UK Pressure Equipment

A Guide to the Interpretation of the Pressure Equipment (Safety) Regulations 2016

SAFed publication PEDG04 - Edition 01
EEMUA publication 251 - Edition 01

Foreword

This document has been developed by the Pressure Equipment Consultation Forum (PECF), Safety Assessment Federation (SAFed) and the Engineering Equipment and Materials Users Association (EEMUA) in consultation with LRQA and other stakeholders within the pressure equipment industry to help users, competent persons and owners of pressure equipment achieve their legal requirements before pressure equipment is put into service in the United Kingdom.

This document has been prepared using technical advice provided by the Health and Safety Executive (HSE).

Within this document are references to UK Legislation, GB Regulations and variations of the two. This document was published in 2025; at the time of publication the UK had legislated to continue recognition of CE marked equipment. The relationships of UK Legislation, GB Legislation and CE marking will likely change as technical and administrative divergence commences. The reader is encouraged to confirm the in-force legislation.

In producing this document, the authors noted that many of the roles and responsibilities referenced overlap; caution should therefore be exercised when only reading a single or selected set of guidelines.

SAFed Publication – PEDG 04 – Edition 01

EEMUA publication 251– Edition 01

Imprint reference – 12/2025

First published – 12/2025

ISBN: 978-0-85931-259-2

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1. Introduction

This, the fourth document in the UK PEDG / EEMUA series, has been written to support understanding and interpretation in the UK of the Pressure Equipment (Safety) Regulations 2016 (PE(S)R). It refers to the EU guidelines written for the EU Pressure Equipment Directive (PED).

This document is not prescriptive nor a definitive guide, but it has been authored and reviewed by a panel of experienced practitioners, including a representative from the UK Enforcement Authority.

It does not constitute a legally binding interpretation of the PE(S)R; the official legal text of the PE(S)R remains authoritative.

This document is intended to provide a reference for ensuring a consistent application of the PE(S)R where the option of CE marking under an EU Member State's national implementation of PED has not been used.

Many of the guidelines originated under Pressure Equipment Directive 97/23/EC (implemented in the UK as the Pressure Equipment Regulations 1999). These have since been updated by the EU as part of Pressure Equipment Directive 2014/68/EU, with the UK's implementation being the Pressure Equipment (Safety) Regulations 2016.

To promote coherent application of the PE(S)R, this document includes guidelines which were originally proposed or significantly revised by the UK; developed and agreed upon by the EU Commission's Working Group "Pressure" (WGP); specifically referenced or associated with the above.

The convention of the Guidelines follows the same convention of the PED Guidelines:

A. Scope and Exclusions of the PE(S)R
B. Classification and Categories
C. Assemblies
D. Evaluation Assessment Procedures
E. Interpretation of the Essential Safety Requirements on Design
F. Interpretation of the Essential Safety Requirements on Manufacturing
G. Interpretation of the Essential Safety Requirements on Materials
H. Interpretation of other Essential Safety Requirements
I. Miscellaneous
J. General-Horizontal Questions

In preparing this document, the technical group tried to record the latest information. One recurring topic was the acceptance of CE marking in the UK and the impact on the different stakeholders. The following section is included to assist. It is not legally binding and may be overtaken by emerging legislation when published.

1.1 UK Legislative Actors

The PE(S)R 2016 and Pressure Systems Safety Regulations 2000 (PSSR) are UK statutory instruments (SI). HSE also produce an approved code of practice (ACOP) which interprets the enforcement expectations of PSSR. (NOTE: The UK intends to review the status of the PSSR and its ACOP under the UK Government's "red-tape" challenge during 2026.)

We have referred to a document known as the Blue Guide - Why? EU Product Directives have been subjected to several frameworks to promote consistency, the New Approach of 1985; the Global Approach of 1989 and the New Legislative Framework (NLF) of 2008. The original guidance for the New Approach and Global Approach was bound in blue covers, hence the nickname. The EU published the guidance to the NLF as Commission Notice 2016/C272/01 titled "The 'Blue Guide' on the implementation of EU products rules 2016". This is not to be confused with the original UK DTI PED/PER guidance that was also published in a blue cover but

has since been withdrawn. As the PE(S)R was written as the UK transposition of the EU PED the context provided is important where interpretation of a requirement is needed. As a Commission Notice, the Blue Guide is a definitive source of information.

2. Nomenclature

ADR	Refers to L'Accord européen relatif au transport international des marchandises Dangereuses par Route, which translates as the "European Agreement" concerning the International Carriage of Dangerous Goods by Road
ALARP	As low as reasonably practicable
Approved Body	Is a conformity assessment body which has been approved by the Secretary of State in Great Britain or a UK Notified Body in the Northern Ireland market
ASME	American Society of Mechanical Engineers
CDGUTPER	The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009
CEN	The European Committee for Standardisation
DBT	The Department for Business and Trade in the UK Government
EEMUA	The Engineering Equipment and Materials Users Association
EN	European Norm
ESR	Essential Safety Requirement
EU	European Union
HAZ	Heat Affected Zone
HSE	The Health and Safety Executive (UK Regulatory Authority)
HSWA	The Health and Safety at Work etc Act 1974
ICAO	The International Civil Aviation Organization of the United Nations
ISO	International Organisation for Standardization
IMDG	The International Maritime Dangerous Goods Code
LOLER	The Lifting Operations and Lifting Equipment Regulations 1998
NDT	Non-destructive testing
NLF	New Legislative Framework
ONR	The Office for Nuclear Regulation (UK Regulatory Authority)
OPSS	The Office for Product Safety and Standards (Part of UK Government DBT)
PECF	Pressure Equipment Consultation Forum
PED	The Pressure Equipment Directive 2014/68/EU
PER	The Pressure Equipment Regulations 1999 (SI. 1999 No. 2001)
PE(S)R	The Pressure Equipment (Safety) Regulations 2016 (SI. 2016 No. 1105)
PS	Maximum pressure as defined in PE(S)R, i.e. maximum allowable pressure for which the equipment is designed for
PSSR	The Pressure Systems Safety Regulations 2000 (SI. 2000 No. 128)
PUWER	The Provision and Use of Work Equipment Regulations 1998 (SI. 1998 No. 2306)
pWPS	Preliminary Welding Procedure Specification
RID	Refers to Le Règlement concernant le transport international ferroviaire des marchandises dangereuses and regulates the transport of dangerous goods by rail
RTPO	Pressure Systems Safety Recognised Third-Party Organisation
SAFed	The Safety Assessment Federation
SEP	Sound engineering practice
Tank	A tank is usually a receptable for holding, transporting, or storage of fluids. In this document the relevant legislation must be used to determine if a "tank" is subject to consideration as a pressure vessel, or which requirements from the relevant legislation apply
TS	Maximum temperature as defined in PE(S)R, i.e. maximum allowable temperature for which the equipment is designed for
UK marking	Is any marking acceptable under the current legislation for products placed on the UK market. In Great Britain (UKCA marking) or in Northern Ireland (UKNI marking), or CE marking in either
UN	United Nations

WGP	EU Commission's Working Group "Pressure"
WPQR	Welding Procedure Qualification Record

3. Guidelines

A. Scope and exclusions from the UK Regulations

Guideline:	**A-01**
Question	Are portable extinguishers within the scope of the PE(S)R or are they covered by the exclusion in Schedule 1 Paragraph 1(s) for equipment covered by the ADR (CDGUTPER)?
Response	They are covered by the PE(S)R.
Explanation	Portable extinguishers are specifically mentioned in Regulation 6(a)(i)(bb) and Schedule IB Paragraph 4(1)(b)(ii) of the PE(S)R. All fire extinguishers according to UN 1044 are specifically mentioned in special provision 594 of ADR as an exclusion when appropriately packed for transport. Thus, these fire extinguishers are not covered by the exclusion in Schedule 1 Paragraph 2(s) of the PE(S)R.
PE(S)R reference	Regulation 6(a), Schedule 1 Paragraph 1(s), Schedule 1B Paragraph 4(b)
PED reference	Article 4 Paragraph 1(a), Article 1 Paragraph 2(s); Annex II, Table 2
UK Narrative (if any)	NOTE: The CDGUTPER set the legal framework in GB, as ADR itself has no provision for enforcement. The regulations include a number of exceptions and make substantial changes to the ADR requirements for the domestic carriage of many explosives. Periodic inspection is under CDGUTPER. The PSSR also contains an exception of a portable extinguisher that is less than 23 kg and no greater than 25 Barg at 60ºC operating pressure (Ref: PSSR Exemption 24). Reference should also be made to The Regulatory Reform (Fire Safety) Order 2005 and British Standard 5306-3.

Guideline:	**A-02**
Question	Are tanks (irrespective of contents) intended for the transport of non-dangerous goods (as defined by ADR), which are not pressurised during carriage but are pressurised during other foreseeable operations, e.g. filling, emptying or cleaning, within the scope of PE(S)R?
Response	Yes. If the PS of the tank is more than 0.5 bar.
Explanation	Such tanks are not excluded by Article 1 paragraph 2 (s). Refer also to Guideline A-14
PE(S)R reference	Regulation 2(1)
PED reference	Article 2 Paragraph 1
UK Narrative (if any)	Vehicles such as vacuum tanker trucks (powder tankers; gully suckers; septic tank emptying) are examples of a potentially affected system.

Guideline:	**A-03**
Question	Are replacements, repairs or modifications of pressure equipment in use covered by the Pressure Equipment (Safety) Regulations?
Response	1) Entire change: the complete replacement of an item of pressure equipment by a new one is covered by the PE(S)R. 2) Repairs are not covered by the PE(S)R but are covered by national regulations (PSSR, PUWER). 3) Pressure equipment which has been subject to important modifications that change its original characteristics, purpose and/or type after it has been put into service has to be considered

	as a new product covered by the regulations. *This has to be assessed on a case-by-case basis*. Note 1: Operating instructions in the sense of the PE(S)R (see Guideline H-03) cover documentation concerning safe operation including maintenance, but not necessarily detailed information concerning repair or modification of the equipment (e.g. material certificates or qualification of welding procedures). Such information may be provided by a specific contractual agreement between manufacturer and user.
Explanation	The regulations apply only to the first making available on the market and putting into service. See “Blue Guide” Chapter 2
PE(S)R reference	Schedule 2 Paragraph 30
PED reference	Article 1, Annex I Section 3.4
UK Narrative (if any)	Refer PEDG1/EEMUA 237 or PEDG2/EEMUA 245 for worked examples of where items of pressure equipment are supplied and assembled on site under the responsibility of the end user.

Guideline:	**A-04**
Question	When is a modification of a piping system not covered by the PE(S)R?
Response	When the content, main purpose and safety systems remain essentially the same, it may be regarded as a non-important modification of an existing piping system and is therefore not covered by the PE(S)R.
Explanation	See Guideline A-03
PE(S)R reference	Interpretation Paragraph 2
PED reference	Article 2 Paragraph 3
UK Narrative (if any)	There is no guidance for what may constitute an important modification. The following are offered as non-exhaustive examples of the considerations when deciding. • Change resulting in an increase in PE(S)R Category (for example due to a change of fluid, pipe size or pressure). • Change to process duty to provide a major new process function. (Minor changes in fluid/composition or flow rate would not normally be regarded as a change in process duty.) • Change of (piping) material type (not grade within a type). • Changes of pressure and/or temperature resulting in significant changes to loads on equipment and stresses, considerably increasing those in the original design. All modifications need to be controlled by effective management of change procedures and conform to the PE(S)R and in-service regulations such as PSSR and PUWER.

