

# EPERC Conference – Roma April 2019



## **CEN and EPERC – Strategic Importance of European Standardization for Pressure Equipment**

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## Topics



- ❖ European Standardization
- ❖ Pressure equipment activities
- ❖ Link with Research and Innovation
- ❖ Involvement in European Standardization

## Background



- ❖ Before 1997 (national codes)
- ❖ 1997 Publication of the Pressure Equipment Directive
- ❖ Today improvement of the European catalogue of standards for Pressure Equipment that make it the most user friendly referential in the World

## Who we are



The European Committee for  
Standardization



The European Committee for  
Electrotechnical Standardization



The European Telecommunications  
Standards Institute

= the European Standards Organizations (“ESOs”)  
recognized at European level



## About CEN and CENELEC



- ❖ 34 national standardization bodies
- ❖ Effective co-regulation tool:
  - Provide support to European legislation
- ❖ National delegation principle:
  - Consensus process + identical national implementation
- ❖ Voluntary standards and market driven
- ❖ Cooperation with international standards organisations (ISO, IEC)

# One European standard...



## 1 European Standard (EN)

... replaces 34  
different national  
standards in Europe

... creates access  
to a market of  
600 million...



# CEN-CENELEC members



<p>Austria</p>  <p>Belgium</p>  <p>Bulgaria</p>  <p>Croatia</p>  <p>Cyprus</p>  <p>Czech Republic</p>  <p>Denmark</p> 	<p>Estonia</p>  <p>Finland</p>  <p>France</p>  <p>FYROM</p>  <p>Germany</p>  <p>Greece</p> 	<p>Hungary</p>  <p>Iceland</p>  <p>Ireland</p>  <p>Italy</p>  <p>Latvia</p>  <p>Lithuania</p> 	<p>Luxembourg</p>  <p>Malta</p>  <p>Netherlands</p>  <p>Norway</p>  <p>Poland</p>  <p>Portugal</p>  <p>Romania</p> 	<p>Slovakia</p>  <p>Slovenia</p>  <p>Spain</p>  <p>Sweden</p>  <p>Switzerland</p>  <p>Turkey</p>  <p>United Kingdom</p> 
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# European Standard

- A document for a **common** and **repeated** use
- Produced by all **interested parties** through **a transparent, open and consensus based process**
- A tool to underpin legislation
- **Voluntary** in use
- Automatically **transposed into national standards** and therefore **conflicting national standards are to be withdrawn**
- Integration with **international** standardization work





## Our mission



- ❖ Support and strengthen the European Single Market;
- ❖ Enhance the competitiveness of European players in the global market;
- ❖ Foster the European economy and the welfare of European citizens under the global concept of sustainable development;
- ❖ Ensure the most efficient input of Europe to international standardization activities and cooperation.

## Benefits from standards



- ❖ Improve efficiency - *"Standards contribute to the **economic efficiency** of our company because through them we know exactly according to which principles we have to produce."*
- ❖ Improve energy efficiency, minimise waste & reduce costs
- ❖ Support innovative technologies - *"Standards define a framework in which we can use our **creativity and flexibility in a targeted way**."*
- ❖ Ensure quality and safety of products and services
- ❖ Increase productivity and compatibility
- ❖ Access new markets and attract customers - *"Standards **open doors** to business on an international scale."*
- ❖ Facilitate compliance with regulations

