



Choose certainty.
Add value.

Simple Pressure Vessels

Simple Pressure Vessels Directive
(SPV 87/404/EEC)

Welded Vessels with Internal Gauge Pressure
Greater than 0,5 bar

Certification and Inspection

TÜV SÜD Czech s.r.o.

TÜV®

TÜV SÜD Czech is a Notified Body as defined in the Simple Pressure Vessels Directive (SPV) accredited for full scope of pressure equipment, vessels and assemblies and recognized by the European Commission (NB 1017). TÜV SÜD Czech is authorized to carry out type examinations.

The area of pressure products is one of the traditional services provided by TÜV SÜD Czech from the beginning of its operations. It is also one of the basic reasons of the formation of the “technical supervision association” of TÜV SÜD on the German market. Today we provide services based on harmonized regulations of the European Union, we are able to meet requirements of a number of national regulations not only from Europe but from overseas as well.

‘Simple pressure vessel’ means any welded vessel subjected to an internal gauge pressure greater than 0,5 bar which is intended to contain air or nitrogen and the vessel is manufactured in series.

The vessel shall be made of:

- either a cylindrical part of circular cross-section closed by outwardly dished and/or flat ends which revolve around the same axis as the cylindrical part
- or two dished ends revolving around the same axis
- the maximum working pressure of the vessel shall not exceed 30 bar and the product of that pressure and the capacity of the vessel (PS.V) shall not exceed 10 000 bar/litre
- the minimum working temperature must be no lower than minus 50 °C and the maximum working temperature shall not be higher than 300 °C for steel and 100 °C for aluminium or aluminium alloy vessels

| | |
|---|--|
| Vessels in respect of which the product of PS and V exceeds 50 bar/litre must satisfy the essential safety requirements set out in Annex I. | Vessels in respect of which the product of PS and V is 50 bar/litre or less must be manufactured in accordance with sound engineering practice in one of the Member States and bear markings as laid down in section 1 of Annex II, with the exception of the EC mark referred to in Article 16. |
|---|--|

EC Type-Examination (PS and V exceeds 50 bar/litre)

EC type-examination is the procedure by which TÜV SÜD Czech certifies that a prototype vessel satisfies the provisions of this Directive.

EC Type-Examination Application includes:

- the name and address of the manufacturer or of his authorized representative and the place of manufacture of the vessels
- the design and manufacturing schedule (Annex II 3)
- vessel which is representative of the production envisaged

Examination of the vessel:

- verification that the vessel has been manufactured in line with the design
- performing appropriate examinations and tests

If the prototype complies TÜV SÜD Czech will issue EC Type certificate.

EC verification

The purpose of EC verification is to check and certify that series-manufactured vessels comply with the standards or with the approved prototype. EC verification is performed by TÜV SÜD Czech and as a result EC verification certificate is issued.

Verification shall be performed on the batches of vessels submitted by their manufacturer. Vessels are subject of a hydrostatic test or, a pneumatic test of equivalent effect on each vessel in the batch at a pressure P_h equal to 1,5 times the vessel's design pressure in order to check its soundness.

EC Mark and Inscription

The vessel or data plate must bear the EC mark with at least the following information:

- the maximum working pressure P_S in bar
- the maximum and minimum working temperature T_{max} in °C and T_{min} in °C
- the capacity of the vessel V in l
- the name or mark of the manufacturer
- the type and serial or batch identification of the vessel.

Key Harmonised Standards of the Directive

- EN 286-1:1998 - Simple unfired pressure vessels designed to contain air or nitrogen
Part 1: Pressure vessels for general purposes
- EN 286-2:1992 - Simple unfired pressure vessels designed to contain air or nitrogen
Part 2: Pressure vessels for air braking and auxiliary systems for motor vehicles and their trailers
- EN 286-3:1994 - Simple unfired pressure vessels designed to contain air or nitrogen
Part 3: Steel pressure vessels designed for air braking equipment and auxiliary pneumatic equipment for railway rolling stock
- EN 286-4:1994 - Simple unfired pressure vessels designed to contain air or nitrogen
Part 4: Aluminium alloy pressure vessels designed for air braking equipment and auxiliary pneumatic equipment for railway rolling stock

Other Harmonised Standards of the Directive

- EN 2857-1:2004, EN 571-1:1997, EN 583-1:1998, EN 970:1997, EN 1011-1:1998, EN 1290:1998, EN 1330-3:1997, EN 1714:1997, EN 10207:2005, EN 12062:1997, EN ISO 15614-1:2004, EN ISO 15614-2:2005

Related certifications and inspection in scope of:

- Pressure Equipment Directive (PED)
- Transportable Pressure Equipment Directive (TPED)
- Machinery Directive (MD)
- ADR/RID



Czech



www.tuv-sud.cz

TÜV SÜD Czech s.r.o.

Novodvorská 994
142 21 Praha 4
Tel.: +420 239 046 800
Fax: +420 239 046 806
info@tuv-sud.cz