Guideline:	**A-09**
Question	Are piping components, such as a pipe or system of pipes, tubing, fittings, hoses or other pressure bearing components, considered to be piping when they are placed on the market as individual components?
Response	Individual piping components, such as a pipe or a system of pipes, tubing, expansion bellows, hoses, or other pressure bearing components are not “piping”. However, a single pipe, or system of pipes, for a specific application, maybe classed as “piping”, provided all appropriate manufacturing operations such as bending, forming, flanging, and heat treatment, have been completed. Some piping components (e.g. expansion joints) may be considered to be pressure accessories.

	Remark: Please note the definitions related to expansion joints and to expansion below: **Expansion joints** are devices containing one or more bellows used to absorb linear or angular changes such as those caused by thermal expansion or contraction of a pipeline, duct or vessel. **Expansion bellows** are flexible elements of an expansion joint consisting of one or more convolutions and the end tangents
Explanation	
PE(S)R reference	Regulation 2(1)
PED reference	Article 2(3)
UK Narrative (if any)	

Guideline:	**A-11**
Question	How can Schedule 1 Paragraph 1(j) more specifically be understood, especially the wording “for which pressure is not a significant design factor”?
Response	1. Schedule 1 Paragraph 1(j) excludes pressurised equipment comprising casings or machinery from the scope of the PE(S)R: a) if this equipment is primarily dimensioned for loads other than pressure, i.e. for which pressure is not the significant design factor and b) if it is primarily designed to move or rotate or fulfil other functions than pressure containment. 2. Such equipment may include: • engines including turbines and internal combustion engines. • steam engines, gas/steam turbines, turbo-generators, compressors, pumps, actuating devices and curing moulds for tyres. 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. 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 PE(S)R with regard to Schedule 1 Paragraph 1(j) ***Note(s):*** *1. No factor is included in the requirements of the PE(S)R. Any factor given in a guideline would therefore go beyond the PE(S)R and should be avoided.*

	2. *If a factor were used to decide whether the requirements of the PE(S)R are applicable or not, over dimensioning could result in a case where pressure equipment need not fulfil the requirements of the PE(S)R. This is not acceptable.* 3. *To decide on the exception with a factor of over dimensioning would consequently result in the necessity of a detailed stress analysis, especially if this factor 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 of the above answer could be overlooked if the decision whether the pressure is a significant factor were based on a factor of over dimensioning only.*
Explanation	
PE(S)R reference	Schedule 1 Paragraph 1(j)
PED reference	Article 1 Paragraph 2(j)
UK Narrative (if any)	The current situation with emergent net zero technologies may result in additional guidance or modification to the exclusions and numerical references in the ESRs. Readers should refer to the latest edition of the applicable legislation.

Guideline:	**A-14**
Question	If transport tanks for use in any mode of transport have been designed, manufactured and approved for the carriage of dangerous goods under the ADR, RID, IMDG code or the IMDG convention (CDGUTPER), will it also be necessary for them to comply with the PE(S)R when they are placed on the market?
Response	No. Schedule 1 Paragraph 1(s) of the PE(S)R excludes transport tanks covered by Directive 2008/68/EC and Directive 2010/35/EU (ADR, RID) or the IMDG code or the ICAO convention. If a manufacturer declares that transport tanks designed, manufactured and approved for the carriage of dangerous goods under the ADR, RID, IMDG code or the ICAO convention, are intended to be used for both dangerous and non-dangerous goods then the exclusion in Schedule 1 Paragraph 1(s) may still apply. On the other hand, if a transport tank is not designed, manufactured and approved under the ADR, RID, IMDG code or the ICAO convention, then it will be limited to the transport of non-dangerous liquids and solids. These transport tanks will not be excluded from the PE(S)R and will be covered if they are in the scope. All transport tanks covered by the agreements and conventions in Schedule 1 Paragraph 1(s) must be designed and built to a maximum allowable working pressure, satisfy the requirements for initial pressure testing and undergo periodical examination throughout their service life. The requirements of the agreements and conventions deal with safe containment and hazards due to pressure, but primarily only for the safety of transport. With regard to the use of a transport tank, for example as a storage tank, or being emptied outside the scope of the transport codes, consideration should be given to applicable national legislation. For example, the question of safety valves in the tank itself or in the emptying station should then be considered. Refer also to Guideline A-02.

Explanation	
PE(S)R reference	Schedule 1 Paragraph 1(s)
PED reference	Article 1 Paragraph 1(s)
UK Narrative (if any)	

Guideline:	**A-16**
Question	Schedule 1 Paragraph 1(b) excludes from the PE(S)R “networks for the supply, distribution and discharge of water and associated equipment”. Clarification is required in respect of water, networks and associated equipment in this context?
Response	‘Water' means: potable water, waste water and effluent, and sewage. ‘Networks and associated equipment' means: complete systems for the supply distribution and discharge of water. They extend up to the point of use in buildings, industrial sites and plants, and include equipment closely related to these networks such as water meter and line valves. Pressure vessels, such as expansion vessels, however, are not considered to be part of such ‘networks and associated equipment' and are therefore not excluded.
Explanation	
PE(S)R reference	Schedule 1 Paragraph 1(b)
PED reference	Article 1 Paragraph 2(b)
UK Narrative (if any)	

Guideline:	**A-17**
Question	What is the meaning of the expression "standard pressure equipment" in Schedule 1 Paragraph 1(a) on pipelines?
Response	A standard pressure equipment is not specially designed and manufactured for a specific conveyance pipeline, but is intended for use in a number of applications, including other conveyance pipelines or, for example, industrial piping. Typical examples of standard pressure equipment annexed with pipelines, pressure reduction stations or compression stations may include: measuring devices, valves, pressure regulators, safety valves, filters, heat exchangers, vessels. Such equipment is covered by the Regulations.
Explanation	
PE(S)R reference	Schedule 1 Paragraph 1(a)
PED reference	Article 1 Paragraph 2(a)
UK Narrative (if any)	Refer to Guideline A-29

Guideline:	**A-22**
Question	What guidance can be given regarding the application of the PE(S)R to component parts of pressure equipment such as flanges, dished ends and nozzles?
Response	If these component parts are incorporated to an item of pressure equipment, the relevant requirements of the PE(S)R will apply. However, these component parts do not meet the definition of pressure equipment in Regulation 2, therefore they shall not bear the UKCA mark.

	It is the responsibility of the pressure equipment manufacturer to ensure that the component parts enable the pressure equipment to meet the essential safety requirements of the PE(S)R. ***Note:*** *Another example of a component part is a split tee.*
Explanation	
PE(S)R reference	Regulation 2(1)
PED reference	Article 2(1)
UK Narrative (if any)	A component is generally considered to be a piece of material that has been formed or fabricated but remains an incomplete pressure bearing housing or is not yet an item of pressure equipment.

Guideline:	**A-25**
Question	Are the sensors which are used as part of a safety system to protect pressure equipment covered by the PE(S)R?
Response	A sensor alone does not meet the definition of a pressure accessory, as per Regulation 2(1), nor the definition of a safety accessory, as per Regulation 2(1). Consequently, no UKCA marking (due to the PE(S)R) is to be put on the individual sensor. The conformity assessment procedure and essential safety requirements of the Regulations relate to the complete safety system. The requirements to the sensor may be different depending upon the safety concept employed (for example redundancy or fail safe, see Schedule 2 Paragraph 15(c)). ***Note:*** *The meaning of sensor is defined in the International Vocabulary of Metrology - Basic and General Concepts and Associated Terms, published by JCGM (Joint Committee for Guides in Metrology).*
Explanation	
PE(S)R reference	Regulation 2(1)
PED reference	Article 2(4), Article 2(5)
UK Narrative (if any)	A sensor may indicate a situation (or value) which is useful to know and informs the user. However, unless the sensor directly alters the operating condition to prevent the equipment from exceeding the allowable limits or corrects such a situation, it is not a safety accessory / protective device on its own.

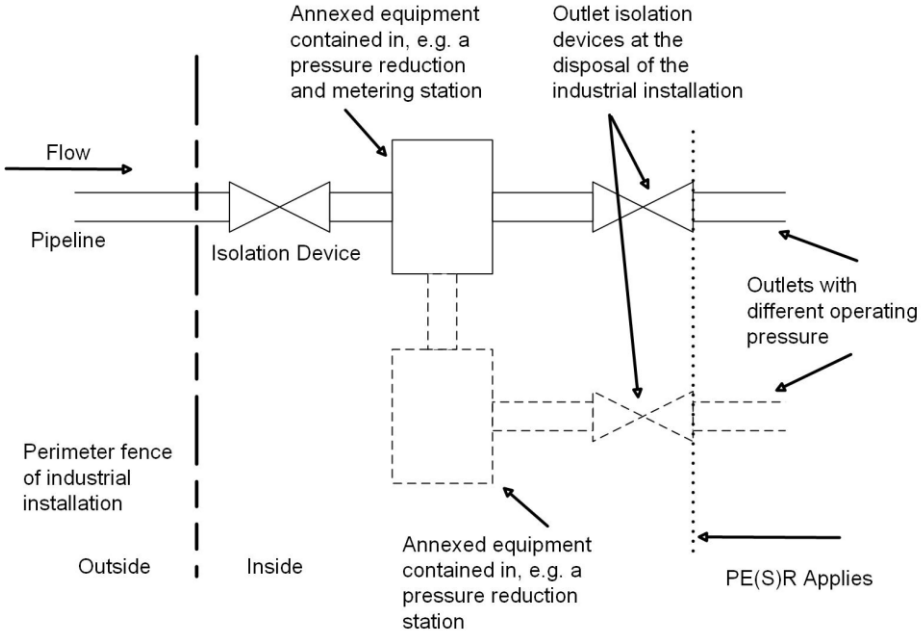
Guideline:	**A-27**
Question	What is meant by the term mobile offshore unit?
Response	A mobile offshore unit is an offshore unit that is not intended to be placed permanently or long term on the field but is designed to be moved from location to location whether or not it has a means of propulsion or of lowering legs to the seafloor (e.g. a unit used solely for exploration). For example, floating units intended for production, such as FPSOs (Floating Production, Storage and Offloading installations usually based on tanker designs) and FPPs (Floating Production Platforms based on semi-submersible vessels), are not considered to be mobile. ***Note:*** *Items of pressure equipment specifically intended for mobile offshore units are excluded from the PE(S)R. However, items of pressure equipment intended to be installed on both FPSOs / FPPs and mobile offshore units are not excluded from the PE(S)R.*
Explanation	
PE(S)R reference	Schedule 1 Paragraph 1(n)

PED reference	Article 1 Paragraph 2(n)
UK Narrative (if any)	

Guideline:	**A-28**
Question	Are conveyance pipeline stations such as compressor, reduction, metering stations covered by PE(S)R?
Response	These stations contain pressurised systems which may include compressors, heat exchangers, valves, filters, piping, etc. When they are specifically designed for pipelines, they are considered as annexed equipment, and as such are excluded from PE(S)R, according to Schedule 1 Paragraph 1(a). However, this exclusion does not apply to standard pressure equipment which may be found in these stations.
Explanation	
PE(S)R reference	Schedule 1 Paragraph 1(a)
PED reference	Article 1 Paragraph 2(a)
UK Narrative (if any)	Standard pressure equipment is not specially designed and manufactured for a specific conveyance pipeline but is intended for use in a number of applications, including other conveyance pipelines or, for example, industrial piping. Typical examples of standard pressure equipment annexed with pipelines, pressure reduction stations or compression stations may include: measuring devices, valves, pressure regulators, safety valves, filters, heat exchangers, vessels. Such equipment is covered by the Regulations.

