European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 0-001_2014_ACP

Type of question: **Interpretation**

Registration number	*Date of submission*	*Target date for answer*	*Date of acceptance*
0-001-2014	18/08/2014	29/10/2014	29/10/2014

Part number	*Page number*	*Subclause number*	*Reference of the standard used*
All Parts			EN 13480:2012

Question

EN 13480 piping code edition

Question/comment : How shall piping code editions be identified when referring to EN 13480? Looking at the current and past edition(s) of EN 13480, for example part EN 13480-1, it is noticed that EN 13480 works with year designation and issue numbers. It is not 100% clear if there are differences between these 2, e.g. EN 13480-1 issue .....

What format shall be used when referring to a specific piping code edition?

Answer proposed by the author of the question

Make it clear in EN 13480 that one has to reference to issue plus year number, not only issue number. Only referring to issue is not sufficient, since there may be various versions in terms of years of 1 issue.

Answer of the maintenance group

Publication rules of EN 13480 series are the same as EN 13445 series adopted through CEN/BT decisions.
Every 5 years a new edition is published with a new indication of the year. The last current edition of EN 13480 series is 2012. The next edition will be therefore in 2017.
Between 2 editions, a yearly update, so called "Issue", is published (integration of Amendment(s) and/or correction(s)) with the following indication on the top of each page, e.g.:
EN 13480-x:2012 (Issue 1 – 2012-06), EN 13480-x:2012 (Issue 2 – 2013-08), EN 13480-x:2012 (Issue 3 – 2014-08)…
The differences between editions and "Issues" are indicated in Annex Y of each Part of EN 13480 and modifications marked-up on the relevant pages.

Question from:
Name Hubert Velten
Company ZETON BV
Country The Netherlands
Date 2014-08-18

European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 1-001_2014_ACP

Type of question: **Correction**

Registration number	*Date of submission*	*Target date for answer*	*Date of acceptance*
1-001-2014	12/12/2013	31/01/2014	31/01/2014

Part number	*Page number*	*Subclause number*	*Reference of the standard used*
1			EN 13480-1:2012, Clause 3.1.2

Question

How can we define the term “industrial site” in German language exactly?

Answer proposed by the author of the question

Just change the term in “"Industriegebiet / Gewerbegebiet". So we will have compatibility to German Baunutzungsverordnung BauNVO (§8, §9) for example.

Answer of the maintenance group

The expression has been discussed within the German mirror group. The new German translation "Industriegebiet" could be accepted. Nevertheless, it has to be noted, in the past there was no problem by understanding the word "Industriegelände".

Question from:

Name Frank-Christoph RÖSCH

Company Imtech Deutschland GmbH & Co ***Country*** Germany

Date 2013-12-12

European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 1-002_2014_ACP

Type of question: **Technical**

Registration number	*Date of submission*	*Target date for answer*	*Date of acceptance*
1-002-2014	20/11/2013	30/04/2014	29/10/2014

Part number	*Page number*	*Subclause number*	*Reference of the standard used*
1			EN 13480-1:2012, Clause 5.3

Question

Table 5.1-1 uses Ps (maximum allowable pressure) and states where Ps≤0,5 bar then clause 5.3 applies.

Fluid	Fluid Group	Criteria	Category	Reference to CEN/TR 13480-7
	All	Ps ≤0,5 bar	(see 5.3)	-

Clause 5.3 refers to Piping ***operating*** ≤0,5 bar.

Since pipe systems can have an operating pressure of ≤0,5 bar but may be subjected to a maximum pressure >0,5 bar, they shall be designed, categorized and tested in accordance to the maximum pressure that the system may be subjected to.

Answer proposed by the author of the question

For clarity/correctness amend Clause 5.3 to:

5.3 Piping with a maximum allowable pressure of ≤0,5 bar

Piping with a maximum allowable pressure ≤0,5 bar shall be designed, manufactured, examined and subjected to testing in accordance with sound engineering practice applicable in one of the EU or EFTA Member States or in accordance with this standard.

