SLOVENSKI STANDARD
SIST EN 17038-2:2019/AC:2021

01-december-2021

Črpalke - Metode za kvalifikacijo in verifikacijo indeksa energijske učinkovitosti centrifugalnih črpalk - 2. del: Preskušanje in računanje indeksa energijske učinkovitosti (IEE) enodelnih črpalk

Pumps - Methods of qualification and verification of the Energy Efficiency Index for rotodynamic pump units - Part 2: Testing and calculation of Energy Efficiency Index (EEI) of single pump units

Pumpen - Methoden zur Qualifikation und Verifikation des Energieeffizienzindexes für Kreiselpumpen - Teil 2: Prüfung und Berechnung des Energieeffizienzindexes (EEI) einzelner Pumpenaggregate

Pompes - Méthodes de qualification et de vérification de l'indice de rendement énergétique des groupes motopompes rotodynamiques - Partie 2 : Essais et calcul de l'indice de rendement énergétique (EEI) des groupes motopompes simples

Ta slovenski standard je istoveten z: EN 17038-2:2019/AC:2021

ICS:

23.080	Črpalke	Pumps
27.015	Energijska učinkovitost. Ohranjanje energije na splošno	Energy efficiency. Energy conservation in general

SIST EN 17038-2:2019/AC:2021 en,fr,de

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 17038-2:2019/AC

October 2021

ICS 23.080

English version

Pumps - Methods of qualification and verification of the Energy Efficiency Index for rotodynamic pump units - Part 2: Testing and calculation of Energy Efficiency Index (EEI) of single pump units

Pompes - Méthodes de qualification et de vérification de l'indice de rendement énergétique des groupes motopompes rotodynamiques - Partie 2 : Essais et calcul de l'indice de rendement énergétique (EEI) des groupes motopompes simples

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This corrigendum becomes effective on 13 October 2021 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 17038-2:2019/AC:2021 E

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1 Changes related to EN 17038-2:2019/AC:2020 (00197C15)

1.1 Modification to 5.2.3, Determination of part load and over load points and reference control curve

Format the line "Determination of part load and over load points and reference control curve" *as heading 5.2.3.*

1.2 Modification to 6.3.4, Determination of $Q_{100\ \%}$ from Q_{BEP}

In 1), replace "Formula 6.23" *with* "Formula (23)".

1.3 Modification to 6.3.5, Determination of the $P_{1,avg,c}$-value

In 5), replace "Formula (10)" *with* "Formula (4)".

2 Changes related to EN 17038-2:2019/AC:2021 (00197C17)

2.1 Modification to 5.2.3, Determination of part load and over load points and reference control curve

In Formula (3), the quotient in brackets shall be multiplied by "$H_{100\%}$" instead of *"$Q_{100\%}$".*

I.e. replace Formula (3): "

$$H_i = \left(\frac{H}{100}\right)_i \cdot Q_{100\%} \tag{3}$$

" with: "

$$H_i = \left(\frac{H}{100}\right)_i \cdot H_{100\%} \tag{3}$$

".

2.2 Modification to 6.2, The semi-analytical model of the pump

In Formula (13), – the exponent shall be „-0,15".

I.e. replace Formula (13): "

$$D_{imp}^2 \cdot \frac{n}{60} < 1 \Rightarrow k_{corr} = \left(\frac{n}{n_{N,PU}}\right)^{-0,15} \tag{13}$$

" with: "

$$D_{imp}^2 \cdot \frac{n}{60} < 1 \Rightarrow k_{corr} = \left(\frac{n}{n_{N,PU}}\right)^{-0,15} \tag{13}$$

".

2.3 Modification to 6.4.2, The model of the Power Drive System (PDS)

In Formula (33):

— *at the beginning of the formula, replace "$p_{l,PDS(100;100)}$" with "$p_{L,PDS\,(100;100)}$";*

— *at the end of the formula, replace the index to read "-2 $p_{L,PDS(50;25)}$".*

I.e. replace Formula (33): "

$$B_n = -p_{l,PDS(100;100)} + 3 \cdot p_{L,PDS(100;50)} - 2 \cdot p_{L,PDS(100;25)} \tag{33}$$

" with: "

$$B_n = -p_{L,PDS(100;100)} + 3 \cdot p_{L,PDS(100;50)} - 2 \cdot p_{L,PDS(50;25)} \tag{33}$$

".

