

- by using materials covered by a European approval of pressure equipment materials in accordance with Article 11,
- by a particular material appraisal;

(c) for pressure equipment in categories III and IV, particular appraisal as referred to in the third indent of (b) must be performed by the notified body in charge of conformity assessment procedures for the pressure equipment. (See *Guidelines: 7/1,7/10,7/15,7/21,9/10,9/11,9/13,9/14*)

4.3.

The equipment manufacturer must take appropriate measures to ensure that the material used conforms with the required specification. In particular, documentation prepared by the material manufacturer affirming compliance with a specification must be obtained for all materials. For the main pressure-bearing parts of equipment in categories II, III and IV, this must take the form of a certificate of specific product control. Where a material manufacturer has an appropriate quality-assurance system, certified by a competent body established within the Community and having undergone a specific assessment for materials, certificates issued by the manufacturer are presumed to certify conformity with the relevant requirements of this section.

SPECIFIC PRESSURE EQUIPMENT REQUIREMENTS

In addition to the applicable requirements of sections 1 to 4, the following requirements apply to the pressure equipment covered by sections 5 and 6. (See *Guidelines: 7/10,7/16,7/19,7/2,7/24,7/25,7/5,7/6,7/7*)

5. FIRED OR OTHERWISE HEATED PRESSURE EQUIPMENT WITH A RISK OF OVERHEATING AS REFERRED TO IN ARTICLE 3 (1)

This pressure equipment includes: (See *Guidelines: 2/22,3/4*)

- steam and hot-water generators as referred to in **Article 3**, section 1.2, such as fired steam and hot-water boilers, superheaters and reheaters, waste-heat boilers, waste incineration boilers, electrode or immersion-type electrically heated boilers, pressure cookers, together with their accessories and where applicable their systems for treatment of feedwater and for fuel supply, and
- process-heating equipment for other than steam and hot water generation falling under **Article 3**, section 1.1, such as heaters for chemical and other similar processes and pressurized food-processing equipment. This pressure equipment must be calculated, designed and constructed so as to avoid to minimize risks of a significant loss of containment from overheating. In particular it must be ensured, where applicable, that:
 - (a) appropriate means of protection are provided to restrict operating parameters such as heat input, heat take-off and, where applicable, fluid level so as to avoid any risk of local and general overheating,
 - (b) sampling points are provided where required to allow evaluation of the properties of the fluid so as to avoid risks related to deposits and/or corrosion,
 - (c) adequate provisions are made to eliminate risks of damage from deposits,
 - (d) means of safe removal of residual heat after shutdown are provided,
 - (e) steps are taken to avoid a dangerous accumulation of ignitable mixtures of combustible substances and air, or flame blowback.

6. PIPING AS REFERRED TO IN ARTICLE 3, SECTION 1.3