

BS EN 12561-1:2011



BSI Standards Publication

Railway applications — Tank wagons

Part 1: Identification plates for tank wagons for the carriage of dangerous goods

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National foreword

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The UK participation in its preparation was entrusted to Technical Committee RAE/1/-/9, Railway Applications - Wagons (Tank/Freight).

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

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English Version

Railway applications - Tank wagons - Part 1: Identification plates for tank wagons for the carriage of dangerous goods

Applications ferroviaires - Wagons citernes - Partie 1 :
Plaques d'identité des wagons citernes destinés au
transport des matières dangereuses

Bahnanwendungen - Kesselwagen - Teil 1:
Kennzeichnungsschilder von Kesselwagen für die
Beförderung von gefährlichen Gütern

This European Standard was approved by CEN on 3 June 2011.

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Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

This document (EN 12561-1:2011) has been prepared by Technical Committee CEN/TC 256 "Railway applications", the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by December 2011, and conflicting national standards shall be withdrawn at the latest by December 2011.

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.

This document supersedes EN 12561-1:1998.

This European Standard *Railway applications — Tank wagons* consists of the following parts:

- *Part 1: Identification plates for tank wagons for the carriage of dangerous goods;*
- *Part 2: Bottom emptying devices for liquid products including vapour return;*
- *Part 3: Bottom filling and emptying devices for gases liquefied under pressure;*
- *Part 4: Devices for top filling and emptying of liquid products;*
- *Part 5: Devices for vapour return while filling or emptying of liquid products;*
- *Part 6: Manholes;*
- *Part 7: Platforms and ladders;*
- *Part 8: Heating connections.*

The previous version of EN12561-1 set requirements for marking and identification plate for tank wagons. All the marking requirements for tank wagons are put in the prEN 15877-1. The EN12561-1 describes only the identification plate.

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

1 Scope

This European Standard lays down the identification plates for tank wagons used for the carriage of:

- liquefied gases of class 2 of RID,
- substances of classes 3, 4.1, 4.2, 4.3, 5.1, 5.2, 6.1, 6.2, 8 and 9 of RID.

Compressed gases have not been considered in this European Standard.

This European Standard also defines the dimensions and the fixing of identification plates and various particulars to be marked on them.

The requirements of RID shall override conflicting requirements of this European Standard.

This European Standard applies to new tank wagons built after the 1st January 2010.

2 Normative references

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.

EN 10088-2, *Stainless steels — Part 2: Technical delivery conditions for sheet/plate and strip of corrosion resisting steels for general purposes*

EN 14564, *Tanks for transport of dangerous goods- Terminology*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 14564 and the following apply.

3.1 capacity

capacity of shell or shell compartment for tanks, i.e. the total inner volume of the shell or shell compartment expressed in litres or cubic metres.

NOTE When it is impossible to completely fill the shell or the shell compartment because of its shape or construction, this reduced capacity shall be used for the determination of the degree of filling and for the marking of the tank

3.2 expert

person who carries out tests on tanks and who is approved by a competent authority

3.3 gauge pressure

pressure in excess of atmospheric pressure

NOTE pressures are always indicated as gauge pressure in this document."

4 Identification plates for gases

4.1 General

The identification plates shall be in accordance with and with EN 12561-1.

NOTE See also the requirements of the current version of RID [2].

π mark of Figures 1 and 2 is given according the TPED directive [1].

4.2 Identification plate for gases liquefied under pressure

The identification plate for the carriage of gases liquefied under pressure shall be in accordance with Figure 1. The particulars to be indicated on this plate in the numbered fields are contained in Table 1.