Guideline:	**A-29**
Question	Where does the exclusion under Schedule 1 Paragraph 1(a) end when a pipeline crosses the perimeter of an industrial installation?

Response
The exclusion of Schedule 1 Paragraph 1(a) ends at the outlet isolation device of the annexed equipment contained in stations supplying the fluid to the industrial installation.



Note: The installation beyond the outlet isolation devices detailed in the above diagram, is covered by the PE(S)R; this includes any pressure equipment, any piping between individual operating units or plants, or storage facilities.

See also Guidelines A-17 and A-28

Explanation	
PE(S)R reference	Schedule 1 Paragraph 1(a)
PED reference	Article 1 Paragraph 2(a)
UK Narrative (if any)	

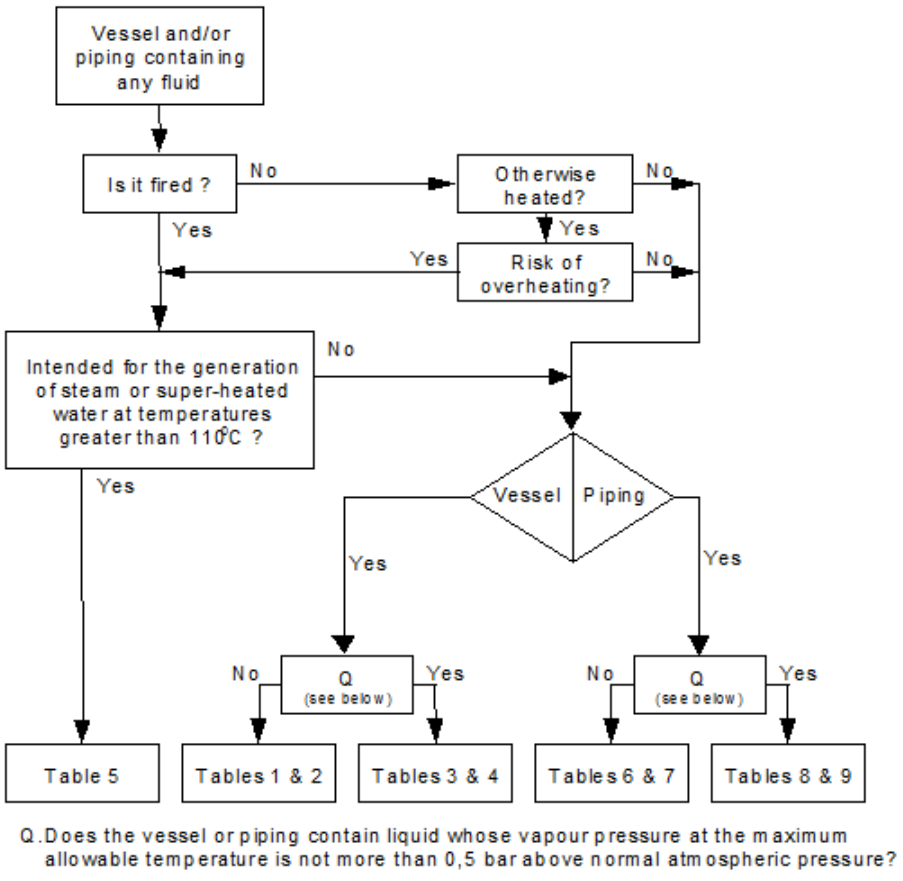
Guideline:	**A-40**
Question	What does “pressure-bearing housing” mean in the definition of pressure accessory in Regulation 2(1)?
Response	The term pressure-bearing housing refers to an envelope in which fluid under pressure (PS > 0,5 [bar]) is contained or transported (volume V > 0 [m^3]). Therefore, a product whose only pressure-bearing surface is a flange or screwed fitting is not a pressure accessory but is a component of an item of pressure equipment under the PE(S)R when used on such equipment. Typical examples of components which are not pressure accessories: Level Switch, Flush Mounted Pressure Transmitter and Thermowell. ***Note:*** *This does not apply to such devices when employed in a safety function.* *Refer also to Guidelines A-22, A-25 and G-19.*
Explanation	
PE(S)R reference	Regulation 2(1)
PED reference	Article 2(5)
UK Narrative (if any)	

B. Classification and categories

Guideline:	**B-05**
Question	Some warm water generators having a volume greater than 2 L are intended to generate water at a temperature less than 110 °C, but are fitted with a safety temperature limiter which is set to a temperature of 120 °C. What value of maximum allowable temperature, TS, shall be declared by the manufacturer?
Response	If the equipment is designed to operate at a temperature up to, but not exceeding 110°C, then 110°C shall be the value of TS, as defined in Regulation 2(1), specified by the manufacturer. In this case, the temperature limiter shall be set to ensure that the water temperature will not exceed 110°C. In the example given in the question, TS is 120°C. See also Guideline B-12
Explanation	
PE(S)R reference	Regulation 2(1), Regulation 6(b), Schedule IB Paragraph 4(1)(e)(i)
PED reference	Article 2(9), Article 4 Paragraph 1(b), Annex II Table 5
UK Narrative (if any)	In cases where the temperature (or other characteristic) is a controlling variable the assessment of risks and hazards must consider and mitigate against allowable limits being exceeded.

Guideline:	**B-06**
Question	How should fired or otherwise heated equipment be classified if a fluid other than water is being heated?
Response	This equipment shall be considered as vessel in accordance with Schedule IB Paragraph 1(e)(i) of the PE(S)R. It may also be considered as assembly in accordance with Schedule IB Paragraph 1(e)(ii). The categorisation of assemblies in Schedule IB Paragraph 1(e)(i) concerns only the assemblies intended for generating steam or superheated water and does not concern equipment where a fluid other than water is heated. As a consequence, the classification shall not be made using Schedule IB Paragraph 4(1)(e)(i). Examples of such equipment are oil heating furnaces, heat exchangers and induction heaters. ***Note:*** *The essential requirements of Schedule 2 Paragraph 33 are applicable to such pressure equipment, if it presents a risk of overheating, unless the equipment is covered by Regulation 8.*
Explanation	
PE(S)R reference	Regulation 6(b), Schedule IB Paragraph 4(1)(e)(i) and 4(1)(e)(ii)
PED reference	Article 4 Paragraph 1(a), Article 4 Paragraph 2(a) and 2(b)
UK Narrative (if any)	The original EU Guideline B-06 contains a reference to EU Guideline B-04. The main part of B-04 relates to heating or cooling air. The UK relevant part is: "*Heat exchangers are considered to be vessels. As an exception, heat exchangers which consist of straight or bent pipes which may be connected by common circular header(s) made also from pipe are classified according to Regulation 2(3) last sentence as piping if, and only if, the three following conditions are met: - air is the secondary fluid, - they are used in refrigeration systems, in air conditioning systems or in heat pumps, - the piping aspects are predominant.*"

Guideline:	**B-12**
Question	For warm water boilers which are controlled by a temperature thermostat and protected by a safety temperature limiter, does the maximum allowable temperature (TS) mean: a) the maximum intended operating temperature under normal conditions as controlled by the thermostat; or; b) the temperature setting of the ultimate over-temperature safety device i.e. the limiter?
Response	b) is correct. ***Note:*** *Manufacturers must ensure that the equipment is sufficiently robust to deal with any residual heat after activation of the limiter.* See also Guideline B-05
Explanation	
PE(S)R reference	Regulation 2(1)
PED reference	Article 2(9)
UK Narrative (if any)	

Guideline:	**B-13**
Question	How can manufacturers use Regulation 6 to determine the appropriate conformity assessment tables in Schedule 1B?
Response	
Explanation	
PE(S)R reference	Regulation 6(a) (b) (c), Schedule 1B
PED reference	Article 4 Paragraph 1(a) (b) (c), Annex II
UK Narrative (if any)	

Guideline:	**B-14**
Question	Regulation 6(a)(i)(bb), states that all portable extinguishers must comply with the essential safety requirements (ESRs). In addition, Schedule IB Paragraph 4(1)(b)(ii) states that portable extinguishers must exceptionally be classified at least in category III. To what parts of a portable extinguisher do these requirements apply?
Response	Regulation 6(a)(i) and Schedule IB Paragraph 4(1)(b) are applied to vessels and therefore the requirements are relevant to the cylinder (bottle) of the portable extinguisher. The other parts of the portable extinguisher which are pressure equipment are classified according to Regulation 6 and assessed according to the appropriate Tables. ***Note:*** *A portable extinguisher is an assembly referred to in Regulation 6(1) and Regulation 7(1)(b). It shall be subjected to a global conformity assessment procedure of Regulation 45 and it shall bear the UKCA marking as an assembly.* *The global conformity assessment procedure of Regulation 45(b) and (c) is determined by the highest category applicable to the equipment concerned other than that applicable to any safety accessories. Because the cylinder (bottle) of a portable extinguisher is classified at least in category III the global conformity assessment procedure to be applied must be chosen among those laid down at least for category III.*
Explanation	
PE(S)R reference	Regulation 6(a)(i)(bb), Schedule IB Paragraph 4(1)(b)
PED reference	Article 4 Paragraph 1(a)(i), Annex II Table 2
UK Narrative (if any)	

Guideline:	**B-18**
Question	Regulation 42(2) states that a manufacturer may choose to apply one of the conformity assessment procedures which apply to a higher (conformity assessment) category, if available. Does this mean that a manufacturer of pressure equipment covered by Regulation 8, referred to as Sound Engineering Practice (SEP), can choose to apply Module A for example and hence apply a UKCA marking?
Response	No. Regulation 8(3) explicitly prohibits UKCA marking of SEP pressure equipment. Schedule 3 Paragraph 3 deals with the classification of pressure equipment referred to in Regulation 6 (not Regulation 8) and Regulations 41 and 42(1) set out how the conformity assessment procedures should be determined for such equipment. Therefore, Regulation 42(2) does not apply to SEP pressure equipment and it does not provide any derogation to the provision in Regulation 8(3) that prohibits UKCA marking of SEP pressure equipment.
Explanation	
PE(S)R reference	Regulation 8, Regulation 42(2)
PED reference	Article 3 Paragraph 4, Article 14 Paragraph 3
UK Narrative (if any)	UK and/or CE marking is not allowed under SEP

Guideline:	**B-22**
Question	What does overheating mean in Regulation 6(b)?
Response	Overheating in the sense of Article 4 paragraph 1(b) means exceeding the design temperature, for instance in the case of a failure of a safety system, or through operator error.

