The CEN system in relation to the PED & Classification of Standards

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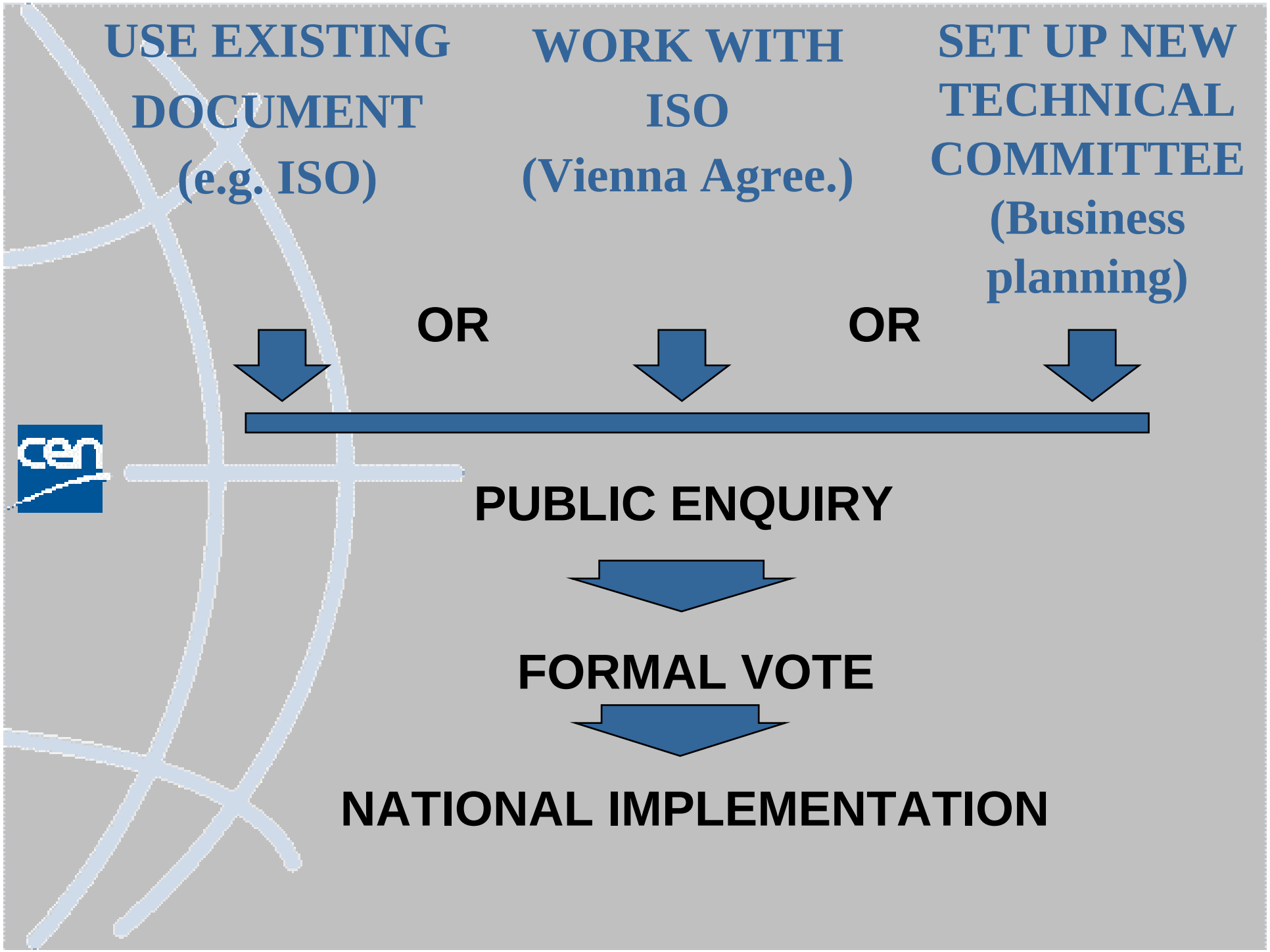
The European Committee for Standardisation

