

0.7.1 REFERENCE LEGISLATION

On February 12, 2005 entered into force Decree 1 December 2004, n. 329 by the Ministry of Productive Activities, entitled: "Rules for the commissioning and use of pressure equipment and assemblies referred to Article 19 of Legislative Decree 25 February 2000, No 93" (PED).

SCOPE (article 1)

The DM 329 is applicable to:

- Pressure equipment and "assemblies" as defined by the Decree 93/2000, in particular:
- vessels of gas and liquids;
- generators of steam and hot water;
- piping intended to contain liquids and gases;
- equipment and facilities that existed prior to May 29, 2002 and approved by ISPESL (ANCC) according to the rules in force before April 19, 2000;
- simple pressure equipment regulated by legislative decree 27/09/1991 n° 311;
- vessels and pipelines for liquids already in service before May 29, 2002 and never subjected to approval (and not falling into the conditions of exclusion provided for in Legislative Decree no. 93/2000).

Articles 4 and 6 of Ministerial Decree 329/2004 take care of the verification of first equipment (or supervision of commissioning) and the obligations of the commissioning with the declaration.

EXCLUSION FROM THE CONTROL OF THE COMMISSIONING

The following equipments and assemblies are excluded from the verification of commissioning:

- portable fire extinguishers and portable cylinders for breathing apparatus;
- simple vessels by Decree-Law No 311/1991 with pressure less than or equal to 12 bar and product pressure by volume lower than 8000 bar x liter;
- pressure vessels, including the simple equipment referred to Legislative Decree 27 September 1991, No 311, with a capacity <25 l and, if the pressure is <12 bar, with a capacity <50 liters.
- the assemblies for which from the relevant notified body or from a user inspectorate are made the verifications of the safety accessories or of the control devices.

COMMISSIONING

The current legislation provides that only for the pressure equipment or assemblies installed and assembled by the user should be done a verification of proper installation, known as first verification system or commissioning.

The test above mentioned must be requested by the user to the relevant ISPESL or ASL referred to art. 4 of the DM 329/2004.

Once the verification of first/new installation is done, the user is required, at the time of commissioning of the equipment/assembly, to send a statement of commissioning to the relevant ISPESL or ASL, which includes a numbered technical documents mentioned in Art. 6 of Decree 329/2004, including the report of the first verification system.

DECLARATION OF COMMISSIONING

The declaration of commissioning, to be sent to ISPESL and to USL or to ASL responsible, must contain:

- a list of the items, with respective values of pressure, temperature, capacity, and the working fluid;
- a technical report, with the plant diagram, containing the conditions of

installation and operation, security measures, protection and control measures adopted;

- an explicit declaration, drawn up under Article 2 of Decree of the President of the Republic of 20 October 1998, no 403, stating that the installation was done according to the operating Manual;
- the report issued by the supervisor and provided to the company at the end of the verification, if required;
- a list of components operating under viscose sliding or subjected to few cycle fatigue.
- the timing of periodical re-testing equipment (article 10 and Tables "Annex A and B" of the DM 329/2004)
- exemption from periodic re-testing (Article 11).

The documentation of the new equipment and/or assembly, built according to the PED, is now made up of the Declaration of Conformity issued by the manufacturer and supplemented by the operation and maintenance manual, rather than the ISPELS booklet that accompanied pressure vessels built in accordance with the previous legislation.

VERIFICATION OF PERIODIC CHECKS:

The current law puts in the hands of the end users of pressure equipment/assembly a number of obligations related to periodical checks which they are subjected.

In particular, users are obliged to:

- Submit equipment/sets to regular checks.
- Exclude from operation the equipment/sets that are not subject to periodic checks on time.
- Encourage and provide the necessary assistance for the conduct of periodic inspections.
- Communicate the decommissioning and/or restart of equipment/assembly.

CLASSIFICATION

The Ministerial Decree 329/2004 provides that the pressure equipment falling within the scope of the decree, should be classified under the categories defined in Annex II of the Decree 93/2000 and, consequently, defined the frequency of checks for the requalification.

The classification must be made by the user even for the equipment in use before the entry into force of Legislative Decree no. 93/2000.

This technical specialist evaluation can be, if deemed necessary by the official ASL/ARPA responsible for periodic review, adequately supported by a specific document showing the appropriate arguments and technical considerations to support the classification made and signed by appropriate technical authority.

FREQUENCY

The Ministerial Decree 329/2004 regulates the frequency of checks according to the two tables annexed to the same Ministerial Decree (Table 0.7a and Table 0.7b).