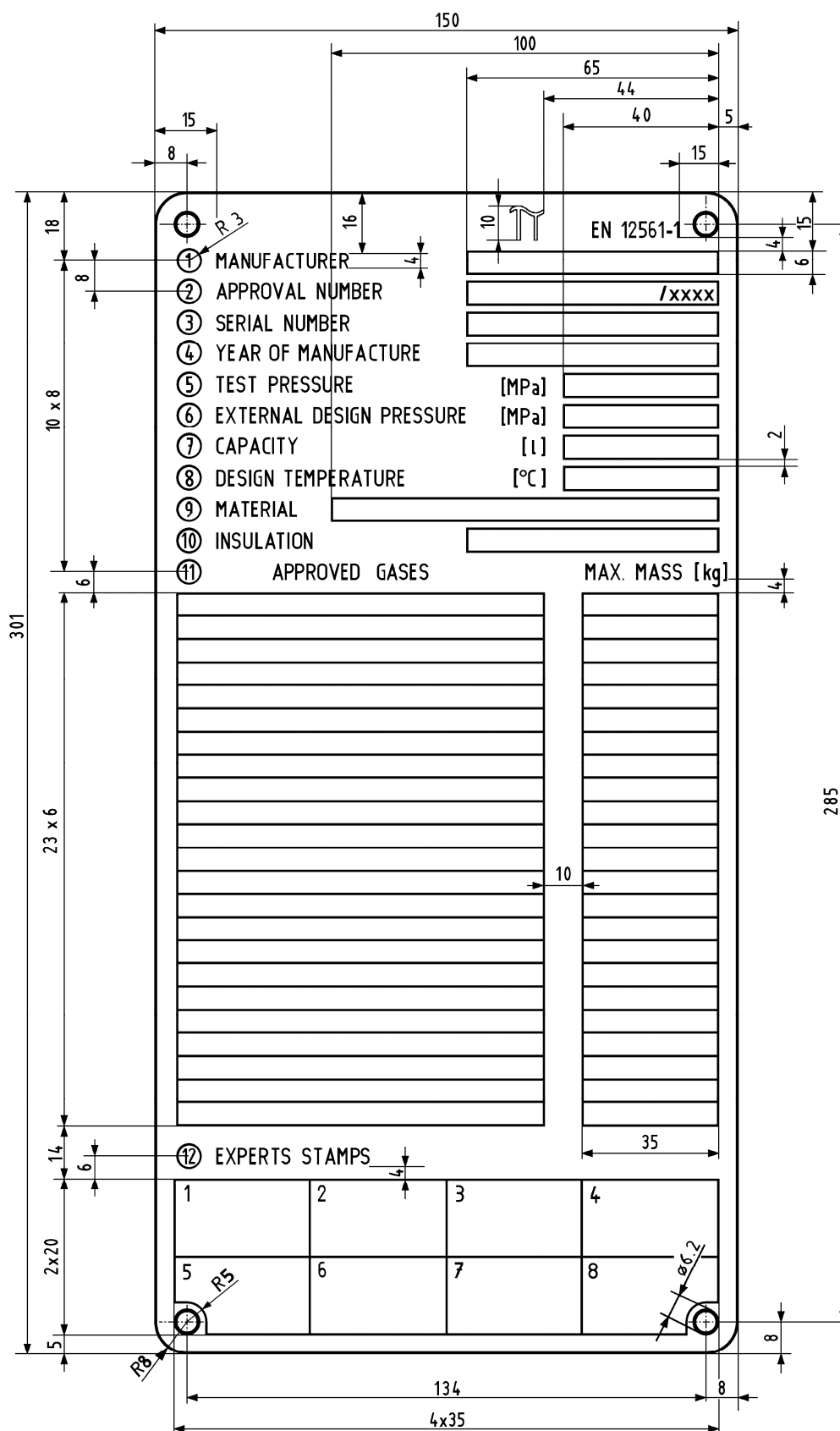


Figure 1 — Identification plate for liquefied gases

Table 1 — Particulars to be indicated on the identification plate for liquefied gases