2.4 Modification of B.2.1, Additional supporting points at Q/Q_{BEP} = 0,25

In Formula (B.9): "

$$\left(\frac{P}{P_{BEP}}\right)_{q=0,25} = \frac{0,0962\cdot\left(\lambda_{PL}^{*}\right)^{3} - 0,0727\cdot\left(\lambda_{PL}^{*}\right)^{2} + 0,6651\cdot\lambda_{PL}^{*} + 0,0085}{0,937\cdot\left(\lambda_{BEP}^{*}\right)^{2} + 0,7468\cdot\lambda_{BEP}^{*} + 0,02}\cdot\frac{\lambda_{PL}^{*}}{\lambda_{BEP}^{*}}$$

replace "+ 0,0085" with "- 0,0085" and "0,937" with "0,0937", to read the following formula: "

$$\left(\frac{P}{P_{BEP}}\right)_{q=0,25} = \frac{0,0962\cdot\left(\lambda_{PL}^{*}\right)^{3} - 0,0727\cdot\left(\lambda_{PL}^{*}\right)^{2} + 0,6651\cdot\lambda_{PL}^{*} - 0,0085}{0,0937\cdot\left(\lambda_{BEP}^{*}\right)^{2} + 0,7468\cdot\lambda_{BEP}^{*} + 0,02}\cdot\frac{\lambda_{PL}^{*}}{\lambda_{BEP}^{*}}$$

".

I.e. replace Formula (B.9): "

$$\left(\frac{P}{P_{BEP}}\right)_{q=0,25} = \frac{0,0962\cdot\left(\lambda_{PL}^{*}\right)^{3} - 0,0727\cdot\left(\lambda_{PL}^{*}\right)^{2} + 0,6651\cdot\lambda_{PL}^{*} + 0,0085}{0,937\cdot\left(\lambda_{BEP}^{*}\right)^{2} + 0,7468\cdot\lambda_{BEP}^{*} + 0,02}\cdot\frac{\lambda_{PL}^{*}}{\lambda_{BEP}^{*}} \qquad \text{(B.9)}$$

" with: "

$$\left(\frac{P}{P_{BEP}}\right)_{q=0,25} = \frac{0,0962\cdot\left(\lambda_{PL}^{*}\right)^{3} - 0,0727\cdot\left(\lambda_{PL}^{*}\right)^{2} + 0,6651\cdot\lambda_{PL}^{*} - 0,0085}{0,0937\cdot\left(\lambda_{BEP}^{*}\right)^{2} + 0,7468\cdot\lambda_{BEP}^{*} + 0,02}\cdot\frac{\lambda_{PL}^{*}}{\lambda_{BEP}^{*}} \qquad \text{(B.9)}$$

".

And "0,0937" in the nominator shall also appear in Formula (B.8).

I.e. replace Formula (B.8): "

$$\left(\frac{P}{P_{BEP}}\right)_{q=0,25} = \frac{0,2699\cdot\left(\lambda_{PL}^{*}\right)^{2} - 0,4442\cdot\lambda_{PL}^{*} + 0,021}{0,937\cdot\left(\lambda_{BEP}^{*}\right)^{2} + 0,7468\cdot\lambda_{BEP}^{*} + 0,02}\cdot\frac{\lambda_{PL}^{*}}{\lambda_{BEP}^{*}} \qquad \text{(B.8)}$$

" with: "

$$\left(\frac{P}{P_{BEP}}\right)_{q=0,25} = \frac{0,2699\cdot\left(\lambda_{PL}^{*}\right)^{2} - 0,4442\cdot\lambda_{PL}^{*} + 0,021}{0,0937\cdot\left(\lambda_{BEP}^{*}\right)^{2} + 0,7468\cdot\lambda_{BEP}^{*} + 0,02}\cdot\frac{\lambda_{PL}^{*}}{\lambda_{BEP}^{*}} \qquad \text{(B.8)}$$

".