

EUROPEAN ASSOCIATION OF PUMP MANUFACTURERS
ASSOCIATION EUROPÉENNE DES CONSTRUCTEURS DE POMPES
EUROPÄISCHE VEREINIGUNG DER PUMPENHERSTELLER



SECRETARIAT
Standards Commission
Lyoner Straße 18
D-60528 Frankfurt - Niederrad

2000-08-10

EUROPUMP – Position paper

concerning the applicability of the EC-Directive 97/23/EC

“Pressure equipment” for pumps and pump units

Introduction

The EC-Directive "Pressure equipment" from 29 May 1997 came into force on 29. November 1999.

In the transition period from 29 November 1999 until 29 May 2002 the Member States must permit the placing on the market of pressure equipment and assemblies which comply with the regulations in force of their territory at the date of application of this Directive.

As from 30 May 2002, all Member States undertake to apply this Directive. From this date on, pressure equipment and assemblies may be placed on the market only if it satisfies the requirements of the Directive. The Directive defines the essential requirements regarding safety to be met by pressure equipment.

The Directive applies to the design, manufacture and conformity assessment of pressure equipment and assemblies with a maximum allowable pressure PS greater than 0,5 bar.

For the purposes of this Directive "Pressure equipment" means:

- vessels
- piping
- safety accessories
- pressure accessories

NOTE: Where applicable, pressure equipment includes elements attached to pressurised parts, such as flanges, nozzles, couplings, supports, lifting lugs etc.

There are general as well as special requirements to be met by pressure equipment depending of the category (I to IV), applicable to the pressure equipment.

Excluded from the scope of the Directive is equipment classified as no higher than category I of this Directive and covered e.g. by one of the following Directives:

- EC-Directive 98/37/EC "Machinery" of 22 June 1998
(replacing 89/392/EEC "Machinery" and its amendments)
- EC-Directive 73/23/EEC "Electrical equipment designed for use within certain voltage limits" (so-called "Low-Voltage" Directive)
- EC-Directive 94/9/EC "Equipment and protective systems intended for use in potentially explosive atmospheres" (also known as "ATEX 100a")

Conclusions and measures

The Members of EUROPUMP understood and agreed, that pumps and pump units are excluded from the scope of the Pressure Equipment Directive.

An “EC-Declaration of conformity” and the CE-marking as defined by the Pressure Equipment Directive (PED) are not applicable for pumps and pump units.

Pumps and pump units are subject of the “Machinery”-Directive 98/37/EC and are supplied with a “Declaration by the manufacturer” and/or with an “EC-Declaration of conformity” as well as with the CE-marking as defined by the “Machinery”-Directive.

This also encompasses conformity with the “Low Voltage”-Directive.

Pumps and pump units may also be subject to the Directive “ATEX 100a” and other Directives depending upon the intended use.

If ancillary components are needed to complete the pump unit, which are subject of the PED, the pump manufacturer/supplier shall select only such equipment, which is in conformity with the requirements of the PED and bears the CE-marking within the meaning of the PED.

Such items do not make the complete pump unit subject to the PED,

Annex: Supplementary explanations

According to article 1, paragraph 3.10, of this Directive furthermore are excluded from the scope:

Equipment comprising casings or machinery where the dimensioning, choice of material and manufacturing rules are based primarily on requirements for sufficient strength, rigidity and stability to meet the static and dynamic operational effects or other operational characteristics and ***for which pressure is not a significant design factor.***

In 1998, EUROPUMP had asked the Working group “Pressure” of the European Commission to explain in particular how to interpret the wording of article 1.3.10, namely “Equipment comprising casings or machinery...for which pressure is not a significant design

On 8 November 1999, the Working group “Pressure” of the European Commission approved the following relevant commentary:

1. Article 1.3.10 excludes pressurised equipment comprising casings or machinery from the scope of the PED
 - if this equipment is primarily dimensioned for loads other than pressure, i.e. for which pressure is not the significant design factor and
 - if it is primarily designed to move or rotate or fulfil other functions than pressure containment.

2. Such equipment, which is excluded from the scope of the PED, may include
 - engines including turbines and internal combustion engines;
 - steam engines, gas/steam turbines, turbo-generators, compressors, pumps and actuating devices
3. For such equipment pressure can be considered as not being a significant factor, if other factors alone or together are more significant than pressure. Other factors are e.g.:
 - dynamic loads with vibrations or very high number of cycles;
 - thermal loads together with a complicated form of structure;
 - stiffness of the structure because of external mechanical loads or requirements related to high weight;
 - requirements related to low elongation, low change of diameter or low other deformation because of functional requirements to rigidity.

NOTE: This shall be decided on a case by case basis, taking into account established safe industrial practice.
4. An over-dimensioning as such shall not result in exclusion from the PED with regard to article 1.3.10.

Explanatory notes given by the Working group "Pressure":

- 1 No factor¹⁾ is included in the requirements of the PED. Any factor¹⁾ given in a guideline would therefore go beyond the PED and should be avoided.
- 2 If a factor¹⁾ were used to decide whether the requirements of the PED are applicable or not, overdimensioning could result in a case where pressure equipment need not fulfil the requirements of the PED. This is not acceptable.
- 3 To decide on the exception with a factor¹⁾ of overdimensioning would consequently result in the necessity of a detailed stress analysis, especially if this factor¹⁾ would have been connected to the primary membrane stress. This is far beyond the present established industrial practice.
- 4 Furthermore, there is a danger that the more important influences explained in paragraphs 1 to 3 could be overlooked if the decision whether the pressure is a significant design factor were based on a factor of overdimensioning only.

Note: ¹⁾ means "design safety margin"