



ASSOCIATION OF WELL HEAD EQUIPMENT MANUFACTURERS

PO Box 197, Aberdeen, Scotland, AB9 6EE

GUIDANCE DOCUMENT

ON THE

AWHEM INTERPRETATION

OF THE

PRESSURE EQUIPMENT DIRECTIVE

GD 02-01

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FOREWORD

POLICY

AWHEM has developed this Interpretation through formation of a task group comprised of AWHEM member companies and represents the opinions of the membership. However, it is not intended to obviate the need for applying sound engineering judgement. The following is specifically drawn to the attention of any person following the provisions of these notes:

- a. This document is AWHEM's Interpretation of current legislation, which is not prescriptive in terms of equipment requirements and places the responsibility on the applicable "responsible person". Consequently, AWHEM cannot guarantee that if any person or organisation follows the Interpretation it will be complying with current legislation in all respects and will not be open to prosecution for failure to observe relevant legislation.
- b. All conditions, warranties, terms and undertakings expressed or implied statutory or otherwise, in respect of this Interpretation are hereby excluded.
- c. AWHEM shall not be liable to any person who follows the provisions of this Interpretation for damages, costs expenses, loss of profits, goodwill or any type of special indirect or consequential loss howsoever rising (and whether by any act, omission or negligence of AWHEM or its members), including any loss or damage suffered by a person following this Interpretation as a result of any action brought by a third party.
- d. It is a condition of use of this Interpretation that the entire policy statement section is brought to the attention of:
 - ? any equipment owner who purchases equipment from a supplier who elects to provide equipment or services in accordance with this Interpretation.
 - ? any supplier of equipment or services where the equipment owner insists that those products or services are provided in accordance with this Interpretation.

AWHEM does not in any manner warrant that compliance with this Interpretation will result in approval and/or certification of the well control equipment and AWHEM expressly disclaim any liability or responsibility for any loss for failure to obtain approval and/or certification.



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1.0 INTRODUCTION

The Pressure Equipment Directive (PED) (97/23/EC) hereinafter referred to as the Directive, was adopted by the fifteen Member States of the European Community and the three states of the European Free Trade Association (Norway, Iceland and Liechtenstein) as part of a "New Approach" to allow the free movement of goods throughout the European Economic Area (EEA).

The Directive has been transposed into law in each of the Member States; in the United Kingdom it is enforced by the Health and Safety Executive (HSE) under Statutory Instrument SI 1999/2001 - The Pressure Equipment Regulations 1999.

The Regulations are enforceable for all pressure equipment supplied from 29 May 2002 in the United Kingdom, but their use is optional for pressure equipment supplied before this date. Failure to comply with these regulations after 29 May 2002 will be a criminal offence and could result in a fine or imprisonment, or both.

This Directive and local legislation are subject to change, and as such, the reader should make themselves aware of the latest status of the document.

This document is intended to provide a unified position on equipment categorisation as pertaining to the Directive. Although compliance with this document does not guarantee immunity from investigation or prosecution, an AWHEM-backed interpretation of the Directive will carry more weight than that of an individual company.

The contents are kept deliberately brief; this document is not intended to replace the actual text of the Directives or the Regulations. Guidance notes on the Regulations are available from the DTI, and guidance is also available from Notified Bodies (appointed under the Regulations) such as Lloyds Register. The European Commission website contains a set of guidelines in question and answer form which are cross referenced to the Directive (<http://ped.eurodyn.com/>)



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2.0 COVERAGE AND DEFINITIONS

2.1 Coverage

The Regulations apply to the design, manufacture and conformity assessment of pressure equipment and assemblies of pressure equipment with a maximum allowable pressure greater than 0.5 bar unless excluded from the scope of the Regulation.