	Overheating is a hazard which cannot be eliminated through a safety system, but the risk can be minimised. However, if the design temperature is chosen to take into consideration the highest temperature in all foreseeable conditions, the hazard of overheating does not exist. ***Note:*** *Design temperature will have to take account of the highest temperature of the material, and not only of the fluid content.*
Explanation	
PE(S)R reference	Regulation 6(b), Schedule 2 Paragraph 3 (Part 5)
PED reference	Article 4 Paragraph 1(b), Annex I Section 5
UK Narrative (if any)	

Guideline:	**B-23**
Question	How should a solar panel be classified?
Response	This pressure equipment shall be considered as a heat exchanger containing super-heated or hot water (with or without additives). Only when a solar panel in its entirety is designed to withstand the highest possible temperatures (stagnation conditions are within the normal operation range), a risk of overheating does not occur (see Guideline B-22). As a consequence, the classification shall be made using Table 2 (Paragraph 4(1)(b)) of Schedule IB (see Guideline B-13). ***Note:*** *A typical solar panel would be classified as Regulation 8 (SEP) equipment, due the maximum allowable pressure and volume.*
Explanation	Note: This guideline is primarily focussed on solar panels used for heating liquid. Photovoltaic panels are unlikely to fall within PE(S)R.
PE(S)R reference	Regulations 6 and 8, Schedule IB
PED reference	Article 4 Paragraph 1 and 3, Annex II
UK Narrative (if any)	

Guideline:	**B-36**
Question	Are hot blast stoves, which heat incoming cold air to a blast furnace by a regenerative process, covered by the exclusion in Schedule 1 Paragraph 1(k)?
Response	Yes. They are excluded.
Explanation	While recuperators and hot blast stoves operate in different ways, the first heating incoming cold air by heat exchange with another hot gas and the second by the firing of an alternative heat source, they can be considered similar for the purposes of exclusion under this article. Those hot blast stoves should be included under Schedule 1 Paragraph 1(k).
PE(S)R reference	Schedule 1 Paragraph 1(k)
PED reference	Article 1 Paragraph 2(k)
UK Narrative (if any)	

C. Assemblies

Guideline:	**C-01**
Question	Must the global conformity assessment procedure be applied to assemblies covered by Regulation 7(1)(a), e.g. to boilers, even if the assembling is done under the responsibility of the user?
Response	No
Explanation	Regulation 4(2) states - These regulations do not apply to the assembly of pressure equipment on the site of and under the responsibility of a user who is not the manufacturer. This means that “assembly” in the sense of the regulations must be assembled by a manufacturer, otherwise it is not in the scope of the Regulations. An installation performed by or under the responsibility of the user would normally not be under the scope of the Regulations. It would be under the applicable national legislation. Refer also to Guideline C-02.
PE(S)R reference	Regulations 45 and 7(1)(a)
PED reference	Articles 14(6) and 4(2)(a)
UK Narrative (if any)	Refer to PEDG2 / EEMUA 245. An assembly has to meet the requirements of PSSR Regulations 4,5 and 6.

Guideline:	**C-02**
Question	Are joining operations on site covered by the Regulations?
Response	For the joining on site of components or equipment, two cases have to be considered: 1) Joining of component parts: joining of component parts to comprise an item of pressure equipment is subject to the requirements of the Regulations. The manufacturer - even if they are the user - has the responsibility that the resulting item of pressure equipment is in compliance with the Regulations. 2) Joining of items of pressure equipment: the joining is not covered by the Regulations if it is carried out to constitute an “installation” ** under the responsibility of the user but remains covered by national rules. If the joining is carried out under the responsibility of a manufacturer to constitute an assembly, this assembly must fulfil the requirements of the Regulations. ***Note:*** *** The definition of an assembly in Regulation 2(1) is limited to those assemblies assembled by a manufacturer. When items of pressure equipment or assemblies are being put together by a user, to avoid confusion, the term “installation” is used.* *See also Guideline C-08.*
Explanation	The Regulations do not cover the assembly of pressure equipment on the site of and under the responsibility of the user who is not the manufacturer.
PE(S)R reference	Regulations 2(1) and 7(1)
PED reference	Articles 2 and 4(2)
UK Narrative (if any)	Refer to PEDG2 / EEMUA 245. Joining operations fall under the requirements of PSSR Regulations 4, 5 and 6

Guideline:	**C-03**
Question	The effect of the derogation in Regulation 7 from the introductory paragraph in the same article is not clear. In the circumstances, how should Regulation 7 be applied?
Response	The assemblies set out in Regulation 7(2) must comply with the essential requirements referred to in Paragraphs 14, 15, 30, 33(2)(a) and 35(2)(d) of Schedule 2, even if all the items of pressure equipment comprising the assembly fall under Regulation 8 (SEP).
Explanation	
PE(S)R reference	Regulation 7
PED reference	Article 4 Paragraph 2
UK Narrative (if any)	This guideline is little used, however has relevance to manually fed stoves and therefore may be useful where new stoves are commissioned.

Guideline:	**C-04**
Question	What shall be the minimum extent of the assembly "boiler" which shall be subjected to a global conformity assessment procedure in accordance with Regulation 7(1)(a)?
Response	The assembly shall comprise, as a minimum, the boiler including all the pressure parts from the feedwater inlet (including the inlet valve) up to and including the steam and/or hot water outlet (including the outlet valve or, if there is no valve, the first circumferential weld or flange downstream of the outlet header). This includes all economisers, superheaters and inter-connecting tubing which may be exposed to a risk of overheating and are not capable of isolation from the main system by interposing shut-off-valves. Additionally included are the associated safety accessories and the tubing connected to the boiler involved in services such as draining, venting desuperheating, etc., up to and including the first isolating valve in the tubing line downstream of the boiler. ***Note(s):*** *1) This definition is based on standard EN 12952-1:2015 and is in conformity with Schedule 2 Part 5 of the PE(S)R.* *2) This is a MINIMUM definition of the assembly.* *3) The ISOLATABLE superheaters, reheaters, economisers and related interconnecting tubing are not part of this minimum assembly. They can bear a UKCA marking separately or be integrated in the assembly if the manufacturer wishes so.* *4) The means of providing the boiler with feedwater and the means of preparing and feeding the fuel to the boiler are not part of this minimum assembly. They can bear a UKCA marking separately or be integrated in the assembly if the manufacturer wishes so.*
Explanation	
PE(S)R reference	Regulation 7(1)(a), Schedule 2 Part 5
PED reference	Article 4 Paragraph 2(a), Annex I Section 5
UK Narrative (if any)	

Guideline:	**C-05**
Question	Shall the assemblies defined in the derogation in Regulation 7(2) [boilers intended for generating warm water at temperatures not higher than 110°C] carry UKCA marking?
Response	Yes, in accordance with Regulation 49(1), but the identification mark of the approved body is left out if the manufacturer has selected the use of module B-Type examination - design type.
Explanation	The applied conformity assessment procedure is defined in Paragraph 4(d)(ii) of the Schedule 1B, where the modules B type examination – design type and H are given as alternatives (see note below table). In the case of module B type examination - design type there is no approved body involved at the production control phase, and according to Regulation 49(6) no identification number of the approved body shall follow UKCA marking. ***Note:*** *Assemblies as defined in the derogation in Regulation 7(2) [boilers intended for generating warm water at temperatures not higher than 110°C] to be UKCA marked shall comprise, as a minimum, the boiler with its protection devices.*
PE(S)R reference	Regulation 7(1), Regulation 49(1), Schedule 1B Paragraph 4(1)(d)
PED reference	Article 4 Paragraph 2, Article 19 Paragraph 1, Annex II Table 4
UK Narrative (if any)	

Guideline:	**C-08**
Question	Can some guidance be provided on the terms used in the definition of an assembly?
Response	Items of pressure equipment form an assembly if: 1. they are integrated, i.e. they are connected and designed to be compatible with each other and 2. they are functional, i.e. together, they achieve specific, overall objectives and could be put into operation, and 3. they form a whole, i.e. all the items which are necessary for the assembly to function and be safe are present and 4. they are assembled by one manufacturer who intends the resulting assembly to be placed on the market and who will subject the assembly to a global conformity assessment procedure. It is irrelevant whether completion of the assembly takes place at the manufacturer workshop or by the manufacturer on site. Other factors will need to be considered to determine whether the Regulations applies to a particular assembly. (See guideline C-02). Some possible examples of assemblies are pressure cookers, portable extinguishers, breathing apparatus, skid mounted systems, autoclaves; air conditioner, compressed air supply in a factory, refrigerating system, shell boilers, water tube boilers, distillation, evaporation or filtering units in process plants, oil heating furnaces.
Explanation	
PE(S)R reference	Regulation 2(1)
PED reference	Article 2(6)
UK Narrative (if any)	Refer also to the other PEDG1 / EEMUA 237, PEDG2 / EEMUA 245, PEDG03 / EEMUA 248 series documents as there must be a definition of a manufacturer or User and the types of activity being conducted.

Guideline:	**C-09**
Question	Does the PE(S)R put formal upper limits to the extent of an assembly?
Response	The PE(S)R does not limit the extent of an assembly, which can range from simple standard products up to large complex industrial plants. An assembly can itself be composed of other assemblies and further items of pressure equipment. For such a final assembly, two cases are possible: 1) When a manufacturer places on the market a product as a final assembly, consisting of assemblies and items of pressure equipment, intended to be put into service as such, they have to perform the global conformity assessment resulting in the UKCA marking of the final assembly. If some of the constituent assemblies are not UKCA marked - see Guideline C-10 - the individual items of pressure equipment shall be included in the global conformity assessment. 2) When a user takes the responsibility for the final assembly, it constitutes an installation as explained in Guideline C-02. ***Note:*** *The definition of an assembly is explained in Guideline C-08.*
Explanation	
PE(S)R reference	Regulation 2(1), Regulation 45
PED reference	Article 2(6), Article 14 Paragraph 6
UK Narrative (if any)	See also PEDG1 / EEMUA 237.

Guideline:	**C-10**
Question	Is it possible to put assemblies on the market which are not Conformity marked?
Response	Yes, in several cases: - If the intention of the manufacturer is to place on the market an assembly not to be put into service as such but to become part of a bigger assembly or installation (see Guideline C-02), the global conformity assessment according to PE(S)R does not need to be applied to this assembly, which in this case will not be conformity-marked. In this case, conformity assessment according to PE(S)R shall have been conducted for each item of pressure equipment. - However, if the intention of the manufacturer is to place on the market an assembly to be put into service as such, the global conformity assessment procedure described in the Regulations must be conducted, resulting in the conformity-marking of the assembly. For boilers (Regulation 7(1)(a)) refer to Guidelines C-01, C-04 and C-05. ***Note(s):*** *1) Assemblies the conformity of which has been assessed by a user inspectorate shall not bear the conformity marking.* *2) Assemblies in accordance with Sound Engineering Practice shall not bear the conformity marking.* *3) This does not restrict the integration of conformity marked assemblies into bigger assemblies.*
Explanation	

PE(S)R reference	Regulation 7(1)(b), Regulation 39(2)(b), Regulation 49(1), Schedule 5
PED reference	Article 4 Paragraph 2(b), Article 16 Paragraph 2, Article 19 Paragraph 1
UK Narrative (if any)	In the UK, PE(S)R conformity marking applies where an item is manufactured (by a manufacturer) in order to be “placed on the market” for the first time. If an assembly is not intended to be placed on the market, either because it is being further processed, or because the user will use it rather than sell it, the marking does not need to be applied, providing that all of the necessary steps have been recorded and suitable warnings made.