Answer of the maintenance group

5.3 Piping with a maximum allowable pressure of ≤0,5 bar

Piping operating ≤ 0,5 bar shall be designed, manufactured, examined and subjected to testing in accordance with sound engineering practice applicable in one of the EU or EFTA Member States or in accordance with this standard.

As indicated in 4.2.3.1 of EN 13480-1:2012, the operating pressure p_o shall be below PS.

(This will be carried out at the occasion of the next complete revision of EN 13480 series).

Question from:

Name Peter BATES

Company E.ON New Build & Technology Ltd ***Country*** UK

Date 2013-11-20

European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 1-003_2014_ACP

Type of question: **Interpretation**

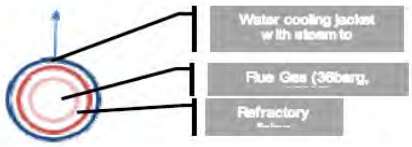
Registration number	*Date of submission*	*Target date for answer*	*Date of acceptance*
1-003-2014	28/10/2013	29/10/2014	29/10/2014

Part number	*Page number*	*Subclause number*	*Reference of the standard used*
1			EN 13480-1:2012, Clause 1

Question

Question/comment: My request is regarding the scope of EN 13480.

We have a refractory lined pipeline which contains hot flue gas. This pipeline is covered by a water cooling jacket where the water is evaporated and the steam is exhausted to the atmosphere. Is such an arrangement covered by the above mentioned standard? If yes, is the cooling jacket classified as a boiler as per EN12953?



Answer proposed by the author of the question

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Answer of the maintenance group

The jacket is under PED. The internal/external pipe is under PED and also under the requirements of EN 13480. See also European Guideline 1/48 for additional help.

Question from:

Name	Daniel SPONSEILER		
Company	Borealis Agrolinz Melamine GmbH	*Country*	Austria
Date	2014-10-28		

European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 2-001_2014_ACP

Type of question: **Interpretation**

Registration number	*Date of submission*	*Target date for answer*	*Date of acceptance*
2-001-2014	05/12/2013	31/01/2014	29/10/2014

Part number	*Page number*	*Subclause number*	*Reference of the standard used*
2			EN 13480-2:2012, Fig B.2.3.2-1

Question

Which is the Material Impact Test Temperature for pipe A 106 gr.B having thickness less than 10mm at Design Reference temperature of -1C according to Figure B.2.3.2-1.

Since there is not reference for Test Temperature on figure, can we avoid the impact test?

Answer proposed by the author of the question

—

Answer of the maintenance group

A106 Gr.B. is not listed in harmonised European Material Standards. This material can only be used with a PMA (see clause 4.3, and EN 764-4 and -5). The PMA shall consider all applicable requirements of EN 13445-2 / EN 13480-2 clause 4.1 and 4.2. With regard to impact testing, clause 4.1.6 applies. A lack of data / requirements in a Non-European Standard shall not be used to wave requirements of the PED and EN with regard to specified or verified impact values (no impact test exemption).
Note: See also 4.1.7 for chemical analysis, Annex A for grouping and 4.2.2 for material properties at elevated temperatures.

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Question from:

Name Christos PALASIDIS

Company Technipetrol Hellas S.A ***Country*** Greece

Date 2013-12-05

European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 2-002_2014_ACP

Type of question: **Interpretation**

Registration number	*Date of submission*	*Target date for answer*	*Date of acceptance*
2-002-2014	28/05/2014	15/06/2014	29/10/2014

Part number	*Page number*	*Subclause number*	*Reference of the standard used*
2			EN 13480-2:2012, Annex B

