

Directive 2014/68/EU

Adopted by CLAP : 10/03/2021

Directive References:

Annex I §
7.4**Subject:** ESR on fabrication - Test pressure**Question:**

The test pressure as defined in Annex I § 7.4 shall take into account the maximum loading that the equipment can withstand in service. Does it mean that the value of the test pressure must be determined by taking creep into account?

Answer:

No.

Due to its short duration, the pressure test can only confirm the resistance of the equipment with regard to the sole risks of failure independent of time. It cannot provide any indication on its long-term resistance, in particular on its resistance to material degradation produced by time when the service temperature is in the creep range.

Thus, creep should not be taken into account for the determination of the test pressure. The temperature correction to be used to calculate the test pressure shall be based, in the creep range as at lower temperatures, on the mechanical characteristics of the materials which are independent of time, respectively at ambient temperature and at service temperature.

Note 1: When the service temperature is within the creep range, such characteristics may not be available in material standards. Appropriate solutions must be defined.

Note 2: This analysis complies with 10.2.3.3.1 of EN 13445-5 and 9.3.2.2.1 of EN 13480-5.

Creep is taken into account in the design of the equipment. The resistance of the equipment to the risks of failure linked to the effects of time is verified by the in-service inspections