Guideline:	**C-11**
Question	If an item of pressure equipment complies with national pre-PE(S)R (formerly PER 1999) and is placed on the market on, or before, 29 May 2002, is it possible for it to be subsequently included in an assembly which is placed on the market after 29 May 2002?
Response	Only if it is shown that such pre-PE(S)R 2016 (formerly PER 1999) item of pressure equipment also complies with the requirements of the Regulations. If an assembly, as referred to in Regulation 7, is placed on the market after 29 May 2002 then it must comply with the PER. This requirement can only be met if the individual items of pressure equipment which form the assembly also comply with the PER. This is achieved by using the global conformity assessment procedure as per Regulation 45(a), where required.
Explanation	
PE(S)R reference	Regulation 88, Regulation 7, Regulation 45
PED reference	Article 48, Article 4 Paragraph 2, Article 14 Paragraph 6(a)
UK Narrative (if any)	This is relevant because it is about transition between regulatory regimes. The principles in this guidance should be considered if the UK were to diverge from the EU PED.

Guideline:	**C-12**
Question	Do only the essential requirements given in Regulation 45 apply to assessment of the integration of assemblies?
Response	No, according to Schedule 2, Part 1 - General, the requirements of Schedule 2 also apply to assemblies, where the corresponding hazard exists. Examples of other ESRs which may be relevant to assemblies: 21 - Permanent joining, 27 - Proof test, 30 - Operating instructions, 34 (a) and (d) Thermal expansion and vibration of piping, …
Explanation	
PE(S)R reference	Regulation 45, Schedule 2
PED reference	Article 14 Paragraph 6, Annex I
UK Narrative (if any)	The manufacturer must take into account all applicable ESRs.

D. Evaluation assessment procedures

Guideline:	**D-01**
Question	Is design approval by an approved body required under module G?
Response	Module G does not explicitly require formal design approval by an approved body, but it does require the manufacturer to submit to an approved body, technical documentation to enable the design, manufacture and operation of the pressure equipment to be understood. It also requires the approved body to examine the design and construction of the pressure equipment to ensure its conformity with the requirements of the PE(S)R which apply to it. It is expected that the approved body will report the outcome of the examination of the design to the manufacturer and this will effectively constitute design approval.
Explanation	As stated above, module G does not contain any explicit requirement for approval of the design by the approved body. However, it is understood that design approval is common practice for the types of pressure equipment to which module G would be applied. Module G does require that the approved body must examine the design of the pressure equipment, and it is considered reasonable to expect the approved body to inform the manufacturer of the results of the examination.
PE(S)R reference	Schedule 1A, module G
PED reference	Annex III, module G
UK Narrative (if any)	In the UK context, PSSR Regulation 4 requires that pressure equipment is designed and constructed properly from suitable material so as to prevent danger. Therefore, it is implicit that a design review is conducted to satisfy the competent person by the user (or their agent / supplier) in cases where an approved body has not been involved. PEDG1 / EEMUA 237 or PEDG2 / EEMUA 245 may be followed to demonstrate good practice.

Guideline:	**D-03**
Question	How to apply conformity assessment modules when some parts of an item of pressure equipment or some operations are sub-contracted?
Response	There is only one manufacturer taking responsibility for each item of pressure equipment, who chooses one module (or combination of modules). The conformity assessment is related to an item of pressure equipment and not to the parts considered alone. It is the responsibility of the pressure equipment manufacturer to obtain from their sub-contractor the information and documentation required for the application of the module chosen. Depending on the module, the approved body could be required to visit the sub-contractor site, and it is the responsibility of the pressure equipment manufacturer to ensure access. If relevant work has been performed by different approved bodies at the sub-contractor site, it should be taken into account.
Explanation	
PE(S)R reference	Schedule 1A
PED reference	Annex III
UK Narrative (if any)	Note, all EU product conformity legislation is based on a series of horizontal regulations. These are interpreted in a published guide to the implementation of product rules (The Blue Guide). This

	document does not cite the Blue Guide, however, readers may find it useful context.

Guideline:	**D-04**
Question	If a manufacturer chooses to apply module B for the design phase, in combination with another module for the production phase, does the manufacturer have to choose the same approved body for the design and production modules?
Response	No. As requested by modules B (Type examination - production type or design type), the examination certificate shall contain a list of the relevant parts of the technical documentation and any other relevant information, which allow the requirements of the production modules to be applied. The number to be affixed to the pressure equipment is the number of the body involved at the production control phase (Regulation 49(6)).
Explanation	
PE(S)R reference	Schedule 1A
PED reference	Annex III
UK Narrative (if any)	Reference should be made to Schedule 1A Paragraphs 17(b) and 21 for Type examination-production type certificates and Schedule 1A Paragraphs 35(b) and 37 for Type examination-design type certificates.

Guideline:	**D-11**
Question	Should the holder and the bursting disc which combine to produce a bursting disc safety device for use above 0.5 bar carry separate conformity assessment marking?
Response	No, only the complete safety device can be conformity assessed, and only one conformity assessment marking shall be affixed. The conformity assessment marking shall be on the holder which is less likely to be replaced. The declaration of conformity and instructions for use shall describe in an appropriate manner the components of the bursting disc safety device, and instructions for use shall identify which safety discs can be used on a specific holder.
Explanation	Bursting disc safety devices are usually supplied as a set containing one holder and several spare discs. While both are components of a safety device and therefore should not be conformity assessment marked until assembled, for practical purposes the holder carries conformity assessment marking. See also Guideline A-22.
PE(S)R reference	Regulation 2(1), Regulation 6(d), Regulation 49
PED reference	Article 2(4), Article 4 Paragraph 1(d) and Article 19
UK Narrative (if any)	

E. Interpretation of the essential safety requirements on design

Guideline:	**E-02**
Question	In respect of pressure limiting devices, does the PE(S)R require that the permitted short duration pressure surge of 1.1 PS be maintained when the equipment is exposed to external fire conditions?
Response	The 1.1 PS restriction does not apply to fire.
Explanation	The requirement in Schedule 2 Paragraph 18 for external fire refers to damage limitation and does not serve the purpose of pressure limiting device in normal operation.
PE(S)R reference	Schedule 2 Paragraphs 15(1), 18 and 39
PED reference	Annex I Points 2.11.2, 2.12 and 7.3
UK Narrative (if any)	UK context anticipates risks to be eliminated to a level as low as reasonably practicable (ALARP). Whilst the 10 % overpressure restriction may not apply due to the rapid onset of fire, and some codes / standards allow up to 21%, any value must be appropriately justified.

F. Interpretation of the essential safety requirements on manufacturing

Guideline:	**F-01**
Question	According to Paragraph 21 (permanent joining) of Schedule 2, the third party must perform examinations and tests in order to carry out the approvals of operating procedures and personnel. Must the representative of the third party witness the whole permanent joining and testing process?
Response	No, in accordance with and under the responsibility of the approved body or of a third-party organisation, some practical tasks concerning the approval of joining operating procedures and personnel may be accomplished by a competent person of a manufacturer according to a quality system. Note: The approved body or recognised third party organisation must attend part of the different steps in the process for each procedure and for each person.
Explanation	
PE(S)R reference	Schedule 2 Paragraph 21
PED reference	Annex I Point 3.1.2
UK Narrative (if any)	

Guideline:	**F-04**
Question	Must an approved body take into account a procedure of permanent joints qualified by another approved or a recognised third-party organisation?
Response	Yes, an approved body is not allowed to reject an approval of procedure of permanent joints made on the basis of a precise reference and applying competence in accordance with the PE(S)R. Nevertheless, it is its responsibility to verify that the joining process and the reference to the manufactured product are adequate.
Explanation	
PE(S)R reference	Schedule 2 Paragraph 21
PED reference	Annex I Point 3.1.2
UK Narrative (if any)	

Guideline:	**F-06**
Question	In the absence of designated standards, what approach is to be followed for the approval of personnel carrying out permanent joining?
Response	In the absence of designated standards, the manufacturer shall refer to an existing document (draft standard candidate for designation, professional document, guide, recognised third party / approved body document, company document, etc.) or shall establish a specific document. Such a document shall define at least: o equipment to be used by the personnel; o degree of automatisation of the process and the operations to be carried out by the personnel; o conditions to apply when making the test piece to be used for the test approval and results to be achieved; o range of validity and conditions for the duration of the validity.

	See also Guideline F-01. For welding, see Guideline F-12.
Explanation	
PE(S)R reference	Regulation 2(1), Schedule 2 Paragraph 21
PED reference	Article 2 (13), Annex I Point 3.1.2
UK Narrative (if any)	In the absence of an existing document, the endorsement must be obtained by the approved body if applicable.

Guideline:	**F-10**
Question	If a manufacturer has a procedure for permanent joining approved by an approved or other recognised third-party organization at one site (location), may that manufacturer use the same procedure at other sites for similar applications?
Response	Yes, provided the other sites are under the same technical and quality management.
Explanation	Standard EN ISO 15614-1 concerning specification and qualification of welding procedures states that an approval of a preliminary welding procedure specification (pWPS) obtained by a manufacturer is valid for welding in workshops or sites under the same technical and quality control of that manufacturer.
PE(S)R reference	Schedule 2 Paragraph 21
PED reference	Annex I Point 3.1.2
UK Narrative (if any)	

Guideline:	**F-12**
Question	In the context of approval of welding procedures and personnel, what is meant by “the third-party must perform examinations and tests as set out in the appropriate designated standards or equivalent examinations and tests”?
Response	Where the Regulations refer to equivalent examinations and tests it is required that suitable and sufficient tests are conducted to determine the same range of properties as those in the designated welding standards. Where similar tests have already been conducted that establish a particular property, but the precise testing conditions vary from those in the above standard, there is no requirement to repeat the test. However, those properties which are not the subject of these similar tests shall be added to the testing schedule. If for example the impact property in the weld has already been tested but not the heat affected zone (HAZ), this latter remains to be tested.
Explanation	The tests which are intended to determine the same range of properties are the non-destructive and destructive tests required by the relevant designated welding standards. The additional tests shall be performed under the responsibility of a competent third party (see also Guideline F-01). The current version of ASME Boiler & Pressure Vessel code Section IX is an example of where properties are not sufficiently dealt with for some applications in order to comply by itself with the PE(S)R (for example: impact property in the HAZ; hardness test etc.). Furthermore, it does not require that the tests and examinations shall be performed under the responsibility of a third party (see also Guidelines F-01 and F-04).
PE(S)R reference	Schedule 2 Paragraph 21
PED reference	Annex I Point 3.1.2
UK Narrative (if any)	

Guideline:	**F-13**
Question	For pressure equipment in categories III and IV, can Non-Destructive Testing personnel holding qualifications other than those satisfying criteria of the designated standards (e.g. EN ISO 9712: 2012 Non-destructive testing - Qualification and certification of NDT personnel) be approved by Recognised Third-Party Organisations (RTPO) appointed on behalf of the UK Government or notified by an EU member state.
Response	Yes. NDT personnel certified under standards, other than designated standards, may be approved by a RTPO provided it is satisfied that certification criteria equivalent to the designated standards have been met, and that the scope of certification is relevant to the testing of permanent joints in pressure equipment. A RTPO may sub-contract part of its work but shall keep the full responsibility and issue the approval. The approval of the personnel shall be done by a RTPO on an individual basis.
Explanation	Approval of an individual solely on the basis of a certificate issued by another body where no contractual arrangement exists with the RTPO does not fulfil the requirement of the PE(S)R.
PE(S)R reference	Regulation 63, Schedule 2 Paragraph 22
PED reference	Article 27, Annex I Point 3.1.3
UK Narrative (if any)	Since the UK's departure from the EU, it is possible to either UK or CE mark products. Any NDT personnel must be certified by an appropriate conformity assessment body for the operative regime either UK or CE. The acceptance of CE marking in the UK requires full compliance with the CE requirements and this includes approval of personnel.