Question

ASME materials and compliance with PED: Could you inform us about possibility of using EN 13480-2¸ Annex B, Method 2, including monograms B.2-1 – B.2-9 and table B.4-1 for determination of T_{KV} for C and C-Mn steels for pressure purposes according to ASME Code specifications, to show compliance to the PED.
EN 13480-2:2012¸ Annex B, Method 2; B.2.3.1. *General*, specify types of steels for which the method can be applied. Carefully reading it seems that the Method 2 is not limited only to EN steels, as opposed to the Method 1 where this observation clearly stated. It stated also that Method 2 is developed from operating experiences.
The fact is that ASME materials is frequently used in oil and gas exploration fields in southern Europe more than 40 years, more than enough to provide a „history of safe use“. Representative materials: SA 106 Gr.B, SA 234 Gr. WPB, SA 105N (ASME Code 2010; Sec. II; Part A), have been grouped acc. ISO/TR 20173 and ISO/TR 15608.
While there is no mechanism to approve material standards other than EN, individual materials may be approved for use under a method known as PMA. Prior to drawing up the PMA, the following provisions/restrictions shall be agreed in ordering process:

Material manufacturer: FPC or min. ISO 9001; PED/Annex I; 4.3, issued by competent body or legal entity within EC, material certificate acc. EN 10204 3.1 / Statement: « comply with PED 97/23/EC requirements », A>14%%C ≤ 0,23, KV≥ 27J (10x10), 20J (10x7,5), 14J (10x5), %S≤0,45, %P≤0,45 (max. values of non-metalic P and S acc. ISO/TR 15608, Table 1, for steel group 1). This approach with mixing of different codes leads to sufficient confidence that ESRs on material impact properties are gained.

Answer proposed by the author of the question

—

Answer of the maintenance group

Generally ASME materials are not listed in harmonised European Material Standards. These materials can only be used with a PMA (see clause 4.3, and EN 764-4 and -5). The PMA shall consider all applicable requirements of EN 13445-2 / EN 13480-2 clause 4.1 and 4.2. With regard to impact testing, clause 4.1.6 applies. A lack of data / requirements in a Non-European Standard shall not be used to wave requirements of the PED and EN with regard to specified or verified impact values (no impact test exemption).
Note: See also 4.1.7 for chemical analysis, Annex A for grouping and 4.2.2 for material properties at elevated temperatures.

Question from:
Name Ivan JAMBRECINA
Company STSI Ltd ***Country*** Croatia
Date 2014-05-28

European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 2-003_2014_ACP

Type of question: **Technical**

Registration number	*Date of submission*	*Target date for answer*	*Date of acceptance*
2-003-2014	18/07/2014	31/08/2014	29/10/2014

Part number	*Page number*	*Subclause number*	*Reference of the standard used*
2			EN 13480-2:2012, Clause 2

Question

MATERIAL SELECTION
Question/comment:
EN 13480-2 Section 2 Normative references:

Q1) To comply with the Standard, must material only be selected from the list of standards printed on pages 5, 6 and 7 of EN 13480-2?

Q2) In Section 2 Normative references I cannot find a standard specified for threaded pipe fittings

Q3) Is EN 13480 applicable only to fully welded piping systems?

Answer proposed by the author of the question

To comply with the Standard all material must be selected from EN 13480-2 Normative references list
Threaded pipe fittings are not specified in EN 13480-2 Normative references list
Piping systems to EN 13480 are fully welded

Answer of the maintenance group

Q1) The requirements of clause 4 "*Requirements for materials to be used for pressure containing parts in industrial piping*" of EN 13480-2:2012 (Issue 2014-08) shall be fulfilled.

Q2) Yes, it is not mentioned in EN 13480-2:2012, but see 4.3.3 where PMA (Particular Material Appraisal) is specified.

(subject to be considered in the joint working group CEN/TC 54/WG 52-CEN/TC 267/WG 2)

Q3) No, it is applicable to any kind of connections if the ESRs of the PED are fulfilled.