No.	Particulars to be indicated
1	Manufacturer's name or mark
2	Approval number given by the competent authority or a body designated by this authority. After the /, the 4 last digits shall be the numerical code of the notify body.
3	Manufacturer's serial number
4	Year of manufacture
5	Test pressure in MPa
6	External design pressure in MPa
7	Capacity of the tank in litres (in the case of multiple-element shells, the capacity of each element)
8	Design temperature in °C (only required if above +50 °C or below -20 °C)
9	Material of the shell (and of the ends if different) according to EN where available and where appropriate the protective lining
10	On shells equipped with thermal insulation, the expression "thermally insulated" or "themally insulated by vacuum", otherwise insert the expression "NONE"
11	The names in full of the gases for the carriage of which the shell is approved and corresponding mass in kg. This mass is calculated by multiplying the capacity of the tank by the maximum permissible mass of contents per litre of capacity.
12	Fields for marking of: — date (month and year) of the initial test and of most recent test like: MM/YYP for periodic or initial test MM/YYL for intermediate test — stamp of expert who carried out the test

4.3 Identification plate for refrigerated liquefied gases

The identification plate for the carriage of refrigerated liquefied gases shall be in accordance with Figure 2. The particulars to be indicated on this plate in the numbered fields are contained in Table 2.

Dimensions in millimetres

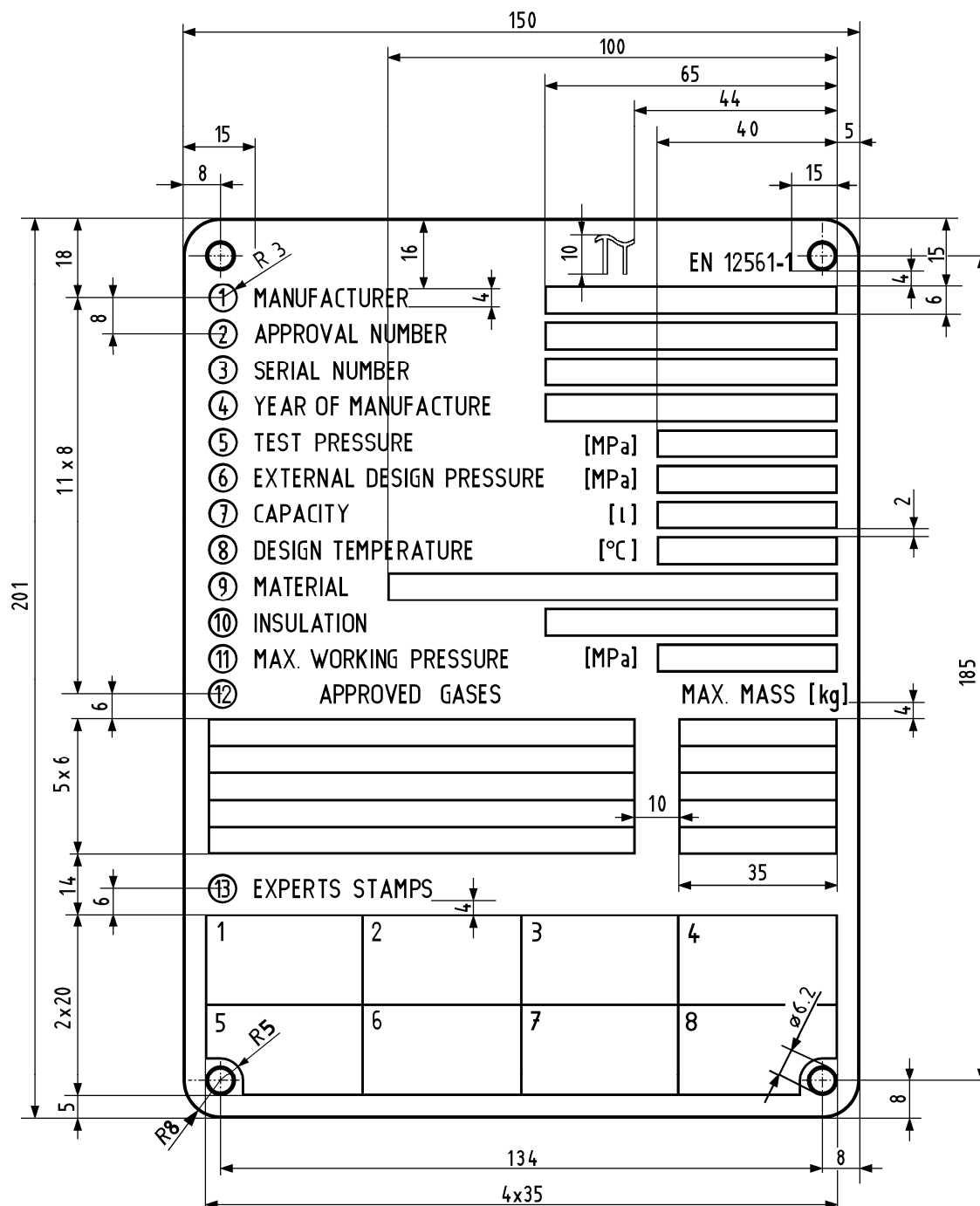


Figure 2 — Identification plate for refrigerated liquefied gases

Table 2 — Particulars to be indicated on the identification plate for refrigerated liquefied gases

No.	Particulars to be indicated