The classification according to the fluid inside is approximately as follows:

a) fluids in group 1 include dangerous fluids (fluids are defined as hazardous substances or preparations as defined in Article 2, Section 2, of Legislative Decree no. 52/97, such as "explosive", "extremely flammable", "highly flammable", "flammable" when the maximum allowable temperature is above flashpoint, "highly toxic", "toxic" and "oxidizing") for such cases, the frequency of the periodic examination is two years.

b) For all the fluids in Group 2 such as air, air/water, nitrogen, argon, carbon dioxide, etc., the frequency may be three or four years depending

on the category.

Regarding to the discipline of the safety at the workplace, the law 81/2008, art. 71 provides that all equipments (including pressure vessels) are subjected to periodic inspections.

The first review is carried out by ISPESL which must execute the task within sixty days from the request. After that period the manufacturer can ask to the ASL to carry out this job to a public or private authorized entity.

Further checks are carried out by ASL, which provides within thirty days from the request after which the employer may make use of public or private entity authorized.

EXEMPTIONS FROM THE REGULAR REDEVELOPMENT

Are excluded from the requirement of periodic requalification:

- vessels containing fluids in Group 2, excluding water vapor, which are not subjected to internal or external corrosion, provided the pressure PS is less than or equal to 12 bar and the product of PS and the volume V does not exceed 12,000 bar x l;
- vessels with volume less than 1000 liters and pressure PS less than or equal to 30 bar belonging to cooling plants in which are not mounted vessels with volume and pressure greater than those indicated in letter a);
- vessels of water vapor self-producers for which the product of pressure PS in bar to volume in liters does not exceed 300 and pressure PS does not exceed 10 bar;
- vessels of water vapor does not self-producers for which the product of the pressure PS in bar to volume in liters does not exceed 400 and pressure PS does not exceed 10 bar;
- acetylene generators;
- the steam converters, traps, condensate separators, oil separators mounted along the pipelines of vapors or gases, filters, receivers and distributors barrels of vapor or gas and power machines belonging to category I and II for which do not occur the conditions laid down in Article 2, paragraph 1, letter o);
- All vessels containing liquids of Group 2;
- the tubes containing fluids of Group 2 and classified in category I and II;
- portable fire extinguishers, powder, foam or water-based with a gas cartridge whose pressure is less than or equal to 18 bar.

PRESSURE EQUIPMENT	LIMITS AND FREQUENCY OF INSPECTIONS
EQUIPMENT/SETS CONTAINING FLUIDS OF GROUP 1 (Legislative Decree no. 93/2000 Art. 3)	
Vessels/Assemblies classified in category III and IV, vessels containing unstable gases belonging to category I to IV, furnaces for the chemical industries and similar, generators and vessels for overheated liquids different than water.	Frequency of inspections: - every 2 years: functional test - every 10 years: integrity test
Vessels/Assemblies classified in category I and II	Frequency of inspections: - every 4 years: functional test - every 10 years: integrity test
Pipelines for gas, vapor and overheated liquids classified in category I, II and III	Frequency of inspections: - every 5 years: functional test - every 10 years: integrity test
Pipelines for liquids classified in category I, II and III	Frequency of inspections: - every 5 years: functional test - every 10 years: integrity test
Vessels for liquids classified in category I, II and III	Frequency of inspections: - every 5 years: functional test - every 10 years: integrity test

0.7a

PRESSURE EQUIPMENT	LIMITS AND FREQUENCY OF INSPECTIONS
EQUIPMENT/SETS CONTAINING FLUIDS OF GROUP 2 (Legislative Decree no. 93/2000 Art. 3)	
Vessels/Assemblies containing compressed gases, liquefied or dissolved or vapor other than water vapor classified in category III and IV and vessels of water vapor and water overheated in category I to IV.	Frequency of inspections: - every 3 years: functional test - every 10 years: integrity test
Vessels/Assemblies containing compressed gases, liquefied or dissolved or vapor other than water vapor classified in category I and II.	Frequency of inspections: - every 4 years: functional test - every 10 years: integrity test
Water vapor generator	Frequency of inspections: - every 2 years: functional test and inside inspection - every 10 years: integrity test
Pipelines for gas, vapor and overheated liquids classified in category III	Frequency of inspections: for TS ≤ 350 °C - every 10 years: integrity test for TS > 350 °C - every 5 years: functional test; - every 10 years: integrity test
Pipelines for liquids	No test
Vessels for liquids	No test
Bottles for breathing apparatus	- for underwater use: initial review every 4 years; following every 2 - for no-underwater use: review every 10 years
Portable fire extinguishers	- No corrosive gas: review every 10 years - Corrosive gas: review every 3 years

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