Question from:
Name T. Sharpling
Company NG BAILEY
Country UK
Date 2014-07-18

European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 2-004_2014_ACP

Type of question: **Technical**

Registration number	*Date of submission*	*Target date for answer*	*Date of acceptance*
2-004-2014	17/07/2014	31/08/2014	29/10/2014

Part number	*Page number*	*Subclause number*	*Reference of the standard used*
2			EN 13480-2:2012, Annex B

Question

We use the material grade 1.4307 below -196 °C to test its resilience with impact test for thicknesses above 5 mm and 6.3 mm for pipes and fittings.
Below these thicknesses, we use this material grade without impact test.
For one of our projects, our client expects to carry out PMA for each component used with 1.4307 below -196 °C and for thicknesses on which impact test cannot be achieved. We do not carry out PMA usually in this case.
Number of components involved on this project is important, this point has a significant documentary impact for us, and we must quickly take actions to manage these PMA.

Answer proposed by the author of the question

Could you give me the perspective of the Maintenance Group for EN 13480 on this matter?

Answer of the maintenance group

Table B.2-11 will be changed to allow the use of grade 1.4307 down to a metal temperature T_M of - 273 °C in a future Draft Amendment of EN 13480-2:2012.

For the time being, PMA shall be used.

Question from:
Name Arnaud Fauchon
Company AIR LIQUIDE
Country France
Date 2014-07-17

European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 2-005_2014_ACP

Type of question: **Technical**

Registration number	*Date of submission*	*Target date for answer*	*Date of acceptance*
2-005-2014	18/08/2014	29/10/2014	29/10/2014

Part number	*Page number*	*Subclause number*	*Reference of the standard used*
2			EN 13480-2:2012, clause 3.1.2

Question

Incorrect reference

Paragraph 3.1.2, note 2, makes references to EN 13480-3:2012, clause 12. Clause 12 of part 3 does not contain the wording 'membrane', so it is not explicitly clear how membrane stresses in this context can be found in clause 12.

Answer proposed by the author of the question

Either revise clause 12 of EN 13480-3 to include the wording membrane stress, such that the designer/reader can find the relation, or revise the wording in EN 13480-2 para 3.1.2, note 2, such that it refers to a paragraph that explicitly handles membrane stresses in clause 12 of EN 13480-3.

Answer of the maintenance group

This item will be discussed and studied within the Joint working group CEN/TC 54/WG 52-CEN/TC 267/WG 2 "Materials".

Question from:
Name Hubert Velten
Company ZETON BV
Country The Netherlands
Date 2014-08-18

European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 3-001_2014_ACP

Type of question: **Technical**

Registration number	*Date of submission*	*Target date for answer*	*Date of acceptance*
3-001-2014	31/10/2013	30/04/2014	29/10/2014

Part number	*Page number*	*Subclause number*	*Reference of the standard used*
3			EN 13480-3:2012 clause 12.3.4

Question

We recognize that the equations 12.3.4-1 and 12.3.4-2 limit the admissible secondary loadings to that particular extent, that the occurring of all respective service conditions will lead to shake-down and elastic behaviour of the structure.
From our point of view it is essential that all service conditions are taken into account leading to secondary loadings when determining the resultant moment loading range Mc unless the secondary loading is of singular occurrence and limited by equation 12.3.6-1.
The resultant moment loading range shall be determined by that combination of service conditions described in section 4.2.5.1 which lead to the highest value Mc. Thereby, the zero state condition shall also be taken into account.
Because a combination between different service conditions might lead to a higher stress range exceeding the stress limit fa it is not conservative if every single service condition is considered in an isolated manner. The occurrence of the respective service conditions one after the other exceeding in combination the stress limit will then lead to accumulation of plastic deformation.
We ask for clarification whether the basis assumptions in equation 12.3.4-2 are met when for every single service condition the stresses are within the limit fh+fa given that the resultant moment loading range is the difference between the particular service condition and the zero state condition, whereas a combination of two service condition will to a violation of the limit fh+fa.