1	Manufacturer's name or mark
2	Approval number given by the competent authority or a body designated by this authority. After the /, the 4 last digits shall be the numerical code of the notify body.
3	Manufacturer's serial number
4	Year of manufacture
5	Test pressure in MPa
6	External design pressure in MPa
7	Capacity of the tank in litres (in the case of multiple-element shells, the capacity of each element)
8	Design temperature in °C. This corresponds to the lowest permissible filling temperature
9	Material of the shell (and of the ends if different) according to EN where available and where appropriate, the protective lining
10	According to the type of insulation, the expression "thermally insulated" or "thermally insulated by vacuum"
11	Maximum permissible working pressure in MPa
12	The names in full of the gases for the carriage of which the shell is approved and corresponding mass. This mass is calculated by taking into account the lowest filling temperature, the relevant density and the allowable filling factor
13	Fields for marking of: — date (month and year) of the initial test and of most recent test like: MM/YYP for periodic or initial test MM/YYL for intermediate test — stamp of expert who carried out the test

5 Identification plates for liquid and solid substances

5.1 General

The identification plates shall be in accordance with the requirements of the current version of RID [2] and with EN 12561-1.

5.2 Identification plate for general purposes

The identification plate for tank wagons for the carriage of substances the name, approved concentration and/or maximum permissible load mass of which is not required to be specified shall be in accordance with Figure 3. The particulars to be indicated on this plate in the numbered fields are contained in Table 3.