2.2 Definitions

The Regulations define:

- ? **Pressure Equipment** as vessels, piping, safety accessories and pressure accessories. *Where applicable, pressure equipment includes elements attached to pressurised parts such as flanges, nozzles, couplings, supports, lifting lugs, etc.*
- ? **Vessel** as a housing designed and built to contain fluids under pressure. *A vessel includes its direct attachments up to the coupling point connecting it to other equipment. A vessel may be composed of more than one chamber.*
- ? **Piping** as piping components intended for the transport of fluids when connected together for integration into a pressure system. *Piping includes a pipe or system of pipes, tubing, fittings, expansion joints, hoses, or other pressure-bearing components as appropriate. Heat exchangers consisting of pipes for the purpose of cooling or heating air shall be considered as piping.*
- ? **Safety Accessories** as devices designed to protect pressure equipment against the allowable limits being exceeded; *such devices include devices for direct pressure limitation, such as safety valves and bursting discs, etc, and limiting devices, which either activate the means for correction or provide for shutdown or shutdown and lock out, such as pressure switches or temperature switches, etc.*
- ? **Pressure Accessories** as devices with an operational function and having pressure-bearing housings.
- ? **Assemblies** as several pieces of pressure equipment assembled by a manufacturer to constitute an integrated and functional whole.

The Regulations do not apply to the assembly of pressure equipment on the site(s) and under the responsibility of the user. In such cases the "in use" Regulations, SI 2000 No 128, will cover the assembly of pressure equipment on site.



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? **Responsible Person** as the manufacturer or his authorised representative established within the Community. *The Responsible Person may arrange for any, all of the activities involved in the design and manufacturer of an item of pressure equipment or an assembly to be carried out by others. However, the Responsible Person retains overall control and should have the necessary competence to take responsibility for the equipment.*

Where neither the manufacturer nor his authorised representative is established within the Community, the person who places the pressure equipment or assembly on the market or puts it into service is the Responsible Person.

2.3 Exclusions

The Regulations do **not** apply to equipment and assemblies:

- a. placed on the market in the EEA before 29 May 2002, e.g. second hand.
- b. for use outside the EEA, not carrying CE marking.
- c. in use, or their repair or modification (unless significant), or to servicing.
- d. included in Schedule 1 to the Pressure Equipment Regulations 4 (1).

There are three specific exclusions relevant to the equipment manufactured by AWHEM members:

Exclusion 1

Pipelines comprising piping or a system of piping designed for the conveyance of any fluid or substance to or from an installation (onshore or offshore) starting from and including the last isolation device located within the confines of the installation, including all the annexed equipment designed specifically for pipelines. This exclusion does not apply to standard pressure equipment such as may be found in pressure reduction stations or compression stations.

Exclusion 9

Well control equipment used in the petroleum, gas or geothermal exploration and extraction industry and in underground storage, which is intended to contain and/or control well pressure. This comprises the wellhead (Christmas tree), the blow out preventers (BOP), the piping manifolds and all their equipment upstream.

Exclusion 14

Ships, rockets, aircraft and mobile offshore units, as well as equipment specifically intended for installation on board or the propulsion thereof.



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2.4 Coverage for AWHEM Equipment

Appendix 1 of this document lists relevant equipment manufactured by the AWHEM member bodies. Where a user requests CE marking on the tabulated equipment discussion needs to take place with the manufacturer to justify their requirement and discuss the commercial and legal implications thereof. Each item of equipment is classified under one of the three categories:

- a. Equipment meeting the definition of Pressure Equipment as defined above, and is not excluded.
- b. Equipment that is excluded from the Pressure Equipment Regulations.
- c. Equipment that may have to comply with the Pressure Equipment Directive, depending on its location in use.

3.0 RESPONSIBILITY

The responsibility for compliance, where required, lies with the manufacturer. Where pressure equipment is manufactured outside the EEA, the responsibility shall lie with the person or company importing the equipment into the EEA.

4.0 GENERAL REQUIREMENTS

Subject to the exceptions and transitional arrangements described above, the Regulations make it an offence for a "responsible person" to place on the market, put into service or otherwise supply pressure equipment or assemblies unless:

- ? It complies with the essential safety requirements (Annex 1 to the Directive).
- ? The appropriate conformity assessment procedure has been carried out, where required.
- ? A declaration of conformity has been drawn up.
- ? It is properly CE marked.
- ? It is in fact safe.

Where equipment is to be placed on the market and put into service in the UK, the instructions, marking, labelling and information are in English.