## PED - CEN Organization



± 30 CEN/TCs drafting hENs

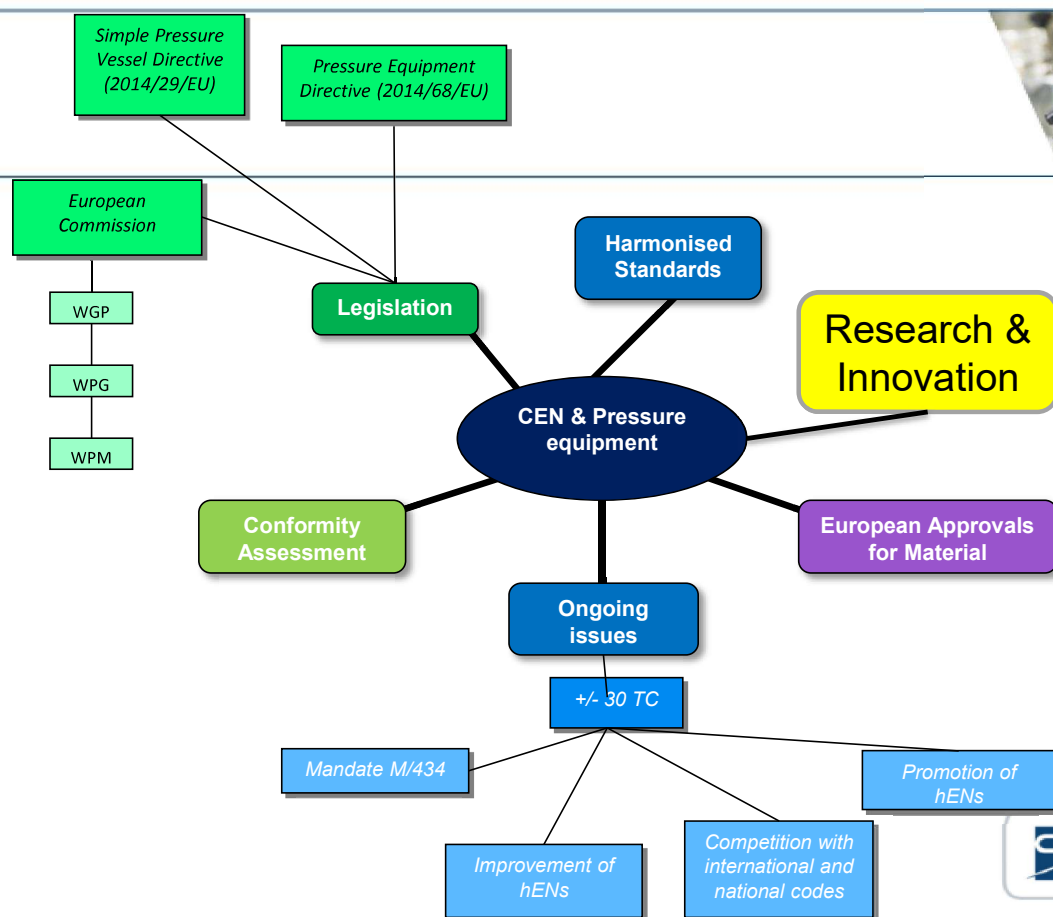
2 Maintenance Helpdesks

2 consultants part-time (150 working days/year together)

Sector Forum:

- Sector rapporteur
- Pressure Equipment Advisory Nucleus





# Technical Committees



## 3 Type of TCs:

- TC developing Standard only linked to PED (TC 54, TC 267 & TC 269)
- TC with some items in their WP linked to PED (TC 23, TC 58, TC 69, TC 70, TC 74, TC 121, TC 132, TC 133, TC 138, TC 155, TC 182, TC 185, TC 190, TC 210, TC 268, TC 286, TC 342, TC 459)
- TC developing one/two standards linked to PED (TC 47, TC 57, TC 79, TC 131, TC 181, TC 194, TC 234, TC 235, TC 237, TC 326)

## Issues related to TC:

- Lack of understanding of the PED
- Inclusion of consultant comments in revision or amendments

## Maintenance Helpdesks



### Two helpdesks:

- EN 13445 (TC 54)
- EN 13480 (TC 267)

### Role:

- help users when applying the standards
- correct the potential errors and mistakes

### Publication of Issues (with corrected pages)

# Harmonized Standards



## Mature sector

1 Open Mandate (M/071) + M/434 (fire extinguishers)

Harmonized standards:

- 220 hENs under PED
- 3 hENs under SPVD

In development (revision of existing standards):

- 83 projects under PED
- 3 projects SPVD

# Pressure Equipment Sector Forum



Sector Rapporteur: **Laurent Legin**

Pressure Equipment Advisory Nucleus:

- AFNOR Secretariat (**David Krupka**)
- Meets twice a year

Role :

- Coordination of the CEN technical committees which dealing with in the PE sector.
- Providing solutions for the problems arising due to the drafting of European Standards within the technical committees concerned.



## Pressure Equipment Sector Forum



- Coordination of consensus building and resolution of issues within the sector.
- Interfacing with the EC and EFTA partners and other stakeholders on policy issues.
- Channelling appropriately and as needed, information on the sector developments and requirements.
- Ensuring that useful information and advice is passed on to the CEN Technical Board and other relevant committees.

