

SLOVENSKI STANDARD
SIST EN ISO 15547-2:2006**01-september-2006****Nadomešča:**
SIST EN ISO 15547:2002

**Petrokemična industrija ter industrija za predelavo nafte in zemeljskega plina –
Ploščni prenosniki toplote – 2. del: Lotani aluminijški narebreni ploščni prenosniki
toplote (ISO 15547-2:2005)**Petroleum, petrochemical and natural gas industries - Plate-type heat exchangers - Part
2: Brazed aluminium plate-fin heat exchangers (ISO 15547-2:2005)**iTeh STANDARD PREVIEW**Erdöl-, petrochemische und Erdgasindustrie - Plattenwärmetauscher - Teil 2: Gelötete
Rippen-Platten Wärmeaustauscher aus Aluminium (ISO 15547-2:2005)standards.itih.eu
[SIST EN ISO 15547-2:2006](http://standards.itih.eu)Industries du pétrole, de la pétrochimie et du gaz naturel - Echangeurs thermiques a
plaques - Partie 2: Echangeurs thermiques a plaques en aluminium brasé (ISO 15547-
2:2005)**Ta slovenski standard je istoveten z: EN ISO 15547-2:2005****ICS:**

71.120.30	Prenosniki toplote	Heat exchangers
75.180.20	Predelovalna oprema	Processing equipment
77.150.10	Aluminijški izdelki	Aluminium products

SIST EN ISO 15547-2:2006**en,fr**

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 15547-2

November 2005

ICS 27.060.30; 75.180.20

Supersedes EN ISO 15547:2001

English Version

**Petroleum, petrochemical and natural gas industries - Plate-type
heat exchangers - Part 2: Brazed aluminium plate-fin heat
exchangers (ISO 15547-2:2005)**

Industries du pétrole, de la pétrochimie et du gaz naturel -
Echangeurs thermiques à plaques - Partie 2: Echangeurs
thermiques à plaques en aluminium brasé (ISO 15547-
2:2005)

Erdöl-, petrochemische und Erdgasindustrie -
Plattenwärmetauscher - Teil 2: Gelötete Rippen-Platten
Wärmeaustauscher aus Aluminium (ISO 15547-2:2005)

This European Standard was approved by CEN on 28 October 2005.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

EN ISO 15547-2:2005 (E)**Foreword**

This document (EN ISO 15547-2:2005) has been prepared by Technical Committee ISO/TC 67 "Materials, equipment and offshore structures for petroleum 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 May 2006, and conflicting national standards shall be withdrawn at the latest by May 2006.

This document supersedes EN ISO 15547:2001.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Endorsement notice

The text of ISO 15547-2:2005 has been approved by CEN as EN ISO 15547-2:2005 without any modifications.

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INTERNATIONAL
STANDARD

ISO
15547-2

First edition
2005-11-01

**Petroleum, petrochemical and natural gas
industries — Plate-type heat
exchangers —**

Part 2:
**Brazed aluminium plate-fin heat
exchangers**

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*Industries du pétrole, de la pétrochimie et du gaz naturel — Échangeurs
thermiques à plaques —*

Partie 2: Échangeurs thermiques à plaques en aluminium brasé

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Reference number
ISO 15547-2:2005(E)

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Published in Switzerland

Contents

Page

Foreword.....	iv
Introduction	v
1 Scope	1
2 Terms and definitions	1
3 General.....	3
4 Proposal information required	3
5 Drawings and other data requirements	4
6 Design	5
7 Materials	7
8 Fabrication.....	8
9 Inspection and testing.....	12
10 Preparation for shipment.....	14
Annex A (informative) Recommended practice	15
Annex B (informative) Plate-fin heat exchanger checklist.....	18
Annex C (informative) Plate-fin heat exchanger data sheets.....	19
Bibliography	26

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ISO 15547-2:2005(E)

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 15547-2 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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This first edition of ISO 15547-2, together with ISO 15547-1 cancels and replaces ISO 15547:2000, of which it constitutes a technical revision.

ISO 15547 consists of the following parts, under the general title *Petroleum, petrochemical and natural gas industries — Plate-type heat exchangers*:

- *Part 1: Plate-and-frame heat exchangers*
- *Part 2: Brazed aluminium plate-fin heat exchangers*

Introduction

Some of the requirements within this part of ISO 15547 have been extracted from the standards of the brazed aluminium plate-fin heat exchanger manufacturers' association (ALPEMA).

Users of this part of ISO 15547 should be aware that further or differing requirements may be needed for individual applications. This part of ISO 15547 is not intended to inhibit a vendor from offering, or the purchaser from accepting, alternative equipment or engineering solutions for the individual application. This may be particularly applicable where there is an innovative or developing technology. Where an alternative is offered, the vendor should identify any variations from this part of ISO 15547 and provide details.

A recommended practice is included within this part of this International Standard (see Annex A).

This part of ISO 15547 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 part of ISO 15547, where practical, US Customary units are included in parentheses for information.

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Petroleum, petrochemical and natural gas industries — Plate-type heat exchangers —

Part 2: Brazed aluminium plate-fin heat exchangers

1 Scope

This part of ISO 15547 gives requirements and recommendations for the mechanical design, materials selection, fabrication, inspection, testing, and preparation for shipment of brazed aluminium plate-fin heat exchangers for use in petroleum, petrochemical and natural gas industries.