The Regulations also make it an offence for any person who is not a responsible person to supply pressure equipment or assemblies unless it is safe.



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5.0 NOTES AND CLARIFICATIONS

- 5.1 The application of a CE mark implies conformity with all relevant Directives, where these do not overlap. Similarly, if equipment is not classified as Pressure Equipment a CE mark may still be required due to the applicability of another Directive.
- 5.2 It is an offence to CE mark equipment that does not require it.
- 5.3 As the Directive approximates the Laws drafted individually by the Member States, the interpretation of the common technical requirements may vary somewhat in each of the Member States. The guideline process of the EU tries to achieve consistency throughout the EEC. The officials responsible for the regulations in each state are noted on the website (<http://ped.eurodyn.com/>)
- 5.4 The equipment classification shown in Appendix 1 has been produced following discussion between the AWHEM Task Group Members.

Appendix 1 is a summary of the AWHEM stance; justification will be provided on an individual basis if requested.



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APPENDIX 1

Well Control Equipment Intended to Contain and/or Control Wellbore Pressure

ITEM	DESCRIPTION	ISO STANDARD REFERENCE*
1.0	Surface Wellhead Assembly	
1.1	Casing Head Housing	10423-1.2(a)
1.2	Casing Head Spool	10423-1.2(a)
1.3	Casing Hanger Mandrel	10423-1.2(c)
1.4	Tubing Head Spool	10423-1.2(a)
1.5	Tubing Hanger Mandrel	10423-1.2(c)
1.6	Tubing Head Adapter	10423-1.2(b)
1.7	Crossover Spools/Connections	10423-1.2(b)
1.8	Annular Packoff	
2.0	Surface Christmas Tree Assembly	
2.1	Master Valve	10423-1.2(d)
2.2	Tee	10423-1.2(b)
2.3	Wing Valve	10423-1.2(d)
2.4	Swab/Crown Valve	10423-1.2(d)
2.5	Top Connector	10423-1.2(b)
3.0	Subsea Wellhead Assembly (equivalent surface equipment shall apply)	
3.1	Conductor Housing	13628-4-1.2(b)
3.2	Wellhead Housing	13628-4-1.2(b)
3.3	Bore Protectors/Wear Bushings	13628-4-1.2(b)
3.4	Corrosion Caps	13628-4-1.2(b)
3.5	Tieback Adapter	13628-4-3.1.46
4.0	Subsea Tree Assembly (equivalent surface equipment shall apply)	
4.1	Tree Connector	13628-4-1.2(a)
4.2	Tree Cap	13628-4-1.2(a)
5.0	Valves and Chokes	
5.1	Choke	10423-1.2(d) 13628-4-1.2(a)
5.2	Back Pressure Valve	10423-1.2(d)
5.3	Valve Actuators	10423-1.2(d) 13628-4-1.2(a)



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ITEM	DESCRIPTION	ISO STANDARD REFERENCE*
6.0	Other Equipment	
6.1	Flanged Connections (OECs)	10423-1.2(e) 13628-4-1.2(f)
6.2	Clamp Connections	10423-1.2(e) 13628-4-1.2(f)
6.3	Threaded Connections	10423-1.2(e) 13628-4-1.2(f)
6.4	Flowlines	13628-4-3.1.13
6.5	Flowline Connector System	13628-4-1.2(a)

**Referenced Standards:*

EN ISO 10423:2001(E) Petroleum and Natural Gas Industries - Drilling and Production Equipment - Wellhead and Christmas Tree Equipment.

EN ISO 13628-4: 1999: Petroleum and Natural Gas Industries - Design and Operations of Subsea Production Systems - Part 4: Subsea Wellhead and Christmas Tree Equipment.

NOTE

All the items tabulated relate specifically to their use as Well Control Equipment.

If items are used for other purposes, they may become subject to the requirements of the Pressure Equipment Directive.

All tooling to install, retrieve, test and handle surface and subsea wellhead and Christmas Tree assemblies are considered to be similarly excluded.

Blow Out Preventers (BOPs) and Piping Manifolds are specifically excluded per Exclusion 9 of the PED.