Dimensions in millimetres

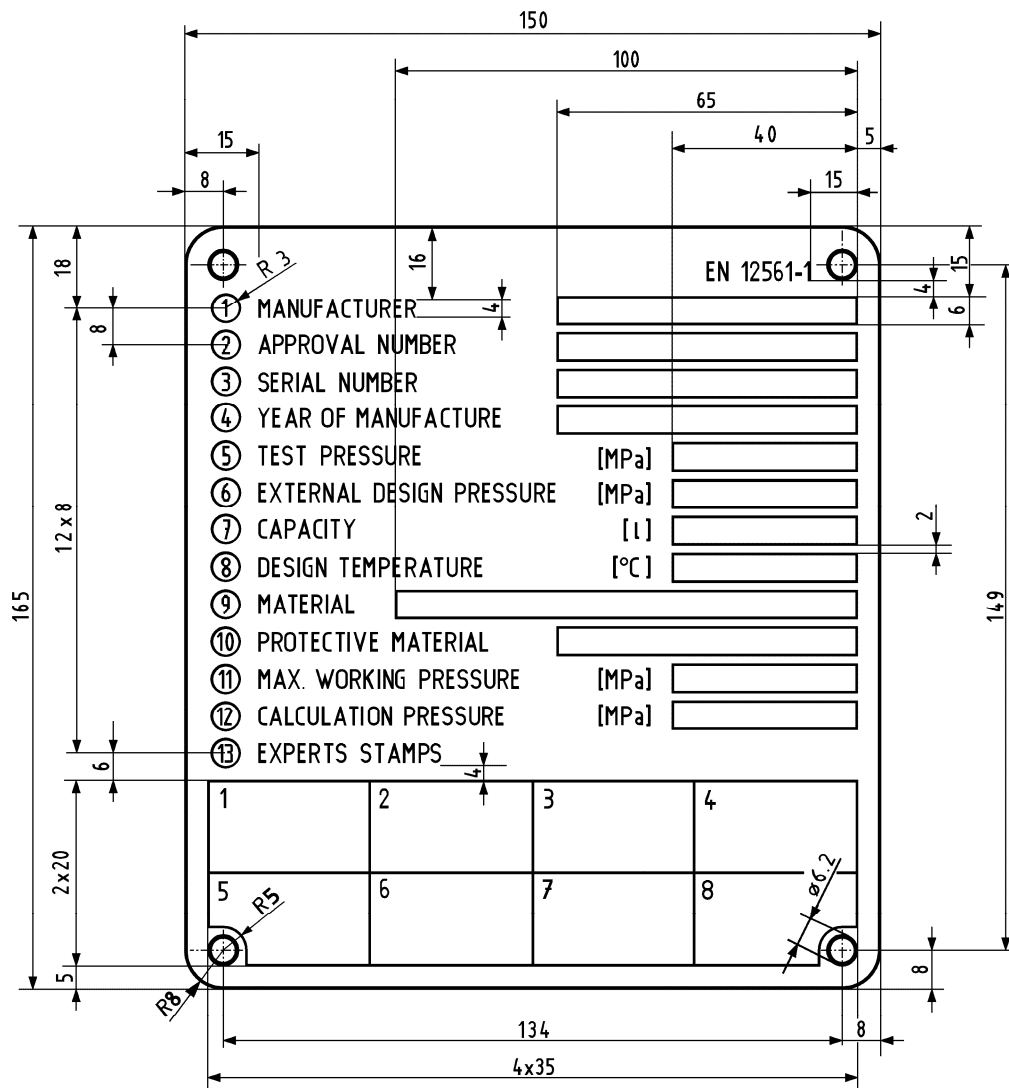


Figure 3 — Identification plate for general purposes

Table 3 — Particulars to be indicated on the identification plate for general purposes

No.	Particulars to be indicated
1	Manufacturer's name or mark
2	Approval number given by the competent authority or a body designated by this authority
3	Manufacturer's serial number
4	Year of manufacture
5	Test pressure in MPa
6	External design pressure in MPa
7	Capacity of the tank in litres (in the case of multiple-element shells, the capacity of each element)
8	Design temperature in °C (only required if above +50 °C or below -20 °C)
9	Material of the shell (and of the ends if different) according to EN where available
10	Material of lining or coating where this is applied to protect the tank if applicable. Brand names may be used if they are in common use
11	Maximum permissible working pressure in MPa
12	RID calculation pressure in MPa
13	Fields for marking of: — date (month and year) of the initial test and of most recent test like: MM/YYP for periodic or initial test MM/YYL for intermediate test — stamp of expert who carried out the test

5.3 Identification plate for specific substances

The identification plate for tank wagons for the carriage of substances the name, approved concentration and/or maximum permitted load mass of which are required to be specified shall be in accordance with Figure 4. The particulars to be indicated on this plate in the numbered fields are contained in Table 4.