# Legislation



## 2 “New Approach” directives:

- Pressure Equipment Directive (2014/68/EU, former 97/23/EC)
- Simple Pressure Vessel Directive (2014/29/EU, former 2009/109/EEC)

More than 200 guidelines to the PED

Discussion in 2007 to revise PED and SPVD → failed

Codification of SPVD in 2009 with no change to the text

Alignment of the PED to the NLF in 2014

- No direct impact on standards
- Update of the references to the directive required upon revision of the standards

# New development



- New edition of EN 13445 (CEN/TC 54 design code)
- Revision of the SPV series (EN 286)
- New standards of EN 13445 series on 'Additional requirements for pressure vessels'
  - of titanium and titanium alloys' (part 11)
  - of copper and copper alloys (part 12)
- New standards of EN 13445 series on 'Additional requirements for pressure vessels related to pressure equipment and pressure components fabricated with additive manufacturing methods'

# Standards for research & innovation



## Standards provide

- ✓ a basis for the integration of new technologies into complex, innovative systems
- ✓ solutions for sustainability



## Societal challenges in Horizon 2020

- Food security
- Sustainable agriculture
- Marine and maritime research
- Bio-economy
- Secure, clean and efficient energy
- Smart green integrated transport
- Climate action, resource efficiency and raw materials

## An example – Hydrogen technology



EN ISO 17268:2016 Gaseous hydrogen land vehicle refuelling connection devices

EN 17128:2018 Hydrogen fuel - Product specification and quality assurance - Proton exchange membrane (PEM) fuel cell applications for road vehicles

EN 17127:2018 Outdoor hydrogen refuelling points dispensing gaseous hydrogen and incorporating filling protocols

# Involvement in standardization



- To line up standardization activities with the strategy of the company
  - To **identify the TCs** with company's products in their scope and which are the relevant WGs/MTs/PTs of each of the TCs
  - To identify the **TCs with horizontal functions** which are referred to in the product standards
  - To **scan the standardization landscape for initiatives** that are close to the DNA of the company
  - to **decide the level of involvement** in each individual TC
    - This depends on the strategic importance of the product(group), available experts, budget
- To get the support of the CEO and his alike
  - To proof that standardization is more than just an insurance
  - To talk their language
    - € \$ £ ¥
    - To translate all standardization challenges into their language

## What to do in standardization?



- To understand standardization work
- To learn about the different topics under discussion in relevant WGs/MTs/PTs
- To analyse/make proposals for modifications of certain standards in line with the company's strategy
  - To get into the nitty gritty details
    - 3 mm or 2,5mm?
    - 5 mA or 7 mA or 6 mA?

## Safety of pressure equipment - Rules and recommendations for the drafting and presentation of safety standards



The image shows the CEN logo at the top left, which consists of the letters 'cen' in a blue square. Below the logo is a dark red horizontal bar containing the text 'European Standards in relation to pressure equipment' in white. The bottom half of the image is a photograph of industrial pressure equipment, showing a large, metallic, cylindrical vessel with several black-handled valves and fittings.

CDN provides a platform for industry experts to develop European Standards that contribute to ensuring high levels of safety in relation to pressure. Many of these standards are specifically intended to support the implementation of the EU Directives relating to Pressure Equipment (PED) and Simple Pressure Vessels (SPV).

Pressure equipment covers a wide range of products from consumer products such as pressure cookers and portable fire extinguishers through to major industrial applications such as reactors, columns, boilers, steam generators, heat exchangers, industrial ovens and safety devices for the power generation.

For many years, Europe was the world's leading producer and supplier of pressure vessels, boilers, heat exchangers, etc. Although some manufacturing has moved to other parts of the world, Europe continues to be a leading source of expertise in the field of pressure equipment.

Within CEN there are 28 Technical Committees (TCs) involved in standardization work related to pressure equipment. In addition, there are another four Technical Committees of ECSS (European Committee for Iron and Steel Standardization), which is an Associated Standards Body that is linked to CEN for administrative and legal reasons.

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### Safety of pressure equipment - Rules and recommendations for the drafting and presentation of safety standards

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**ENELEC**



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