Answer proposed by the author of the question

We would like to propose an addition to the explanation of Mc:

*M*C is the range of the resultant moment due to thermal expansion and alternating loads which shall be determined from the greatest difference between moments using the module of elasticity at the relevant temperatures. The greatest difference of moments shall be obtained from that combination of service conditions described in section 4.2.5.1 which lead to the greatest value for Mc. Thereby, the zero state condition shall also be taken into account.

Answer of the maintenance group

Agree with the proposal. To be added below the equation (12.3.4-2) in the next Revision or Issue of EN 13480-3:2012.

Addition to the explanation of Mc:

*M*C is the range of the resultant moment due to thermal expansion and alternating loads which shall be determined from the greatest difference between moments using the module of elasticity at the relevant temperatures. The greatest difference of moments shall be obtained from that combination of service conditions described in section 4.2.5.1 which lead to the greatest value for Mc. Thereby, the zero state condition shall also be taken into account.

Question from:
Name Jens HÄLBIG

Company RWE Power AG
Country Germany
Date 2013-10-31

European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 3-002_2014_ACP

Type of question: **Technical**

Registration number	*Date of submission*	*Target date for answer*	*Date of acceptance*
3-002-2014	13/11/2013	30/04/2014	29/10/2014

Part number	*Page number*	*Subclause number*	*Reference of the standard used*
3			EN 13480-3:2012, Table H.3

Question

In accordance to EN 13480-3:2012 (see pp.252-254, table H3, welding elbow or pipe bend), the applicability of SIF & K values has no restriction related to D/t ratio.

Nevertheless, ASME code, which is similar to EN, is applicable only for D/t<100.

Could you please provide me with additional information about EN applicability and validity, in case of a D/t much bigger than 100 (e.g. equal to 170).

And why EN code does not mention anything about eventual limitations and un-correct evaluation of SIF, K formulas in such case.

Answer proposed by the author of the question

—

Answer of the maintenance group

EN 13480-3:2012 is applicable for $D_o/ e_n \leq 100$, D_o is the outside diameter; e_n is the nominal thickness; to maintain the use of the beam theory, the stress intensification factor and to avoid local buckling.

To be added at the end of the first sentence of annex H "…, where $D_o/e_n \leq 100$ " in the next Revision or Issue of EN 13480-3:2012.

Question from:

Name Stavros CHATZIS

Company —

Country Greece

Date 2013-11-13

European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 3-003_2014_ACP

Type of question: **Technical**

Registration number	*Date of submission*	*Target date for answer*	*Date of acceptance*
3-003-2014	03/12/2013	30/04/2014	29/10/2014

Part number	*Page number*	*Subclause number*	*Reference of the standard used*
3			EN 13480-3:2012, clause 7.1.2

Question

I am an Eskom engineer, which is the Power Utility Company in South Africa.

I use the En codes a lot and I found an error in the document which I will like to highlight. The error is on Paragraph 7.1.2, figure 7.1.2.-1 (a), where the e_cyl is incorrectly shown.

Figure 7.1.2.-1 (a), the cylindrical thickness is incorrectly shown. The code shows the other part of the material as the thickness instead of the bottom part.

Answer proposed by the author of the question

The e_cyl should show the other part of the thickness not the top part.
Correct the error and show the thickness correctly.

Answer of the maintenance group

Agree, this mistake has been identified by the European Working Group CEN/TC 267/WG 3 "*Industrial piping – Design and Calculation*". It needs to be corrected in the next Revision or Issue of EN 13480-3:2012.