Guideline:	**F-15**
Question	Where approval of operating procedures for permanent joining is required by the PE(S)R and the approval is granted on the basis of a document other than a designated standard, should this approval explicitly mention the PE(S)R?
Response	Yes. The approval certificate should also indicate the tests performed in addition to those in the document used for approval. If certificates do not include a reference to the PE(S)R, the application of the last paragraph of Schedule 2 Paragraph 21(4) shall be checked through the detailed examination of the Welding Procedure Qualification Record (WPQR).
Explanation	
PE(S)R reference	Schedule 2 Paragraph 21
PED reference	Annex I Point 3.1.2
UK Narrative (if any)	

Guideline:	**F-16**
Question	Do the essential safety requirements apply to temporary components used by the equipment manufacturer either during the manufacturing or for the proof test of a pressure equipment?
Response	No, unless the joining of this temporary component, for example by welding, is likely to affect the safety of the equipment during its future operation. However, the manufacturer is responsible for the application of these components, which must have an adequate level of safety and meet national regulations **. Examples of temporary

	components: temporary closure for proof testing, lifting lugs welded on an additional thickness to be removed later
Explanation	
PE(S)R reference	Schedule 2 Paragraphs 21 and 27
PED reference	Annex I Points 3.1.2 and 3.2.2
UK Narrative (if any)	**Note:** ** We understand that the EU guideline is focused on "placing on the market". The UK context is that national regulations and requirements such at HSWA; PUWER; PSSR, LOLER apply, irrespective of the PE(S)R or PED.

Guideline:	**F-19**
Question	The Essential Safety Requirements define in Schedule 2 Paragraph 21 that the properties of welded joints shall meet the minimum properties specified for the materials to be joined unless other relevant property values are specifically taken into account by the design process. Do these requirements apply also for impact property values?
Response	Yes, in general also the impact property values shall meet the specified minimum properties of the materials joined. Schedule 2 Paragraph 31(3)(a) 4.1(a) refers to Paragraph 41 regarding specific requirements of materials. To reach sufficient ductility for steel the impact value shall be at least 27 J at lowest operating temperature. Different values are acceptable if justified by the design solution.
Explanation	
PE(S)R reference	Schedule 2 Paragraph 21
PED reference	Annex I Point 3.1.2
UK Narrative (if any)	

G. Interpretation of the essential safety requirements on materials

Guideline:	**G-01**
Question	What is to be understood by designated standard as referred to in Schedule 2 Paragraph 31(4)(b)(i).
Response	A designated standard in this context can be a designated product standard for an item of pressure equipment or an assembly which may be UKCA marked. It could also be a designated supporting standard, that contains technical data clearly indicating the field of application. In the case of a designated supporting standard for materials, presumption of conformity to the ESRs is limited to technical data of materials in the standard and does not presume adequacy of the material to a specific item of equipment. Consequently, the technical data stated in the material standard shall be assessed against the design requirements of this specific item of equipment to verify that the ESRs of the PE(S)R are satisfied.
Explanation	Subsequent manufacturing processes affecting properties of the base material shall be taken into account when assessing the conformity of the pressure equipment to the material requirements of the PE(S)R.
PE(S)R reference	Schedule 2 Paragraph 31(4)(b)(i)
PED reference	Annex I Point 4.2(b)
UK Narrative (if any)	

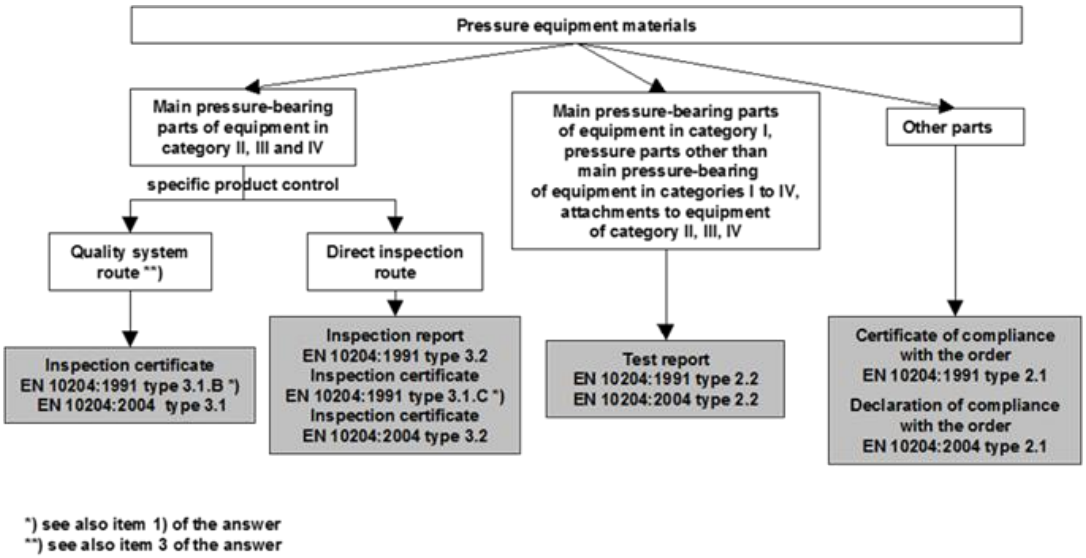
Guideline:	**G-02**
Question	What is a ‘competent body’ for the certification of the quality (assurance) systems of material manufacturers?
Response	A ‘competent body' for certification of the quality systems of material manufacturers can be any third-party body established as a legal entity, acceptable to the UK Government, which has recognised competence in the assessment of quality (assurance) systems for the manufacture of materials and in the technology of the materials concerned. Competence can be demonstrated, for example, by accreditation. See also Guideline G-07.
Explanation	In the EU, a body not established as a legal entity within a member state, even if it has a recognition agreement through the International Accreditation Forum, does not comply with the requirements of Schedule 2, Paragraphs 31(6), 31(7) and 31(8). In the UK, recognition is to the satisfaction of the UK Government. An approved body may perform this task only if it has a recognised competence in the field of quality assurance, materials and related process technology. For this certification, the possible use of the notification number for PE(S)R is irrelevant. The certificate of quality system shall make reference to the legal entity and its address.
PE(S)R reference	Schedule 2 Paragraph 31(8)
PED reference	Annex I Point 4.3 (3rd Paragraph)
UK Narrative (if any)	

Guideline:	**G-04**
Question	What are the “suitable means” for traceability referred to in Schedule 2 Paragraph 24?
Response	The objective of traceability is to avoid any doubt about the material specification used for a type of equipment. The suitable means shall be determined according to the type of equipment and its manufacturing conditions: for instance, complexity of the product, unitary or serial products, risk of mixing of material grades, etc. These means range from physical marking of individual items by stamping or colour coding to procedural methods. It is not always necessary for the identification of material to be linked to a specific delivery. The traceability system should be proportionate to the risk of mixing material grades during the manufacturing process. When there is no such a risk, the system may be limited to administrative means.
Explanation	
PE(S)R reference	Schedule 2 Paragraph 24
PED reference	Annex I Point 3.1.5
UK Narrative (if any)	

Guideline:	**G-05**
Question	Schedule 2, Paragraph 31(6), (7) and (8) of the PE(S)R requires that 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. How may these requirements be applied in terms of required inspection documents?

Response

1. According to Schedule 2 Paragraph 31(6), the equipment manufacturer shall certify, that the delivery complies with the requirement of the specification and the order has been received. This affirmation of compliance shall be stated on or appended to the certificate, whichever type is issued.
2. According to Schedule 2 Paragraph 31(7) a certificate of specific product control is required for the main pressure-bearing parts of pressure equipment in categories II, III and IV. Account shall be taken of the requirements in 4.1 and 4.2 (a) of Schedule 2.
3. According to the Schedule 2 Paragraph 31(8) a distinction is made for the material manufacturer's fabrication system: where they have an appropriate quality (assurance) system certified by a competent body established within the Community, and having undergone a specific assessment for materials, an inspection document from the manufacturer is appropriate (see also Guidelines G-07 and G-16).
4. A scheme of the relevant inspection documents when following EN 10204:1991 or EN 10204:2004 is given in the following diagram:



Notes(s):

1) *An inspection document of a higher level is always acceptable.*
2) *Material from stockists shall be accompanied by inspection documents from the material manufacturer.*
3) *For traceability and transfer of marking, see also Guideline G-04.*
4) *For main pressure bearing parts, see also Guideline G-06, and for attachments see definition in Regulation 2(1) of the PE(S)R.*
5) *For components, see Guideline G-19.*
6) *As regards joining materials, see Guideline G-10.*
7) *Previously, the affirmation of compliance was not included in the definition of certificate 3.1.B or 3.1.C according to EN 10204:1991, which is now included in the definition of certificate 3.1 of EN 10204:2004.*

Explanation	
PE(S)R reference	Schedule 2 Paragraphs 31(6), (7) and (8)
PED reference	Annex I Point 4.3
UK Narrative (if any)	

Guideline:	**G-06**
Question	Paragraph 31(7) of Schedule 2 gives requirements for the main pressure-bearing parts. How are they defined?
Response	The main pressure-bearing parts are the parts, which constitute the envelope under pressure, and the parts which are essential for the integrity of the equipment. Examples of main pressure-bearing parts are shells, ends, main body flanges, tube sheet of exchangers, tube bundles. The materials for these main pressure-bearing parts of equipment of categories II to IV shall have a certificate of specific product control (see Guideline G-05). See also Guideline G-08 for bolting parts (fasteners).
Explanation	
PE(S)R reference	Schedule 2 Paragraphs 31(6), (7) and (8)
PED reference	Annex I Point 4.3
UK Narrative (if any)	

Guideline:	**G-07**
Question	To what apply the terms “having undergone a specific assessment for materials” of Paragraph 31(8) of Schedule 2?
Response	It is the quality (assurance) system of the material manufacturer which shall have undergone a specific assessment for materials (and not the competent body).
Explanation	See also Guideline G-02
PE(S)R reference	Schedule 2 Paragraphs 31(6), (7) and (8)
PED reference	Annex I Point 4.3
UK Narrative (if any)	

