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English Version

**Flanges and their joints - Design rules for gasketed circular  
flange connections - Part 5: Calculation method for full face  
gasketed joints**

Brides et leurs assemblages - Règles de calcul des  
assemblages à brides circulaires avec joint - Partie 5:  
Méthode de calcul pour assemblages avec joints pleine  
face

Flansche und ihre Verbindungen - Regeln für die  
Auslegung von Flanschverbindungen mit runden Flanschen  
und Dichtung - Teil 5: Berechnungsmethode für  
Verbindungen mit vollflächiger Dichtung

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**Contents**

Page

Foreword.....3

1 Scope .....3

2 Normative references .....3

3 Symbols and abbreviated terms .....3

4 Introduction .....5

5 Definition of an equivalent gasket .....6

6 Effective gasket geometry ..... 13

7 Modification of tightness criteria equations ..... 13

8 Application of the proposed method on several standard assemblies ..... 15

9 Application of the proposed method on a non-standard assembly ..... 18

10 Conclusion ..... 22

Bibliography ..... 23

**Figures**

Figure 1 — "FULL FACE" gasket areas division and definition of the equivalent gasket .....6

Figure 2 — Compressed gasket width.....7

Figure 3 — Variation of  $E_G$  versus initial gasket stress  $Q$  .....7

Figure 4 — Flange rotation .....8

Figure 5 — Case with no contact on the inside part of the gasket.....8

Figure 6 — Case with contact on the inside part of the gasket .....9

Figure 7 — Gasket force calculation on bolt hole part .....9

Figure 8 — Equivalent gasket external diameter in plastic case..... 12

Figure 9 — Effective sealing and mechanical parts..... 14

Figure 10 — Elastic/plastic gasket behaviour combination ..... 14

Figure 11 — Relative equivalent gasket dimensions ..... 16

Figure 12 — Required bolt up load ratio (EN 1591-1 based proposed method/ TAYLOR-FORGE based method)..... 17

Figure 13 — Load ratios for all the elements ..... 17

Figure 14 — Initial required bolt load comparison ..... 20

Figure 15 — Relative effective sealing width ..... 21

Figure 16 — Gasket sealing width comparison ..... 22

## Foreword

This document (CEN/TR 1591-5:2012) has been prepared by Technical Committee CEN/TC 74 "Flanges and their joints", the secretariat of which is held by DIN.

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EN 1591 "*Flanges and their joints — Design rules for gasketed circular flange connections*" consists of the following parts:

- *Part 1: Calculation method;*
- *Part 2: Gasket parameters;*
- *Part 3: Calculation method for metal to metal contact type flanged joint (CEN/TS);*
- *Part 4: Qualification of personnel competency in the assembly of bolted joints fitted to equipment subject to the Pressure Equipment Directive;*
- *Part 5: Calculation method for full face gasketed joints (CEN/TR).*

## 1 Scope

This Technical Report gives guidance for the calculation of full face gasketed joints on the basis of the calculation method given in EN 1591-1.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1591-1:2001+A1:2009, *Flanges and their joints — Design rules for gasketed circular flange connections — Part 1: Calculation method*

## 3 Symbols and abbreviated terms

|             |  |
|-------------|--|
| $A_{Ge}$    | effective gasket area ( $= \pi * d_{Ge} * b_{Ge}$ ), [mm <sup>2</sup> ], see Equation (26) |
| $b_{Ge}$    | effective gasket width, (mm), see Figure 2   |
| $b_{Gi}$    | interim value of effective gasket width, [mm]  |
| $b_{Gseal}$ | effective sealing gasket width, [mm], Figure 9   |
| $b_{GQ}$    | compressed gasket width, [mm], Figure 2  |
| $d_{F1}$    | gasket force acting diameter for zone A, Equations (12), (14)                              |