ICS 27.060.30, 27.100 SLOVENSKÁ TECHNICKÁ NORMA Október 2024

STN	**Veľkopriestorové vodné kotly Časť 3: Navrhovanie a výpočet tlakových častí Oprava AC**	**STN EN 12953-3/AC 07 7605**

Shell boilers. Part 3: Design and calculation for pressure parts

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 09/24

Obsahuje: EN 12953-3:2016/AC:2024

139307

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 12953-3:2016/AC:2024

July 2024

ICS 27.060.30; 27.100

English version

Shell boilers - Part 3: Design and calculation for pressure parts

Chaudières à tubes de fumée - Partie 3: Conception et calcul des parties sous pression

Großwasserraumkessel - Teil 3: Konstruktion und Berechnung für drucktragende Teile

This corrigendum becomes effective on 3 July 2024 for incorporation in the official English version of the EN.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Ref. No.:EN 12953-3:2016/AC:2024 E

EN 12953-3:2016/AC:2024 (E)

1 Modification to 12.1, Thickness of straight tubes subject to external pressure

Replace the existing subclause 12.1 with the following:

“

12.1 Thickness of straight tubes subject to external pressure

The wall thickness e_t – c_1 (ordered nominal thickness minus tolerance) of straight tubes ≤ 170 mm nominal outside diameter, subjected to external pressure, shall be greater or equal than the maximum given by Formulae (65), (66) or Table 7.

$$e_{\mathrm{ct,el.}} = d_0 \sqrt[3]{\frac{pS_2(1-\nu^2)}{2\,\mathrm{E}}} + c_{2,\mathrm{red.}} \tag{65}$$

$$e_{\mathrm{ct,pl.}} = \frac{p\,d_0}{1,6\,f} + c_2 \tag{66}$$

where

$e_{\mathrm{ct,el}}$	required wall thickness of straight tubes with reference to elastic buckling
$e_{\mathrm{ct,pl}}$	required wall thickness of straight tubes with reference to plastic deformation
c_2 = 0,75 mm	allowance for metal wastage
$c_{2,\mathrm{red}}$ = 0,3 mm	reduced allowance for metal wastage effective on elastic buckling
ν	Poisson's ratio
S_2	safety factor (S_2 = 3,0; see 13.1.3).

NOTE For ferritic steel the Poisson’s ratio ν = 0,3 can be used.

Table 7 — Minimum thickness of tubes

Dimensions in millimetres

Nominal outside diameter	Minimum thickness $e_t - c_1$
$d_0 \leq 26,9$	1,90
$26,9 < d_0 \leq 54,0$	2,20
$54,0 < d_0 \leq 76,1$	2,50
$76,1 < d_0 \leq 88,9$	2,80
$88,9 < d_0 \leq 114,3$	3,15
$114,3 < d_0 \leq 139,7$	3,50
$139,7 < d_0 \leq 168,3$	3,99

.”.