CEN IS MADE UP OF:

a ‘system’ to carry out formal processes shared between:

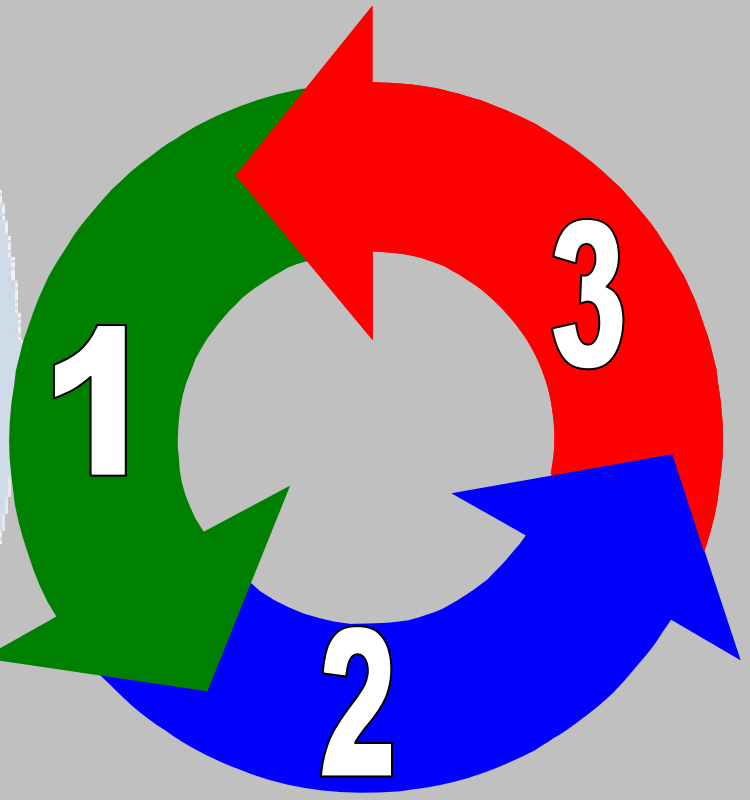
- 22 National Members, and the representative expertise they assemble from each country
- 8 Associates; 2 Counsellors (EC, EFTA)
- The CEN Management Centre, Brussels


USE EXISTING DOCUMENT (e.g. ISO)
WORK WITH ISO (Vienna Agree.)
SET UP NEW TECHNICAL COMMITTEE (Business planning)
OR
OR
PUBLIC ENQUIRY
FORMAL VOTE
NATIONAL IMPLEMENTATION

TYPES OF DOCUMENT

- European Standard - EN
- Technical Specification - CEN/TS
- Technical Report - CEN/TR
- CEN Workshop Agreement - CWA
- CEN Guide

The Three Year Cycle



The Three Year Cycle

Summary:

	Months
Target time to complete	36
Target times + maximum justified tolerance by TC resolution	54

The Role of CEN with respect to EU and National Governments

- CEN supports the policies of the European Union and EFTA
  - in particular for free trade,
  - but also the safety of workers and consumers,
  - environmental protection
  - exploitation of research and development programmes
  - ….

- On behalf of governments, the European Commission or EFTA Secretariat may request the European Standards organisations to develop standards in support of their policies by issuing formal 'mandates'.

The Role of CEN with respect to National Standards Bodies

- The national standards bodies of the Union, EFTA and some Eastern and Central European countries are the National Members of CEN. They:

  - make up the delegations to the technical committees by finding expertise in each country;

  - vote for and implement European Standards as national standards;

  - provide the secretariats of the committees;

  - finance more than 50 % of the work; in turn they are largely financed by industry, sales of standards and government grants.

