

Unipetrol RPA, s.r.o.	Heat exchangers and their parts - Technical delivery terms	N 11 140
Technical Supervision dept.		

The standard is binding for all departments of the company and external organizations which order, accept and supply complete heat exchangers and their parts.

The departments are obliged to present the standard to all external organizations performing these activities for them and to the companies the standard is also binding for.

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1. General provisions

- 1.1 This standards apply to ordering, acceptance and supply of complete heat exchangers and their parts. This standard does not apply to ordering of hydrogenation regeneration bundles.
- 1.2 Prior to ordering the particular exchanger, there is an obligation to discuss all matters with the OTD department.
- 1.3 Heat exchangers are ordered as complete sets as per relevant drawings.
- 1.4 Parts of heat exchangers for repair are ordered separately and individually.
- 1.5 The order as well as purchase requisitions must contain the following data:
 - a) total number of ordered sets or parts
 - b) detailed breakdown with number of pieces
 - c) numbers of drawings
 - d) operating medium
 - e) operating parameters (pressure, temperature)

2. Technical requirements

- 2.1 all heat exchangers and individual parts are executed as per drawings that are specified in the order.
- 2.2 Covers, shell and bellmouths are embossed with brand/logo of the manufacturer's company, material mark and a heat number.
- 2.3 Exchangers and their parts must be designated pursuant to ČSN 69 0010-5.3.

3. Acceptance

- 3.1 Complete heat exchangers and pipe bundles are accepted at the manufacturer by a client's representative responsible – employee of a machinery technical inspection, a maintenance technician or an inspection technician of reserved pressure equipment (OTD), a representative of the investment department.

It replaces:	Administrator:	Valid from:
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- 3.2 Inserting the bundle into the shell of the heat exchanger in presence of the client's representative responsible is carried out only in case this requirements is specified in the order.
- 3.3 All leak and pressure tests are to be carried out in presence of the client's representative responsible.
- 3.4 Complete technical documentation in scope of art. 4. is to be submitted to the client's representative responsible when accepting the work.

4. Handed-over documentation

- 4.1 The manufacturer shall provide a book of inspection-passport for the heat exchangers and their parts that will include:
 - 4.1.1 Complete accompanying technical documentation specified on the fabrication drawing or agreed in the order, drawings and stress analysis (what concerns TNS all pursuant to ČSN 69 0010)
 - 4.1.2 Certificates of used materials including report on executed positive material identification PMI in scope as per S 338.
 - 4.1.3 Protocols on weld joint inspection with evaluation.
 - 4.1.4 Protocols on further prescribed or executed non-destructive inspections of materials or weld joints with evaluation.
- 4.2 Results of final/construction and first pressure tests confirmed by inspection technician for reserved pressure equipment and by a representative of an authorized person if it is a product as per Act No. 22/1997 Coll.

5. Packaging and transport

- 5.1 Complete heat exchangers and their parts are delivered unpacked, machined surfaces will be painted with a conservation coating.
- 5.2 It is necessary to secure the whole equipment against damage during transport.
- 5.3 All bellmouths must be blinded and secured against penetration of undesired particles and against damage of sealing surface of the flanges.

6. List of quoted standards and documents

ČSN 69 0010 - Stationary pressure vessels
Decree No. 18/1979 Coll. ČÚBP and ČBÚ – determining reserved pressure equipment and defining some conditions for ensuring their security

Decree No. 551/1990 Coll. ČÚBP and ČBÚ – amending the decree No. 18/1979 Coll.

Government decree No 26/2003 Coll. – determining technical requirements for pressure equipment

Act No. 22/1997 Coll. – on technical requirements for products and amendments to some laws

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S 338 – Receiving inspection of metallic materials and products manufactured from them using the non-destructive methods

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