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**BS EN ISO 12211:2012**



BSI Standards Publication

# **Petroleum, petrochemical and natural gas industries — Spiral plate heat exchangers (ISO 12211:2012)**

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This British Standard is the UK implementation of EN ISO 12211:2012.

The UK participation in its preparation was entrusted to Technical Committee PSE/17/-/6, Processing equipment and systems for petroleum and natural gas industries.

A list of organizations represented on this committee can be obtained on request to its secretary.

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English Version

## Petroleum, petrochemical and natural gas industries - Spiral plate heat exchangers (ISO 12211:2012)

Industries du pétrole, de la pétrochimie et du gaz naturel -  
Échangeurs thermiques à plaques en spirale (ISO  
12211:2012)

Erdöl- und Erdgasindustrie - Spiralförmige  
Wärmeaustauscher (ISO 12211:2012)

This European Standard was approved by CEN on 27 April 2012.

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## Foreword

This document (EN ISO 12211:2012) has been prepared by Technical Committee ISO/TC 67 "Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries" in collaboration with Technical Committee CEN/TC 12 "Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries" the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by February 2013, and conflicting national standards shall be withdrawn at the latest by February 2013.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

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### Endorsement notice

The text of ISO 12211:2012 has been approved by CEN as a EN ISO 12211:2012 without any modification.

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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 12211 was prepared by Technical Committee ISO/TC 67, *Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries*, Subcommittee SC 6, *Processing equipment and systems*.

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## Introduction

It is necessary that users of this International Standard be aware that further or differing requirements can be needed for individual applications. This International Standard is not intended to inhibit a vendor from offering, or the purchaser from accepting, alternative equipment or engineering solutions for the individual application. This can be particularly applicable where there is an innovative or developing technology. Where an alternative is offered, it is the responsibility of the vendor to identify any variations from this International Standard and provide details.

This International Standard requires the purchaser to specify certain details and features.

A bullet (●) at the beginning of a clause or subclause indicates a requirement for the purchaser to make a decision or provide information (for information, a checklist is provided in Annex B).

In this International Standard, where practical, US Customary (USC) or other units are included in parentheses for information.

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# Petroleum, petrochemical and natural gas industries — Spiral plate heat exchangers

## 1 Scope

This International Standard specifies requirements and gives recommendations for the mechanical design, materials selection, fabrication, inspection, testing and preparation for shipment of spiral plate heat exchangers for the petroleum, petrochemical and natural gas industries.

It is applicable to stand-alone spiral plate heat exchangers and those integral with a pressure vessel.

## 2 Normative reference

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

ISO 15156 (all parts), *Petroleum and natural gas industries — Materials for use in H<sub>2</sub>S-containing environments in oil and gas production*

NACE MR0103<sup>1)</sup> *Materials Resistant to Sulfide Stress Cracking in Corrosive Petroleum Refining Environments*

NACE SP0472, *Methods and Controls to Prevent In-Service Environmental Cracking of Carbon Steel Weldments in Corrosive Petroleum Refining Environments*

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

### 3.1

#### **alternate channels welded**

#### **ACW**

channel closures seal-welded at alternate edges such that each chamber is accessible by removing the corresponding hot or cold side end cover

### 3.2

#### **centre core**

distribution chamber at the centre of the spiral exchanger

### 3.3

#### **channel**

spiral passage formed by strips of metal rolled around a centre core within an outer shell

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