Plate Heat Exchangers for General Refinery Services

Part 2—Brazed Aluminum Plate-fin Heat Exchangers

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Contents

Foreword

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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*.

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.

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

Part 2: Brazed aluminium plate-fin heat exchangers

1 Scope

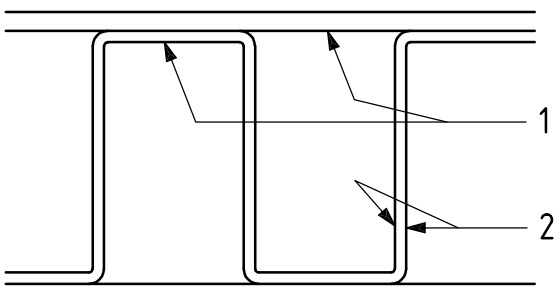
This part of ISO 15547 gives requirements and recommendations for the mechanical design, materials selection, fabrication, inspection, testing, and preparation for shipment of brazed aluminium plate-fin heat exchangers for use in petroleum, petrochemical and natural gas industries.

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

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