Question from:

Name Brian LEHLOHONOLO MOLOI

Company ESKOM ***Country*** South Africa

Date 2013-12-03

European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 3-004_2014_ACP

Type of question: **Interpretation**

Registration number	*Date of submission*	*Target date for answer*	*Date of acceptance*
3-004-2014	14/01/2014	30/04/2014	29/10/2014

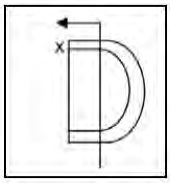
Part number	*Page number*	*Subclause number*	*Reference of the standard used*
3			EN 13480-3:2012, clause 7.1.2

Question

Request for clarification of clause 7.1.2 as a statement and in line with figures (7.1.2-1 a & b)

- a clarification of 7.1.2 in relation to the statement stated below the formula
- a clarification of 7.1.2 in relation with figures 7.1.2-1 a & b as there seem to be an ambiguity to the statement

We had a condition as indicated on the figure:



Answer proposed by the author of the question

If a hemispherical head is manufactured with a skirt or cylindrical portition, how long a skirt should be before its thickness complies with clause 6.1.

1. If the material of a pipe connected to the skirt has the same material as head/skirt, which then will require higher thickness as compared to the hemispherical portion.

or

2. If the material of a pipe connected to the skirt has a stronger material than the head/skirt, which will then require same thickness as the hemispherical portion. The figures indicated seem to not cover this case.

In summary, if a hemispherical head is produced with a skirt, how do we ensure the design suitability of the skirt

Answer of the maintenance group

The answer is given in the second paragraph of 7.1.2 of EN 13480-3:2012, as follows:

"The thickness of the cylindrical part, e_{cyl}, shall be not less than the minimum thickness of the connected pipe calculated in accordance with 6.1…", provided that the connected parts have the same allowable design stress.

Question from:

Name Mfundo NKOSI

Company TÜV Rheinland Inspections Services ***Country*** South Africa

Date 2014-01-14

European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 3-005_2014_ACP

Type of question: **Technical**

Registration number	*Date of submission*	*Target date for answer*	*Date of acceptance*
3-005-2014	05/02/2014	30/04/2014	29/10/2014

Part number	*Page number*	*Subclause number*	*Reference of the standard used*
3			EN 13480-3:2012, 13.3.3.9

Question

Subject: intermediate / secondary steelwork design

Question/comment:

"The dimensioning of intermediate or secondary steelwork supplied for supporting the pipe shall be based on good industrial practice as e.g. defined in EN 1993. Secondary steel work shall fulfil the requirements of 13.3.6.3."
For most of the case EN 1993 criteria are less conservative than criteria from parts 13.3.6.3.

Answer proposed by the author of the question

Is it acceptable to design intermediate steelwork **only based on EN 1993** without comply 13.3.6.3?

Answer of the maintenance group

This point is under revision within the European Working Group CEN/TC 267/WG 3 "*Industrial piping – Design and Calculation*", for the next revision of EN 13480-3:2012 under study.

Nevertheless, at the moment, as it is, the secondary steelwork must fulfill 13.3.6.3 of EN 13480-3:2012.

Question from:
Name Benoît VERNIER

Company ALSTOM POWER ***Country*** France
Date 2014-02-05

European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 3-006_2014_ACP

Type of question: **Technical**

Registration number	*Date of submission*	*Target date for answer*	*Date of acceptance*
3-006-2014	19/02/2014	30/04/2014	29/10/2014

Part number	*Page number*	*Subclause number*	*Reference of the standard used*
3			EN 13480-3:2012, clause 10.2

Question

Exemption from detailed fatigue analysis: The reading of the §10.2 about the exemption from detailed fatigue analysis calls for some clarification on its understanding of the conditions to be met.

" 3) the thickness does not exceed 125 mm for ferritic steels and 60 mm for austenitic steels and the number of thermal cycles is less than 7 000."

Indeed, the condition e/3 to be met allowing the exemption from detailed fatigue analysis specifies that the number of thermal cycle must stay below 7000.

Alstom would like to confirm that thermal cycle has to be understood as equivalent thermal cycle.

