F = (1 + \gamma\vartheta) / \{1 + \gamma\vartheta\,[4\,(1 - 3\,\lambda + 3\,\lambda^2) + 6\,(1 - 2\,\lambda)\,\vartheta + 6\,\vartheta^2] + 3\,\gamma^2\,\vartheta^4\} \qquad (20)".$$

4.1.4.2, Equation (29)
Replace "D_{Ge}" *with* "d_{Ge}".

4.3.3, Equation (42)
Replace Equation (20) completely with the following: "

$$X_G = (e_G / A_{Gt}) \times (b_{Gt} + e_G/2) / (b_{Ge} + e_G/2) \qquad (42)".$$

4.3.3, Table 1, line "Type 1", last column, line below equation for b_{Gi}
Replace complete sentence with the following: "

$E_{Gm} = E_{G0}$, where the value for E_{G0} will be calculated for the pressure of $Q_{G0} = F_{G0}/A_{Ge}$, for flat metallic ring gaskets with rectangular cross section.".

4.3.3, Table 1, line "Type 2", last column, first equation, b_{Gi} = ...
Replace "Q_{max}" *with* "$Q_{max,y}$".

3 Modifications to Clause 5

5.1.2.3, Equation (45), first line
Replace "e_B" *with* "l_B".

5.1.2.3, line below Equation (45), equation after "Herein shall hold:"
Replace "$\tilde{e}_{Ft} + \tilde{e}_{Ft} + e_L + \tilde{e}_L + e_G = e_B$"
with "$e_{Ft} + \tilde{e}_{Ft} + e_L + \tilde{e}_L + e_G = l_B$".

5.3.2, Equation (50)
Replace "$Q_{smin(L)I}$" *with* "$Q_{Smin(L)I}$".

5.4.1, 3rd paragraph
Replace "repeated from equation (38)," *with* "repeated from Equation (37),".

5.4.2, 2nd paragraph
Replace "n_b" *with* "n_B".

5.4.2, Equations (56a), (56b), (58a) and (58b)
Replace four times "n_b" *with* "n_B".

4 Modifications to Clause 6

6.2, Equation (71)
Replace Equation (71) completely with the following: "

$$\Phi_B = \frac{1}{f_B}\sqrt{\left(\frac{F_B}{A_B}\right)^2 + 3\left(C\frac{M_{t,B}}{I_B}\right)^2} \leq 1 \qquad (71)".$$

6.2, first note
Replace ", see 6.1)" *with* ", see 5.4.2)".

6.3, Equation (72a)
Replace Equation (72a) completely with the following: "

$$Q_{\max,Y} = Q_{S\max} / \{1 + c_1 \times (b_G / e_G)_{ref}\} \qquad (72a)".$$

6.3, Equation (72b)
Replace Equation (72b) completely with the following: "

$$Q_{\max} = Q_{S\max} \times \{1 + c_1 \times (b_G / e_G)_{actual}\} / \{1 + c_1 \times (b_G / e_G)_{ref}\} \qquad (72b)".$$

6.4, Equation (74), symbol ψ in round brackets
Replace "$\psi_{opt} \times \psi$" *with* "$\psi_{opt} \times \psi_Z$".

6.4, Equation (77), second equation
Replace "$\delta_R = F_R / (f_E \times d_E \times \cos\varphi_S)$" *with* "$\delta_R = F_R / (f_E \times \pi \times d_E \times e_D \times \cos\varphi_S)$".

6.4, Equation (79), upper line
Replace "$-0{,}75 \times \delta_R)$" *with* "$-0{,}75 \times \delta_Q)$".

6.4, Equation (79), lower line
Replace "$-0{,}25 \times \delta_R)$" *with* "$-0{,}25 \times \delta_Q)$".

6.4, Equation (82)
Replace complete Equation (82) with the following: "

$$\Psi_{(j_S,k_M,k_S)} = \frac{f_E \times d_E \times e_D \times \cos\varphi_S}{f_F \times 2 \times b_F \times e_F}$$
$$\times \left\{ (0{,}5 \times \delta_Q + \delta_R) \times \tan\varphi_S - \delta_Q \times 2 \times e_P / d_E + j_S \times k_S \times \sqrt{\frac{e_D \times c_M \times c_S \times (1 + j_S \times k_M)}{d_E \times \cos^3 \varphi_S}} \right\} \qquad (82)".$$

6.4, Equation (84), left side of equation
Replace "Ψ_{opt} = " *with* "Ψ_0 = ".

5 Modifications to Annex E

E.3, Equation (E.7)
Replace complete Equation (E.7) with the following: "

$$F_{GI\,\mathrm{min}} = \left\{ F_{G0\,\mathrm{min}} \times Y_{G0} \times P_{QRI} - [F_{QI} \times Y_{QI} + (F_{RI} \times Y_{RI} - F_{R0} \times Y_{R0}) + \Delta U_I] \right\} / Y_{GI} \qquad \text{(E.7)".}$$

E.3, Equation (E.8)
Replace complete Equation (E.8) with the following: "

$$F_{GI\,\mathrm{max}} = \left\{ F_{G0\,\mathrm{max}} \times Y_{G0} \times P_{QRI} - [F_{QI} \times Y_{QI} + (F_{RI} \times Y_{RI} - F_{R0} \times Y_{R0}) + \Delta U_I] \right\} / Y_{GI} \qquad \text{(E.8)".}$$