

Compact flanged connections

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Foreword

The NORSOK standards are developed by the Norwegian petroleum industry to ensure adequate safety, value adding and cost effectiveness for petroleum industry developments and operations. Furthermore, NORSOK standards are, as far as, possible intended to replace oil company specifications and serve as references in the authorities regulations.

The NORSOK standards are normally based on recognised international standards, adding the provisions deemed necessary to fill the broad needs of the Norwegian petroleum industry. Where relevant, NORSOK standards will be used to provide the Norwegian industry input to the international standardisation process. Subject to development and publication of international standards, the relevant NORSOK standard will be withdrawn.

The NORSOK standards are developed according to the consensus principle generally applicable for most standards work and according to established procedures defined in NORSOK A-001.

The NORSOK standards are prepared and published with support by The Norwegian Oil and Gas Association, The Federation of Norwegian Industries, Norwegian Shipowners' Association and The Petroleum Safety Authority Norway.

NORSOK standards are administered and published by Standards Norway.

Attention is drawn to the possibility that some of the elements of this NORSOK standard may be the subject of patent rights. Queries about patent rights may be directed to Standards Norway.

This NORSOK standard is based on common principles utilized by VERAX¹⁾, Vector Technology Group AS and Off.N.Galperti SpA.

The CFC as described in Clause 5 is based upon the SPO¹⁾ compact flange developed by Vector International AS.

Annex A, B, C, D and H are normative for products according to Clause 5, whilst Annex E, F and G are informative.

Experience from the first edition of this NORSOK standard has revealed a need of the following improvements, which have been incorporated into the second edition:

- Requirements in order to improve documentation of mechanical properties in 4.2.
- Nickel alloys added for flanges, see 5.6.1.
- More specific guidelines to alignment in 5.14.7 including shear force capacity of seal ring.
- Improved design of blind flange in A.3 in order to improve sealing with a rigid interface.
- Design of integral flanges in A.4 in order to make them more feasible with all type of valves and equipment nozzle designs.
- Orifice spacers for monitoring of flow rate have been added to Clause 5, see A.7.
- Reducing threaded flanges for instrument connections have been added to Clause 5, see A.8.
- An informative bibliography has been added.

Introduction

This NORSOK standard is developed to provide an industry standard for a CFC which is an alternative to conventional flanges as specified in ASME standards, European Standard and International Standard, with reduced weight and smaller overall dimensions. In addition leak tightness reliability is increased by its

¹⁾ VERAX, SPO, CFS and GC - Compact Flanges are trade names of products supplied by VERAX, Vector Technology Group AS and Off.N.Galperti SpA. This information is given for the convenience of users of this NORSOK standard and does not constitute an endorsement by NORSOK of the products named. Equivalent products may be used if they can be shown to lead to the same results.