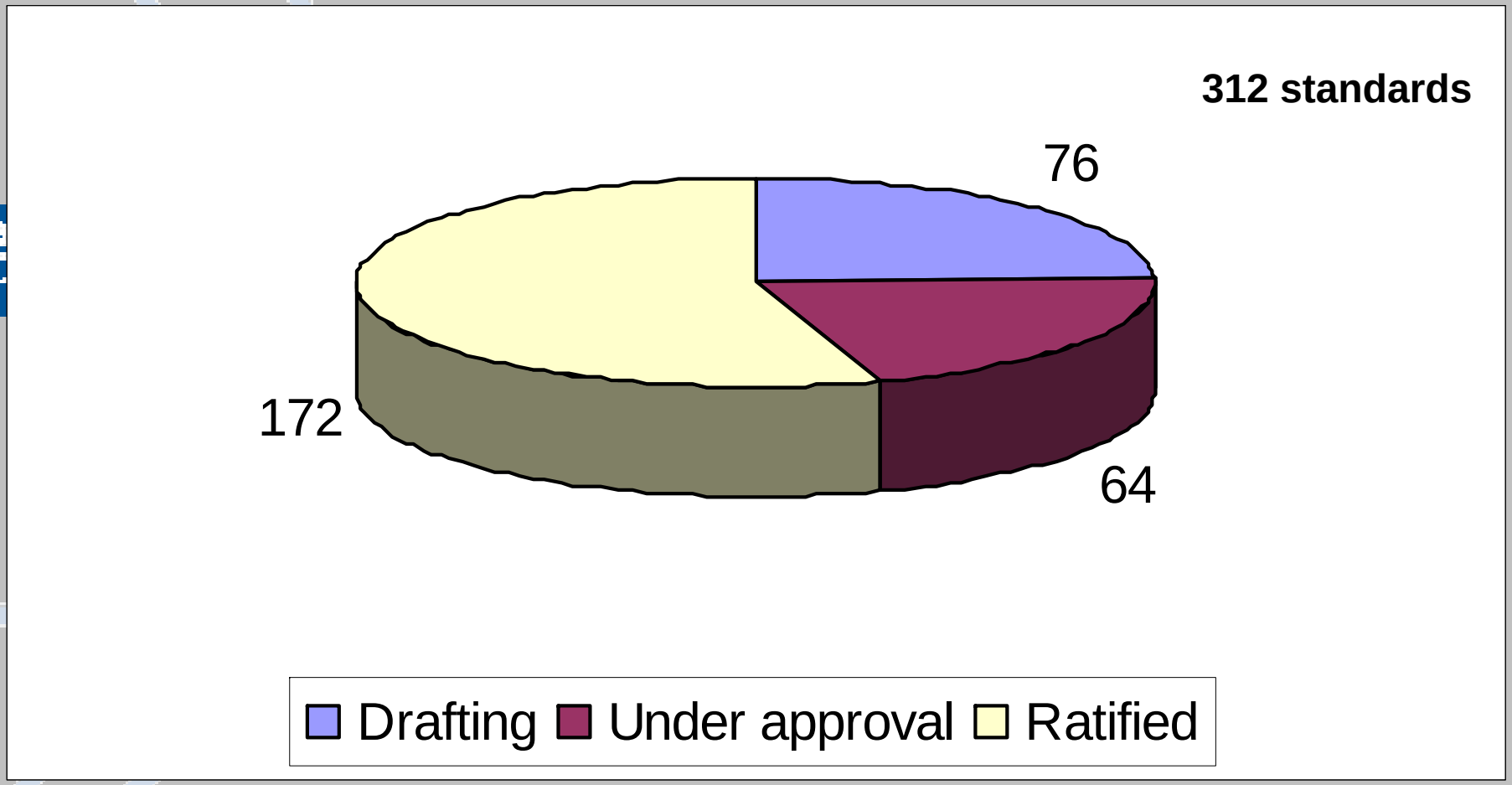
The Pressure Equipment Sector

European Standards

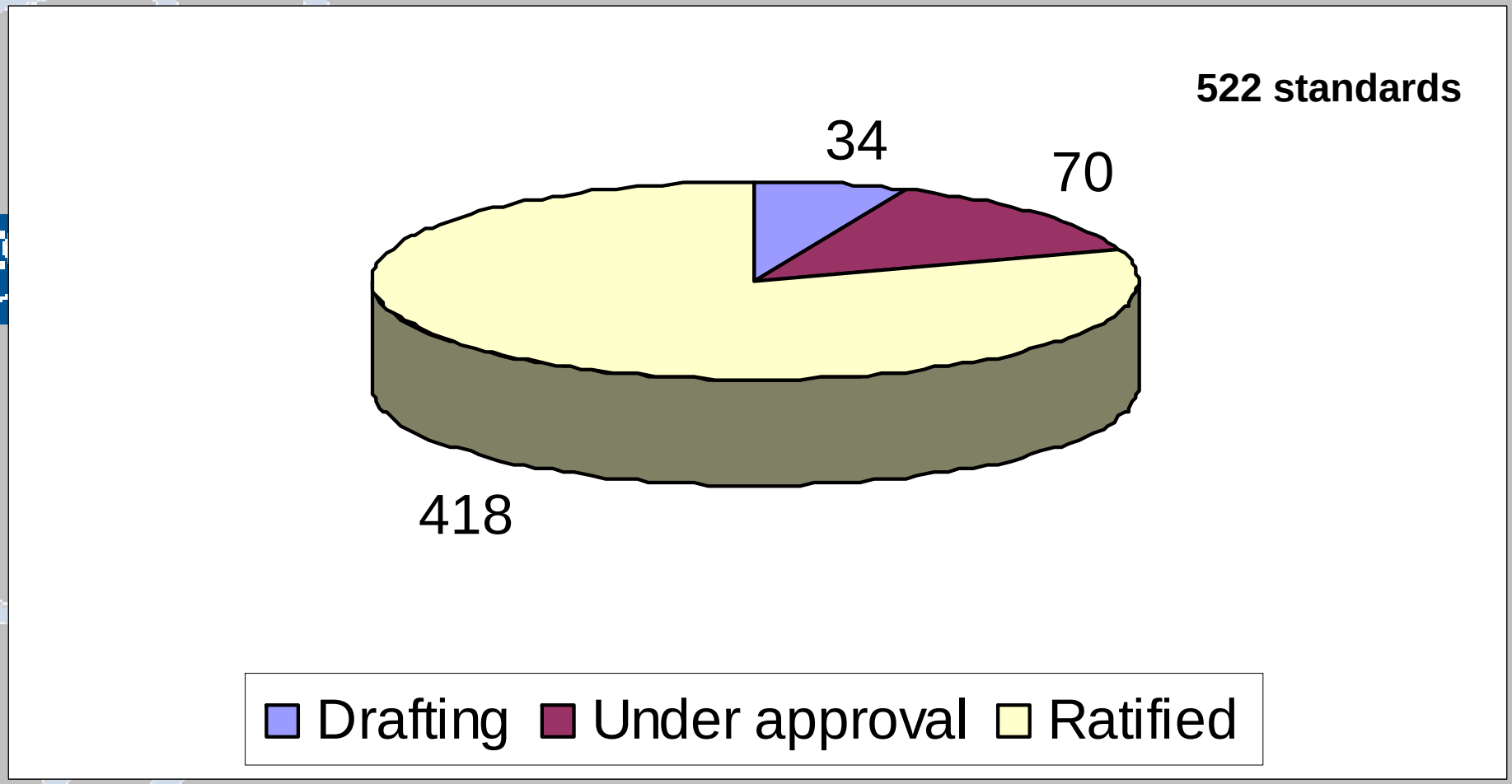
- Some 24 CEN and 9 ECISS Technical Committees relate to the PED
- About 300 harmonised standards
- About 500 supporting standards

Note: A classification exercise is ongoing and will change the above figures

The status of harmonised standards



The status of supporting standards



Classification of Standards: Type 1 standards

- Provide a technical solution to [fully] achieve one or more specific PED Essential Safety Requirements either by itself or by calling up other references (see guideline 10.5).
- It can be a product standard (i.e. a standard dealing with items of pressure equipment or assemblies) or a standard dealing with materials, procedures for permanent joining, approval of NDT personnel etc.

