



DILLINGER HÜTTE GTS

CUSTOMER INFORMATION

Indications for plate ordering in accordance with the Pressure Equipment Directive
Considerations of the actual AD 2000 Regelwerk

Revision 1, December 2004

Key words: Pressure Equipment Directive; Pressure Vessel Steels in accordance with AD-Regelwerk; AD 2000

General indications about the Pressure Equipment Directive - consequences for steel ordering

The **Pressure Equipment Directive (PED, Directive 97/23/EC)** defines a framework for the production and placing on the market of pressure equipment. Since the PED came into force on May 30 2002 every manufacturer of pressure equipment destined for the Common Market has to observe the general rules of the Directive. Only under these conditions he has the right to put the CE-marking on the equipment.

The materials which are required for the manufacture of pressure equipment (e.g. plates) or components (e.g. heads) do **not** bear the CE-marking; accordingly this is also not mentioned in the inspection certificates.

According annex 1, paragraph 4.2 b of the PED, the **following materials may be used for the construction of pressure vessels:**

1. Materials which comply with harmonised standards, e.g. EN 10028 parts 1-7
2. Materials covered by a European approval of pressure equipment materials comparable to the former VdTÜV-material data sheets
3. Materials with particular material appraisal, for equipment of categories III and IV by the notified bodies.

Material manufacturers who want to deliver materials as e.g. plates for pressure vessels of the categories II, III and IV with a **3.1.B certificate according to EN 10024** (remark: in the scheduled revision of EN 10024 the former inspection certificate 3.1.B will be replaced by the certificate type 3.1) must have an appropriate quality-assurance system for the manufacture, inspection and testing, certified by a competent body established within the Community, e.g. in accordance with EN ISO 9001. To show our customers that Dillinger Hütte GTS has the necessary qualifications (QA-System), we have acquired a corresponding certificate from the TÜV Saarland (see appendix). Upon order, an expert of the vessel manufacturer's choice may as well issue an inspection report type 3.2 or inspection certificate 3.1.C (remark: in the scheduled revision of EN 10024 the former inspection report 3.2 will be replaced by the inspection certificate 3.2 and the inspection certificate 3.1.C is omitted)

It is to be taken into consideration that in deviation from this general rule other inspection provisions are defined for the individual steel types and thickness limits in AD2000-W1 and W10.



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Adaptation of the AD-Regelwerk to the Pressure Equipment Directive / AD2000-Merkblatt - Consequences for steel ordering

Due to the introduction of the PED the former AD-Regelwerk was replaced by the new **AD2000-Regelwerk** in order to comply with the requirements of the PED. Therefore Dillinger Hütte GTS has acquired homologations in accordance with the new AD2000-Merkblatt W0 for the applicable steel types as per EN 10025, EN 10028 and several VdTÜV-material data sheets, so that heavy plate deliveries in accordance with AD2000-Merkblätter W1 and W10 can be performed can meet the requirements of the PED. Heavy plate orders in accordance with the no longer valid AD-Regelwerk (e.g. for repair purposes) can be accepted upon special inquiry.

Therefore it is important that the AD2000-Regelwerk (e.g. AD2000-W1) is clearly stated on the order instead of the old version (e.g. AD-W1).

For the placing on the market of new installations the Pressure Vessel Directive applies. Moreover we point out to the fact that the Technical Regulations as TRB, TRbF and TRG do still apply for old installations, but can only be considered by substitution for the operation of new installations according to the Betriebs-Sicherheits-Verordnung (operation safety decree), until corresponding Technical Regulations will be established on this basis. The elaboration of the TRD-Regelwerk has also been stopped, because there are meanwhile harmonised European Standards in this area as e.g. EN 12952, in which materials are considered in part 2. However these regulations can still be applied in orders in single cases upon special request.

According to AD2000-Merkblatt W10 edition 01.2003 the steel types for which an impact test at a temperature defined by AD2000-W10 must be performed have to fulfil impact requirements of at least 27 J. This minimum value of 27 J is derived from the European Pressure Equipment Directive (PED, 97/23/EG).

This means for example for orders in accordance with EN 10028-3, edition December 1992:

P355N, P355NH: Charpy-V transverse at -20 °C = 27 J instead of 20 J

P355NL1: Charpy-V transverse at -40 °C = 27 J instead of 20 J

P355NL2: Charpy-V transverse at -50 °C = 27 J unchanged

In the newer edition of EN 10028-3, edition June 2003, which has meanwhile been published as harmonised standard, the values are raised accordingly. In orders according to EN 10028-3, edition December 1992 in combination with AD2000-W10 higher mechanical values of 7 J have to be considered.

The validity of the regulations is as follows:

Pressure Equipment Directive	02.1998 (97/23/EG)
AD2000-Merkblatt W0	10.2003 (priority versus AD2000W1 and AD2000W10)
AD2000-Merkblatt W1	10.2003
AD2000-Merkblatt W10	10.2003

Dillingen, December 2004
Marketing Boiler & Pressure Vessels

Appendix