Guideline:	**G-08**
Question	What are the certificates required for bolting parts?
Response	The bolting parts (screw, nut, stud, etc) are joining components. When these components contribute to the pressure resistance, their materials shall fulfil the relevant requirements of Schedule 2, Paragraph 31. Regarding Paragraphs 31(6), (7) and (8) of Schedule 2, a bolt is not considered to be a main pressure bearing part unless its failure would result in a sudden discharge of pressure energy. When bolts are used as: - main pressure bearing parts a certificate of specific product control is required (unless the item of pressure equipment itself is in Category I) - pressure bearing parts a test report is sufficient, - non pressure bearing part a certificate of compliance is sufficient (refer also to Guideline G-05).
Explanation	
PE(S)R reference	Schedule 2, Paragraph 31
PED reference	Annex I, Section 4
UK Narrative (if any)	

Guideline:	**G-10**
Question	What are the requirements for the documentation and traceability of welding consumables: - Inspection document? - Suitable procedures for traceability?
Response	Manufacturers of welding consumables shall provide inspection documents affirming compliance with the specification. Based on Paragraph 31 of Schedule 2 and Guideline G-05, manufacturers of welding consumables shall provide test report “2.2” as an inspection document in accordance with the standard EN 10204. The traceability requirement of Schedule 2 Paragraph 24 applies also for welding consumables. It can be maintained by procedural methods that cover receipt, identification, storage, transfer to production, temporary storage and use in production, availability of correct inspection documents at the final inspection (see also Guideline G-04).
Explanation	Welding consumables are defined by trade name, designation and relevant EN classification standard. Inspection documents of welding consumables should give test results, for technical

	characteristics according to designation and classification standard, such as: - Chemical composition of welding filler metal or all-weld metal as appropriate - Tensile properties of all-weld metal: tensile and yield strength, elongation - Impact properties of all-weld metal at temperature according to designation. Test results are based on non-specific inspection and testing. They can be given for example as typical values based on quality control tests.
PE(S)R reference	Schedule 2 Paragraphs 21, 24, 31(3), 31(4)(a) and 31(6)
PED reference	Annex I, Points 3.1.2, 3.1.5, 4.1, 4.2(a) and 4.3 (1st Paragraph)
UK Narrative (if any)	

Guideline:	**G-11**
Question	Do the essential safety requirements of Schedule 2 apply to pressure equipment manufactured from plastic, GRP and non-metallic materials?
Response	Yes
Explanation	
PE(S)R reference	Schedule 2
PED reference	Annex I
UK Narrative (if any)	

Guideline:	**G-16**
Question	The PE(S)R considers the case of a material manufacturer who "has an appropriate quality-assurance system, certified by a competent body established within the United Kingdom or in the territory of an EEA state and having undergone a specific assessment for materials". How should this requirement be understood in practice?
Response	In practice, this requirement is satisfied when the material manufacturer has a quality assurance system of at least EN ISO 9001 type, certified by a competent body (according to the definition given in Guideline G-02) acceptable to the UK Government, and when the field of validity of the certification specifies production of material indicating the relevant material types. The specific assessment of the quality system shall properly cover all the relevant processes and material properties referred to in the material specifications and attested in the material certificates. A single reference to Paragraphs 31(6), 31(7) and 31(8) of Schedule 2 of PE(S)R is not sufficient to validate the quality assurance system of the material manufacturer. The reference document for quality assurance system which has been used shall be identified. Reference to the PE(S)R in the quality assurance system certification is not a mandatory requirement. ***Note:*** *See also Guidelines G-05, G-07 and I-05.*
Explanation	
PE(S)R reference	Schedule 2 Paragraphs 31(6), 31(7) and 31(8)
PED reference	Annex I Point 4.3

UK Narrative (if any)	For CE marked equipment the “EU” requirement must be fulfilled. Where UKCA marking is applied it is possible to use material certified by a body acceptable to the UK Government.

Guideline:	**G-18**
Question	Do the essential safety requirements on materials specified in Paragraphs 31(8) and 41 of Schedule 2 apply to the base material or to the pressure equipment?
Response	They apply to the pressure equipment in its entirety, i.e. also to the heat affected zones of a weldment, but not to the non-pressure bearing parts.
Explanation	Subsequent manufacturing processes affecting properties of the base material shall be taken into account when specifying the properties of the base material, as per Paragraphs 20, 21 and 24 of Schedule 2.
PE(S)R reference	Schedule 2, Paragraphs 31(8) and 41
PED reference	Annex I, Points 4.1 and 7.5
UK Narrative (if any)	

Guideline:	**G-19**
Question	Which requirements apply to components, such as dished ends, bolts, flanges, welded fittings etc, which are placed on the market as such?
Response	To be incorporated into an item of pressure equipment, components which are manufactured from materials such as plates, coils and bars shall meet all the relevant essential safety requirements related to the manufacturing process used; for instance in the manufacturing of welded dished ends, Paragraphs 19 and 38 of Schedule 2 are relevant in addition to Paragraph 31 (e.g. Part 4). In order to prove the conformity to the PE(S)R of the pressure equipment containing the component the equipment manufacturer will need relevant documents from the component supplier: o Material certificates (of the plates, coils, bars …), and as relevant: o Welding procedure approvals, o Welder / welding operator approvals, o Non-Destructive testing operator qualifications, o Non-Destructive testing reports, o Destructive testing reports, o Forming and heat treatment information, etc. This information may be in the form of a component certificate. The requirement in Schedule 2 Paragraph 31(6) is not however intended for a component manufacturer, who is not a material manufacturer in the context of PE(S)R, even if they modify the mechanical properties of the material. Forgings (including forged flanges), castings and seamless tubes are generally considered to be materials. Fittings made from these “materials” without sub-sequent welding or other process which could alter the material characteristics are also considered to be materials. As regard welded tubes, see Guideline G-25.
Explanation	Current practice may require components to be delivered with certificates based on standard EN 10204 Metallic products. Types of inspection documents or corresponding requirement

	when they are placed on the market as such. The PE(S)R does not preclude supplying such certificates with components. See also Guidelines A-09, A-22, D-03, G-05, G-06, G-08, G-18 and G-25.
PE(S)R reference	Regulation 2(1), Schedule 2 Paragraphs 19, 31(6), 31(7), 31(8) and 38
PED reference	Article 2(1), Annex I Points 3.1, 4.3 and 7.2
UK Narrative (if any)	

Guideline:	**G-25**
Question	How shall welded tubes be considered for the application of the Pressure Equipment (Safety) Regulations (PE(S)R)?
Response	Continuously machine-welded tubes, i.e. tubes made from coils as starting materials in an automatic process, which are usually heat treated after welding shall be in the terms of certification procedures considered as materials provided the essential safety requirements (ESRs) of Schedule 2 Part 4 “Materials” as well as applicable ESRs of Schedule 2 Part 3 “Manufacturing” (in particular, Paragraphs 21 and 22) are fulfilled. Further the manufacturer of such tubes shall affirm compliance of the welded tube to the specification. In general, the inspection document shall take the form of a certificate of specific product control, where shall be found the references to the competent third-party approval of welding procedures and personnel and to the recognised third-party approval of non-destructive personnel (for categories III and IV). When the use of the welded tube is limited to pressure equipment of category I, a statement in the test report confirming that personnel and welding procedures are qualified according to suitable internal operating procedures is sufficient. In application of Guideline G-16, where the welded tube manufacturer has a certified quality system, this system shall properly cover not only the relevant material properties referred to in the tube specifications, but also the manufacturing process of the welded tubes (in particular welding and NDT).
Explanation	This implies that e.g. tubes made from plates are to be considered components, refer to Guideline G-19.
PE(S)R reference	Schedule 2 Paragraphs 21, 22 and 31(6), 31(7), 31(8)
PED reference	Annex I, Points 3.1.2, 3.1.3 and 4.3
UK Narrative (if any)	

H. Interpretation of other essential safety requirements

Guideline:	**H-02**
Question	Final assessment (Schedule 2 Paragraph 27) of pressure equipment must include a test for pressure containment at a pressure at least equal, where appropriate, to the value laid down in Schedule 2 Paragraph 40. This section only refers to pressure equipment. Does this mean that Schedule 2 Paragraph 40 does not apply to piping, and pressure and safety accessories?
Response	In accordance with Schedule 2 Paragraph 27 in the course of the final assessment pressure equipment must be subjected to a test for the pressure containment aspect. As a rule, this test for the pressure containment aspect is supposed to be carried out in the form of a hydrostatic pressure test. Where this is not possible or disadvantageous other procedures are permissible. The pressure value chosen for carrying out a hydrostatic pressure test must be such as to assure testing the pressure containment aspect of the pressure equipment with due consideration of the determined safety factors without causing a damage to the pressure equipment. Schedule 2 Paragraph 40 provides additional formulas which may be applied only in due consideration of the general criteria described above (Schedule 2 Paragraph 27). The formulas in Schedule 2 Paragraph 40 should be considered for all items of pressure equipment, not only pressure vessels.
Explanation	
PE(S)R reference	Schedule 2 Paragraphs 27 and 40
PED reference	Annex I Points 3.2.2 and 7.4
UK Narrative (if any)	

Guideline:	**H-03**
Question	What safety information must be given to the user in relation to Schedule 2 Paragraph 29 and 30?
Response	When pressure equipment is placed on the market, the manufacturer is required by the PE(S)R to ensure that it is accompanied by instructions for the user containing certain safety information; such information is mandatory. Additional information may be requested by the user or recommended by the manufacturer and agreed as part of the order or contract; this information is not a PE(S)R requirement and therefore is optional. Both types of information are elaborated below. The following are required by the PE(S)R: o Details accompanying the UK or CE marking, per Paragraphs 29(a), 29(b) and 29(c) o Operating instructions for mounting, putting into service, use and maintenance, per Paragraph 30(1), which include as far as relevant to the equipment: - safe operating limits and design basis (includes anticipated operating and assumed design conditions, intended life, design code used, joint coefficients and corrosion allowances) - features of the design relevant to the life of the equipment per Paragraph 5(3) last indent - residual hazards not prevented by design or protective measures, that might arise from foreseeable misuse, per Paragraph 2(3), 29(c), and 30(3)

	- technical documents, drawings and diagrams necessary for a full understanding of these instructions, as per Paragraph 30(2) - information about replaceable parts, for example per Paragraph 11
Explanation	1. Where an assembly of pressure equipment includes a number of different PS, it is acceptable not to provide these different PS on the assembly marking but they must be provided by other suitable means for example on an assembly layout diagram accompanying the operating instructions. 2. Without prejudice of Paragraph 30(1), other information, not required by the PE(S)R, may be included by contractual agreement, such as: hazard analysis, material test certificates, detailed design calculations, “as built” drawings, heat treatment records, welding records, NDT results, results of dimensional check, full records of proof test, details and results of special checks, details of any corrective repair or modifications, full documentation of any concessions made.
PE(S)R reference	Schedule 2 Paragraphs 29 and 30
PED reference	Annex I Points 3.3 and 3.4
UK Narrative (if any)	The explanation, Point 2 above includes examples of the non-mandatory information that maybe requested.