Classification of Standards: Type 1 standards

If a clause (or paragraph) in a Type 1 standard is related to an ESR and identified in Annex ZA, and that clause refers to another standard, the relevant part of the referenced standard is assessed to ensure that it at least does not contradict the PED, so that the presumption of conformity applies through the main standard and reference.

Classification of Standards: Type 2 standards

- Provide useful elements that contribute to the fulfilment of ESR(s)
- cannot alone give presumption of conformity to these ESRs.
- Examples: NDT test methods, general principles, terminology.
- Type 2 standards are likely to be used as normative references in type 1 standards

Classification of Standards: Type 2 standards

Type 2 is not a “failed” Type 1.

If a Work Item or draft standard is in Type 1 and the CEN Consultant gives a negative assessment, the problem has to be corrected by the TC.

However a change in scope or purpose of a standard may change it from Type 1 to Type 2 or *vice versa*.

Achievements

- ✓ Pressure Vessels EN 13445 series; Help Desk
- ✓ Boilers EN 12952 and 12953 series
- ✓ Industrial pipework EN 13480; Help Desk
- ✓ Materials standards
- ✓ Specialist applications standards: GRP, Cryogenics

PE Major Product Standards

Part Number	Pressure vessels EN 13445 CEN/TC 54	Industrial piping EN 13480 CEN/TC 267	Water tube boilers EN 12952 CEN/TC 269	Shell boilers EN 12853 CEN/TC 269
Part 1	General	General	General	General
Part 2	Materials	Materials	Materials	Materials
Part 3	Design	Design & calculation	Design & calculation	Design & calculation
Part 4	Manufacture	Fabrication & install.		Workmanship
Part 5	Inspection & testing	Inspection & testing	Workmanship	Inspection
Part 6	Cast iron vessels	Buried piping	Inspection	Equipment for boilers
Part 7			Equipment for boilers	Firing systems
Part 8			Firing systems	Safeguards
Part 9			Firing systems	Limiting devices
Part 10			Safeguards	Feed water
Part 11			Limiting devices	Acceptance tests
Part 12			Feed water	Firing systems
Part 13			Flue gas cleaning	Operating instructions

Example – EN 13445

7 (8) linked parts:

1. **General**
2. **Materials**
3. **Design**
4. **Manufacture**
5. **Inspection and testing**
6. **Cast Iron equipment**
7. *Guidance – use of conformity procedures*
8. Aluminium

CEN/TC 121

- Destructive and Non-destructive tests on welds
- Specification and approval of weld procedures
- Approval testing of welders
- Recommendations for welding metallic materials
- Recommendation for joint preparation
- Basic welded joint details in steel
- Brazing

“Materials” standards

ECISS/TC	EN series	Steel
10	10163	Structural
22	10028 eg part 2	elevated temp.
28	10222	Forgings
31	10213	Castings
29	10216	Seamless
29	(10217)	Welded tubes

ECISS/TC 9

Standards for material inspection and documentation

EN 10168: Iron & Steel products
Inspection documents

EN 10204 Metallic materials – Types of inspection documents (undergoing revision)

Some non-ferrous materials

TC 132 Aluminium and its alloys

TC 133 Copper and its alloys

The relation between EN standards and the Pressure Equipment Directive

PED Recital 16

“WHEREAS …to ease the task of demonstrating compliance with ESRs, standards harmonised at European level are useful…”

CEN, CENELEC

recognised as competent to adopt Harmonised Standards that follow general guidelines…”