2 Terms and definitions

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

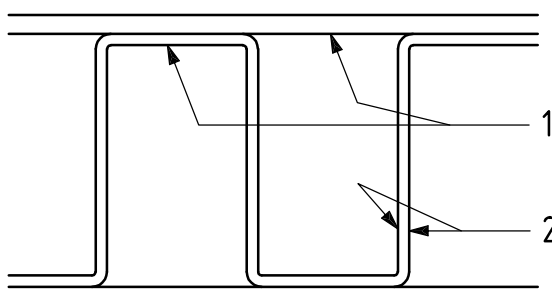
2.1

heat transfer area

sum of the primary and secondary heat transfer surface areas of all heat-transfer passages in contact with a stream

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See Figure 1.



Key

- 1 primary heat transfer surface
- 2 secondary heat transfer surface

NOTE 1 The primary heat transfer surface within the plate-fin heat exchanger consists of the bare parting sheet and the fin base directly brazed to the parting sheet.

NOTE 2 The secondary heat transfer surface is provided by the fins. This area includes both sides of the fins where they are in contact with the fluid.

Figure 1 — Cross-sectional view of fin and parting sheet — Heat transfer area

ISO 15547-2:2005(E)

2.2

item number

purchaser's identification number for a plate-fin heat exchanger

2.3

minimum design metal temperature

lowest metal temperature at which pressure-containing elements can be subjected to design pressure

EXAMPLE Ambient temperature, process fluid temperature.

2.4

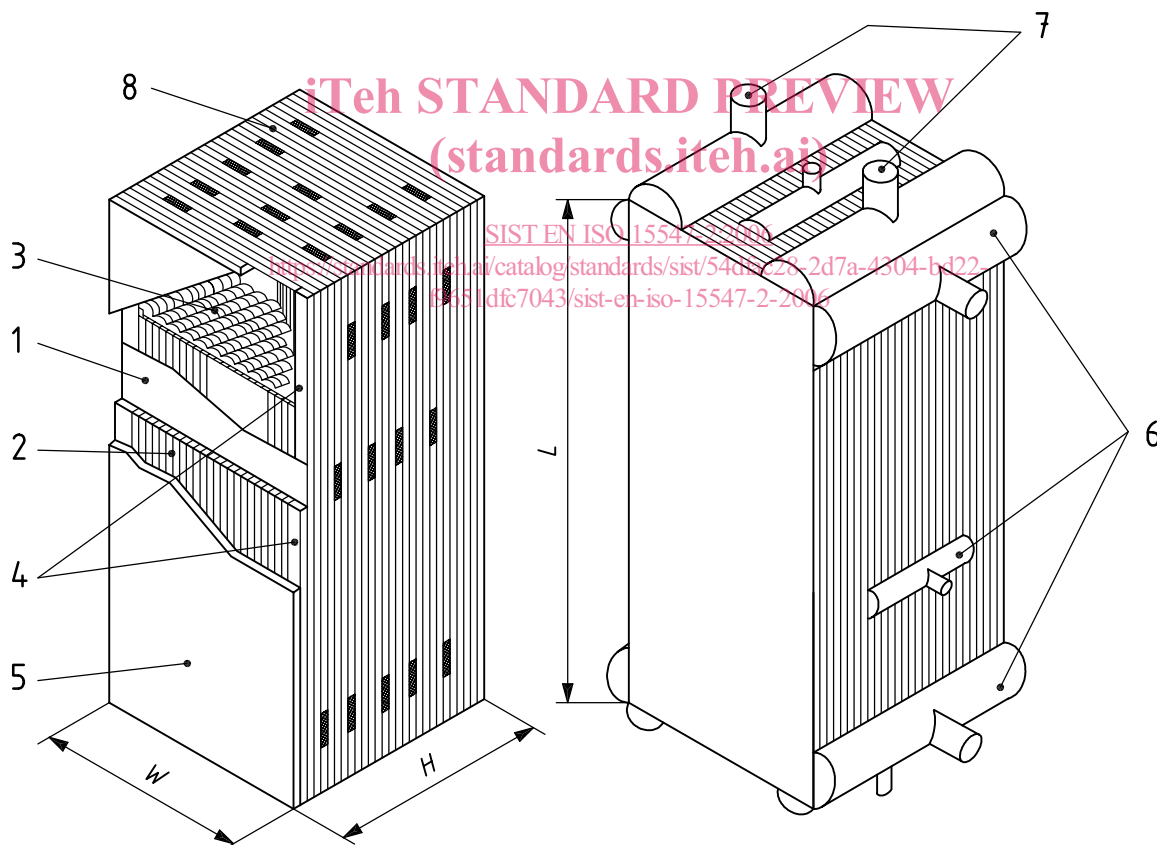
plate-fin heat exchanger

heat exchanger consisting of a block (core) of alternating layers (passages) of corrugated fins

See Figure 2.

NOTE 1 The layers are separated from each other by parting sheets and sealed along the edges by means of side bars, and are provided with inlet and outlet ports for the streams. The block is bounded by cap sheets at the top and bottom.

NOTE 2 All the layers carrying the same stream are connected together by headers (inlet, outlet, intermediate) directly attached by welding onto the brazed core.

**Key**

H height	1 parting sheet	5 cap sheet
L length	2 heat transfer fins	6 headers
W width	3 distributor fins	7 nozzles
	4 side bars	8 block (core)

Figure 2 — Typical brazed aluminium plate-fin heat exchanger and components