Answer proposed by the author of the question

Alstom understands this condition taking into account the number of thermal cycle as the number of equivalent thermal cycles defined in the formula 12.1.3-4
"If the range of temperature change varies, equivalent full temperature cycles shall be as follows:

$$N = N_E + \sum_{i=1}^{n} \left(r_i^5 \; N_i \right) \qquad (12.1.3\text{-}5)$$

where

N_E is the number of cycles at full temperature change Δt_E for which stress from thermal expansion σ_3 (see 12.3.4) has been calculated

N_i is the number of cycles at lesser temperature changes Δt_i

r_i is the ratio of lesser temperature changes to that for any which the stress σ_3 has been calculated $\Delta t_i / \Delta t_E$."

According to Alstom, this can be no other than this implication since it is evident that the tremendous slow temperature variation cannot be the cause of the pipes physical damage.

Answer of the maintenance group

Agree with this interpretation.

Moreover in 10.2, e), 3rd indent, the wording should be modified. Change "*number of thermal cycles*" with "*number of equivalent thermal cycles*".

It needs to be corrected in the next Revision or Issue of EN 13480-3:2012.

Question from:
Name Christophe SERRANO
Company ALSTOM THERMAL POWER ***Country*** France
Date 2014-02-19

European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 3-007_2014_ACP

Type of question: **Interpretation**

Registration number	*Date of submission*	*Target date for answer*	*Date of acceptance*
3-007-2014	28/04/2014	28/05/2014	29/10/2014

Part number	*Page number*	*Subclause number*	*Reference of the standard used*
3			EN 13480-3:2012 Table 5.3.2-1

Question

Table 5.3.2-1

Subject: Safety factor on mean creep rupture strength related to time

This code gives a lower factor of safety on mean rupture strength for longer design life unlike other codes on pressure vessels and nuclear codes where the safety factor on mean rupture strength is independent of design life. There is paradox that one could have lower thickness of piping if designed for longer life say 200000 hours in comparison to design life of 100000 hours because of lower factor of safety though the rupture strength has been reduced.

Answer proposed by the author of the question

Proposal

It is first necessary to know the background of such an approach. In absence of such an information, it is prudent to have safety factor same of 1.5 on mean rupture strength irrespective of design life of 100000 hours and above.

Answer of the maintenance group

Obviously the question addresses the safety factors in table 5.3.2-1, without considering the other requirements of sub-clause 5.3.2.1. The safety factors from this table are to be used for a design lifetime of 200.000h provided that lifetime monitoring is carried out. If the creep rupture strength for 200.000h is not available (yet) as an alternative the creep rupture strength for 150.000h – with SFcr = 1,35 – or for 100.000h – with SFcr =1,5 – shall be used.

In all cases where no lifetime monitoring is carried out, a SFcr = 1,5 has to be used independent of the design lifetime.

Question from:
Name: S.C CHETAL
Company: —
Country: India
Date: 2014-04-28

European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 3-008_2014_ACP

Type of question: **Interpretation**

Registration number	*Date of submission*	*Target date for answer*	*Date of acceptance*
3-008-2014	18/08/2014	29/10/2014	29/10/2014

Part number	*Page number*	*Subclause number*	*Reference of the standard used*
3			EN 13480-3:2012, clause 3.2

Question

Unclear definitions of strength values

1. Table 3.2-1 defines $R_{eH\,t}$ as the "*minimum specified value of upper yield strength at calculation temperature when this temperature is greater than the room temperature*". This value needs to be known for further calculations in sub-clause 5.2. The definition of $R_{eH\,t}$ is unclear, as it unknown how this value can be determined for any type of steel (either austenitic, austenitic -ferritic or non-austentic). At no part in EN 13480 part 2 or 3, mention is made of the "upper yield strength", or how its defined.
2. EN 10216-5 talks about proof strength. Proof strength does not seem to be defined. Is this defined as being the same thing as yield strength with a certain offset? If so, how is it determined?
3. Further, EN 13480-2, sub-clause 4.2.2.1, mentions that "*For other than austenitic and austenitic-ferritic stainless steels, the specified value of R_{eH} ($R_{p0,2}$) at room temperature may be used for temperatures less than or equal to 50 °C*". This indicates that $R_{eH} = R_{p0,2}$ for steels. This seems dubious, as this would mean that in equation 5.2.1-1 of EN 13480-3, in the first part of the equation, two of the same values are determined.