Pressure Equipment Directive

Article 5 (2)

"Pressure equipment and assemblies which conform to the national standards transposing the harmonised standards published in the OJ shall be presumed to conform to the essential requirements…"

EN use for PED compliance

- The PED can be implemented by use of harmonised standards
- Whenever an EN exists, conflicting national standards must be withdrawn
- Presumption of conformity is gained by using ENs
  - This DIFFERENTIATES harmonised standards from other standards

Standards-making

If standards elaborate the Essential Safety Requirements, they must

- Be precise using known and respected data
- Allow flexibility but avoid compromise through stating generalities
- Add value
- Be acceptable to the Mandate

Foreword

Standards which are candidates for citation in the Official Journal state:

“For relationship with EU Directive(s), see informative Annex Z, which is an integral part of this document”

PED Annex Z

"Once this standard is cited in the OJ under [the] Directive and [it] has been implemented as a national standard in at least one Member State, compliance with the clauses of this standard given in Table ZA.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding Essential Requirements [of the] Directive and associated EFTA regulations."

Guidelines

- Developed by Working Party Guidelines (WPG)
- Approved by the Working Group “Pressure”
- WGP chaired by Commission DG/ENTR
- WGP includes Member States and EFTA, technical advisors, applicant members, Orgalime, CEN, Users and Notified Bodies.
- Guidelines are not legally binding, but are regarded very highly in certain Member States
- Guidelines are incorporated in harmonised standards

Approved Guidelines <200?

SCOPE & EXCLUSIONS (46)

CLASSIFICATION AND CATEGORIES (30)

ASSEMBLIES (16)

EVALUATION ASSESSMENT (9)

DESIGN (5), MANUFACTURING (12)

MATERIAL (24)

OTHER ESRs (15), MISCELLANEOUS (21), HORIZONTAL ISSUES (7)

The Promotion of Pressure Equipment Standards

- CEN does not sell standards but encourages their use
- The promotion of standards is to the benefit of all, especially the NSBs
- Ways of promoting are:
  - Writing “case studies” on the success of manufactures using ENs
  - Being present at important conferences (speakers, booths)
  - Publishing articles on important standards
  - Organising workshops/conferences
  - Developing help desks
  - …

Useful Websites

- **PED Text and Guidelines (hyperlinked)**
  http://ped.eurodyn.com

- **www.europa.eu.int/comm/enterprise/newapproach/standardization/harmstds/reflist/equippre.html**

- **CEN Website**
  http://www.cenorm.be

Past experience and perspectives with European Standards

Some experience to 29 May 2002 - negative

Reluctance of some users and manufacturers to change

Problems in the absence of Harmonised standards

Difficulties and differences in interpretation

Varying use of Guidelines

Availability of materials and components

Some positive experience to 29 May 2002

Harmonised standards becoming available

Guidelines are promoting uniformity

http://ped.eurodyn.com

Meetings to exchange experience,
identity common problems and
propose agreed approaches

Differentiators in favour to ENs

- ✓ Presumption of Conformity is one major differentiator from use of European standards

Others include

- ✓ Latest technical experience
- ✓ Breadth of background (*EU Expansion*?)
- ✓ Close partnership of material and design codes
- ✓ Higher allowable stresses generally
- ✓ Latest thinking

Annex Z is the key

Perspectives

- Completion of mandated programme
- Extension of EN 13445 to:
  - The creep range
  - Aluminium
  - Design by experiments
  - others

  Is ongoing (all will be completed by 2006)
- Further improve competitiveness of ENs
- Develop copper and aluminium material standards for pressure purposes

Market relevance of EN standards

- EN standards are high quality standards
- EN standards are used in real life
- EN 13445:2002 ‘Unfired Pressure Vessel” standard is already applied in Nordic countries.
- The ENs replace European national codes and challenge non-European codes
- Give easier market access through Presumption of Conformity