Dimensions in millimetres

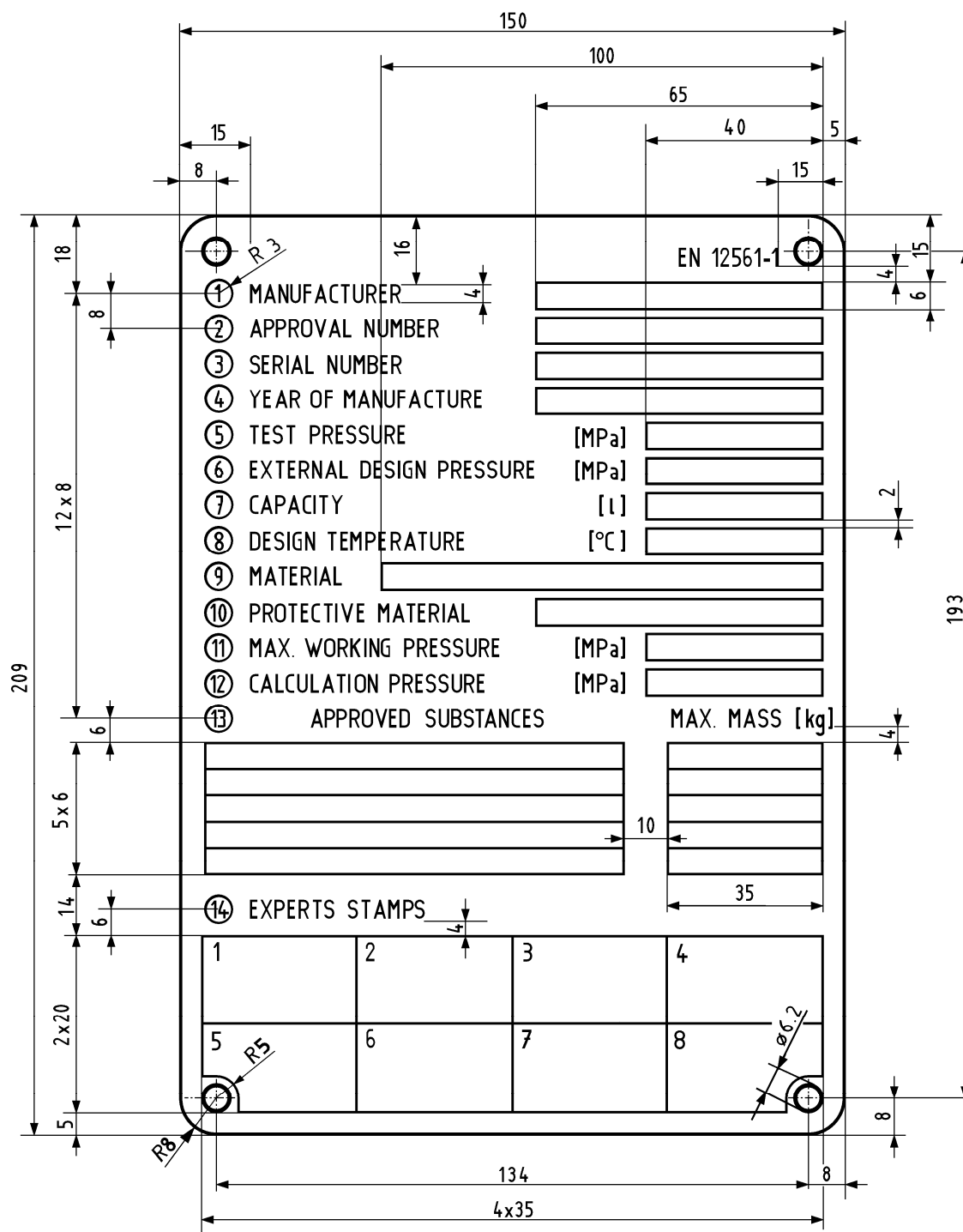


Figure 4 — Identification plate for specific substances

Table 4 — Particulars to be indicated on the identification plate for specific substances