Guideline:	**H-04**
Question	The third preliminary observation of Schedule 2 of the PE(S)R requires that the manufacturer shall “… analyse the hazards and risks in order to identify those which apply to their equipment on account of pressure”. In addition, the modules of Schedule 1A require that “The technical documentation…….shall include an adequate analysis and assessment of the risk(s)”. How shall this be carried out and documented??
Response	As a first stage the manufacturer shall determine and record the characteristics, extent, surrounding and circumstances of the intended use of the pressure equipment or the assembly. Next, it is necessary to identify hazards and/or hazardous situations that could occur during the life cycle of the pressure equipment or the assembly in reasonably foreseeable conditions. The manufacturer shall analyse each hazard and/or hazardous situation and evaluate the significance of the risk for each identified applicable hazard and/or hazardous situation and follow the mitigation measures as listed in Schedule 2 Paragraph 2(2). The goal of the risk assessment is the appropriate application of the relevant essential safety requirements (Schedule 2) of the PE(S)R and the implementation of associated measures. The manufacturer shall record the risk assessment that has been carried out. The methods of the risk assessment, a list of the essential safety requirements applied to the equipment and the corresponding protective measures shall be included in the technical documentation. See also Blue Guide 2016: Section 4.3 “Technical documentation” and ISO/IEC-Guide 51.

Explanation	The risk assessment may be carried out by the manufacturer himself, by their authorised representative or by another person acting on their behalf. If the risk assessment is carried out on behalf of the manufacturer or by another person, the manufacturer remains responsible for the risk assessment and the implementation of the necessary protective measures during the design and manufacture of product. The hazard and risk analysis process may be facilitated by using designated standards but they do not relieve the manufacturer of their obligation to carry out the analysis. See also Blue Guide 2016: Section 4.1.2.2 ”Role of harmonised standards”. The risk assessment can include, but does not require, a quantitative approach with probabilistic analysis and/or assumptions of possible extents of damage. It is up to the manufacturer to decide about the most appropriate method taking into account the pressure equipment technology used and current practice.
PE(S)R reference	Schedule 2 Paragraph 1(2) and 1(3), Schedule 1B
PED reference	Annex I, 2nd and 3rd Preliminary Observations, Annex III
UK Narrative (if any)	Note, all EU product conformity legislation is based on a series of horizontal regulations. These are interpreted in a published guide to the implementation of product rules (The Blue Guide). This document does not cite the Blue Guide, however readers may find it useful context.

Guideline:	**H-06**
Question	The Paragraph 31(1) of Schedule 2 explicitly provides for exceptions to the general rules specified subsequently. How should the achievement of “an equivalent overall level of safety” in such a case be demonstrated?
Response	The specific quantitative requirements given in Schedule 2 Part 6 are related to particular failure modes. If different values are used, the corresponding failure modes and their combination shall be identified and the measures taken to maintain an equivalent level of safety shall be provided in the technical documentation, with appropriate justifications. The achievement of “an equivalent overall level of safety” may be assumed if the measures taken provide adequate safety margins against all relevant failure modes in a consistent manner. Safety margins are adequate, and deviation from a particular value is justified: a) by a reduced risk in the respective failure mode, or b) by additional means to ensure no increase of the risk. When using a designated standard for pressure equipment which has been published in the “Notices of Publication for Designated Standards” on the UK Government website, no further justification is needed for the quantitative values which have been used as regards Schedule 2 Part 6 (refer also to Guideline G-01). The requirement to demonstrate an equivalent overall level of safety applies to the product itself, and to the measures taken to meet the essential safety requirements. The use of a "recognised" code is not, in itself, sufficient to demonstrate an equivalent overall level of safety (see also Guideline I-05).
Explanation	
PE(S)R reference	Schedule 2 Part 6 (Paragraphs 35, 36, 37, 38, 39, 40 and 41)

PED reference	Annex I Section 7
UK Narrative (if any)	

Guideline:	**H-14**
Question	Is it possible to undertake statistical proof testing of series-produced safety valves?
Response	Yes, when the body of the safety valve classified according to Schedule 1B Paragraph 3 does not exceed category I and provided it is supported by the hazard analysis.
Explanation	The proof test is intended to verify the pressure containment aspect of the item of pressure equipment. The proof test does not address the safety function which is covered by Schedule 2 Paragraph 27. 1. The safety function of such safety valves needs to be assessed according to category IV (except for safety valves manufactured for specific equipment of category lower than IV). 2. The same reasoning is not applicable to the other items of pressure equipment which are classified by the PE(S)R in a higher category than the category derived from their intrinsic characteristics.
PE(S)R reference	Schedule 2 Paragraph 27
PED reference	Annex I Point 3.2.2
UK Narrative (if any)	

I. Miscellaneous

Guideline:	**I-05**
Question	In which conditions is it possible to use a document other than a designated standard (national standard, professional code or private technical document) for the design and manufacture of pressure equipment for the application of PE(S)R?
Response	1) The use of the designated standard is not mandatory. 2) However, the Regulations did not include provisions to give presumption of conformity to documents other than designated standards. A manufacturer using another document shall describe in the technical documentation the solutions adopted to meet the essential requirements of the PE(S)R. The approved body (or the user inspectorate) shall validate, if required by the module chosen, these solutions. 3) The technical requirements of the PE(S)R are given in Schedule 2. When using a national standard, a professional code or a private technical document for fulfilling Schedule 2, only the technical content of this document is relevant. Further provisions of this document (e.g. about bodies or certification procedures) are not relevant for the application of PE(S)R.
Explanation	See also Guideline I-06
PE(S)R reference	Regulation 40
PED reference	Article 12
UK Narrative (if any)	

Guideline:	**I-06**
Question	Is it possible to use partially one or more designated standards, codes or specifications to design and manufacture a pressure equipment conform to the PE(S)R?
Response	Yes, provided that the following are addressed: The different parts (design, manufacture, inspection, …) of a designated standard, a code or a specification for pressure equipment form a consistent set of documents which should be followed. Nevertheless, the partial use of a designated standard, a code or a specification is not forbidden. In these conditions, the essential requirements covered by the part(s) of designated standards, codes or specifications used shall be identified. The essential requirements not covered by the part(s) of designated standards, codes or specifications shall be subject to an analysis to judge the validity of the adopted solutions. Then, if several different parts of designated standards, codes or specifications are used, it shall be verified that there are no incompatibility or inconsistency between these parts, particularly for the application data (permissible stress, safety coefficient, extent of the inspection, …).
Explanation	See also Guideline I-05
PE(S)R reference	Regulation 40
PED reference	Article 12

UK Narrative (if any)	

Guideline:	**I-16**
Question	Must a UKCA marked item of pressure equipment, or an assembly, be supplied with an UK declaration of conformity, when it is placed on the UK market?
Response	The manufacturer of UKCA marked pressure equipment or assembly should be aware that the declaration of conformity must be made available upon request. Otherwise, the presumption of conformity is in doubt. For this purpose, the manufacturer or their authorised representative established within the UK must draw up a written declaration of conformity and keep a copy of it for a period of ten years after the last pressure equipment has been manufactured. In addition, the manufacturer should be aware that the declaration of conformity is a helpful document to the distributor or user because it is a summary of design, manufacture and conformity assessment. The manufacturer should also be aware that the declaration of conformity is an essential document for the manufacturer of an assembly into which a UKCA marked item of pressure equipment is to be integrated. It is therefore highly recommended to provide the declaration of conformity for all products which are intended to be put into service as such, with the product.
Explanation	The declaration of conformity does not need to be a separate document; it may be included in the instructions for use.
PE(S)R reference	Regulations 9 to 18, Regulation 19, Regulations 20 to 29, Regulation 48, Schedule 1B (module A, A2, C2, D, D1, E, E1, F, G, H, H1), Schedule 11
PED reference	Article 5 Paragraph 1 and 2; Article 6; Article 7; Article 8; Article 17; Annex III module A, A2, C2, D, D1, E, E1, F, G, H, H1, Annex IV
UK Narrative (if any)	Note, UK Brexit repealed Council Regulation (EC) No. 2679/98 of 7 December 1998 on the functioning of the internal market in relation to the free movement of goods among the Member States. Therefore, any reference to free movement amongst Member States has been removed.

J. General-horizontal questions

Guideline:	**J-03**
Question	If a manufacturer intends to place pressure equipment or assemblies on the market according to pre-PER national Regulations during the transition period, what conditions must be met?
Response	1. A necessary condition is that all manufacturing and conformity assessment operations required by the pre-PER national Regulations have been completed on or before 29 May 2002. 2. In addition, given that one of the purposes of including a transition period in the UK Regulations is to provide time for manufacturers to reduce stocks, items of pre-PER pressure equipment must be physically transferred to the customer or distribution chain on or before 29 May 2002. unless the transfer of ownership has occurred before this date.
Explanation	Provided the conditions in 1 and 2 have been met, there are no restrictions on the subsequent sale of pre-PER pressure equipment (through a distribution chain for example) or when such equipment is eventually put into service. If a manufacturer retains some stocks of pre-PER pressure equipment or assemblies after 29 May 2002, then they can only be subsequently placed on the market if they are shown to be in compliance with the PE(S)R (This is not necessary if the items are intended for export to a country outside the UK).
PE(S)R reference	Regulation 88
PED reference	Article 48 Paragraph 1
UK Narrative (if any)	This guideline is retained to describe the context of acceptance pre-PER / PE(S)R. See also Guideline C-11.

4. Bibliography and References

- Directive 2014/68/EU - Pressure Equipment Directive
- PE(S)R - Pressure Equipment (Safety) Regulations 2016 *(as amended)*
- Product Safety and Metrology (Amendment) (EU Exit) Regulations 2020 No. 852
- Product Safety and Metrology (Amendment) Regulations 2024 No. 696
- The Regulatory Reform (Fire Safety) Order 2005
- ASME B&PV Code Section IX
- Directive 2008/68/EC - Inland Transport of Dangerous Goods
- Directive 2010/35/EU - Transportable Pressure Equipment
- European Commission - Guidelines related to the Pressure Equipment Directive 97/23/EC Version 1.6
- European Commission - Guidelines related to the Pressure Equipment Directive 2014/68/EU Version 6.0
- 2022/C 247/ 01 - Commission Notice - The 'Blue Guide' on the implementation of EU product rules 2022
- EN 10204: 1991 - Metallic products - Types of inspection documents
- EN 10204: 2004 - Metallic products - Types of inspection documents
- EN 12952-1: 2015 - Water-tube boilers and auxiliary installations - Part 1: General
- EN ISO 9712: 2021 - Non-destructive testing - Qualification and certification of NDT personnel
- EN ISO 15614-1: 2017 - Specification and qualification of welding procedures for metallic materials - Welding procedure test
- Global conformity assessment a guide to site installed assemblies - SAFed Publication PEDG1 - Edition 02 / EEMUA Publication 237 - Edition 02
- A guide to pressure system installation where site assembly is required under the control of the end user - SAFed Publication PEDG2 - Edition 1 / EEMUA Publication 245 - Edition 1
- A guide to the information to be supplied to the PSSR competent person drawing-up a written scheme of examination - SAFed Publication PEDG03 - Edition 01 / EEMUA Publication 248 - Edition 01

NOTE: *Where a document is dual designated as EEMUA / SAFed then the text will be the same and the document will be freely available on the respective organisation's web-site.*

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