No.	Particulars to be indicated
1	Manufacturer's name or mark
2	Approval number given by the competent authority or a body designated by this authority
3	Manufacturer's serial number
4	Year of manufacture
5	Test pressure in MPa
6	External design pressure in MPa
7	Capacity of the tank in litres (in the case of multiple-element shells, the capacity of each element)
8	Design temperature in °C (only required if it is above +50 °C or below -20 °C)
9	Material of the shell (and of the ends if different) according to EN where available
10	Material of lining or coating where this is applied to protect the tank if applicable. Brand names may be used if they are on common use.
11	Maximum permissible working pressure in MPa
12	RID calculation pressure in MPa
13	The names in full and where required the approved concentration of the substances for the carriage of which the shell is approved, and/or corresponding mass in kg.
14	Fields for marking of: — date (month and year) of the initial test and of most recent test like: MM/YYP for periodic or initial test MM/YYL for intermediate test — stamp of expert who carried out the test

6 Common requirements

6.1 Manufacturing process and materials

The identification plate shall be made of stainless steel as specified in EN 10088-2. The thickness of the plate shall be not less than 3 mm.

6.2 Marking

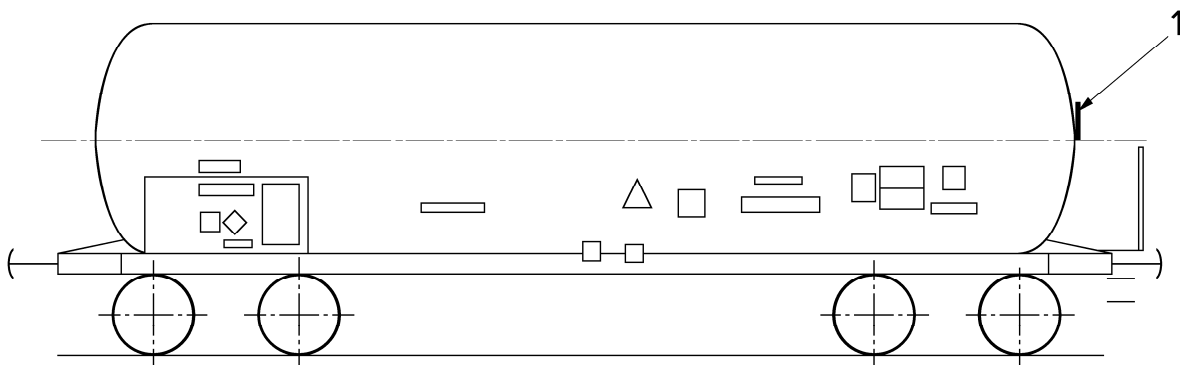
All the characters shall have a nominal height of 4 mm.

Titles and borders of the fields shall be applied to a sufficient depth to ensure that they remain legible (for example by engraving or etching).

6.3 Position and attachment of the identification plate

The identification plate shall be fixed to a welded spacing piece which shall be of a rigid design and readily accessible in order to facilitate stamping.

Its position shall be easily accessible for inspections. Figure 5 gives an example for the location of the identification plate.



Key

- 1 identification plate

Figure 5 — Example of location of identification plate

The fixing of the plate on the spacing piece shall be achieved in one of the following ways:

- using brass screws, one of which shall be sealable, or
- using rivets the material of which shall be compatible with that of the base.
- A fixing by welding is allowed.

One of the brass screws or rivets shall be sealed by the expert.

6.4 Language

The identification plate shall be written in one of the official languages of the country of registration of the tank or in one of the three official CEN languages (English, French, German).

NOTE The fields on the plates are numbered to avoid any linguistic misunderstanding in international traffic.

Bibliography

- [1] *99/36/EC, Council Directive 1999/36/EC of 29 April 1999 on transportable pressure equipment¹*
- [2] *RID, Regulations concerning the International Carriage of Dangerous Goods by Rail² implementing Commission Directives 2003/28/EC and 2003/29/EC.*

¹Commonly known as TPED.

²Commonly known as RID.

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