⇨ In reviewing all EN 13480 parts, and it's sub-referenced standards for materials (e.g. EN 10216-5), there is no uniform definition of strength values and their designators.

Answer proposed by the author of the question

1. A more clear and unanimous definition of the various strength/stress values used in calculations, and their designators, and
2. provide them as one overall nomenclature in one standard, instead of defining them at different parts in the different standards (EN 13480-2, EN 13480-3, EN 10216-5, etc.). The basic layout might be something like EN 13445-1 issue 4:2012-07, table 5-2.

Answer of the maintenance group

Either $R_{eH\,t}$ or $R_{p\,0,2\,t}$ shall be used depending on the values available within the material standards.

See PED 97/23/EC, Annex I, clause 7.1.1.

Question from:

Name Hubert Velten
Company ZETON BV
Country The Netherlands
Date 2014-08-18

European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 3-009_2014_ACP

Type of question: **Interpretation**

Registration number	*Date of submission*	*Target date for answer*	*Date of acceptance*
3-009-2014	18/08/2014	29/10/2014	29/10/2014

Part number	*Page number*	*Subclause number*	*Reference of the standard used*
3			EN 13480-3:2012, clause 4.3

Question

Thickness calculation and tolerances

In determining the minimum required thickness e, the "*absolute value of the negative tolerance take from the material standard*" c_1 shall be considered. In determining c_1 and (ultimately) e, is it required to account for any possible tolerances or variations in the outside diameter (e.g. according ISO 1127 or EN 10220) and how this may affect the c_1? If so, how shall this be done?

Answer proposed by the author of the question

No.

Answer of the maintenance group

It is not necessary to take into account any possible tolerances or variations in the outside diameter.

Question from:
Name Hubert Velten
Company ZETON BV
Country The Netherlands
Date 2014-08-18

European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 3-010_2014_ACP

Type of question: **Correction**

Registration number	*Date of submission*	*Target date for answer*	*Date of acceptance*
3-010-2014	18/08/2014	29/10/2014	29/10/2014

Part number	*Page number*	*Subclause number*	*Reference of the standard used*
3			EN 13480-3:2012, clause 4.3

Question

Definition of groaving and straving

Question/comment : it is unclear what the definitions of the words *groaving* and *straving* are. It seems to have something to do with wearing of metals, however what it exactly means is uncertain (these words don't occur in the English dictionary).

Answer proposed by the author of the question

Post a definition of both words, or update the wording to reflect proper English grammar.

Answer of the maintenance group

This is a mistake replace "straving" with "swaging" and "groaving" with "grooving".

It needs to be corrected in the next Revision or Issue of EN 13480-3:2012.

Question from:

Name Hubert Velten
Company ZETON BV
Country The Netherlands
Date 2014-08-18

European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 3-011_2014_ACP

Type of question: **Interpretation**

Registration number	*Date of submission*	*Target date for answer*	*Date of acceptance*
3-011-2014	18/08/2014	29/10/2014	29/10/2014

Part number	*Page number*	*Subclause number*	*Reference of the standard used*
3			EN 13480-3:2012, clause 4.5

Question

Determination of design stresses in the creep regime according to EN 13480 for certain materials from EN 10216-5

Below question/comment assumes the use of material 1.4958.

When EN 13480-3 is applied for the design of a piping system in the creep regime, e.g. subject to 695 °C and 50 bar(g) design conditions, the design stresses at temperatures have to be determined using paragraphs 5.1, 5.2 and 5.3.
Using seamless pipe acc. EN 10216-5, material 1.4958, stress values for yield and creep rupture are taken from this standard. When doing so, it is found that for 550 °C < T < 700 °C, the standard EN 10216-5 does not provide yield strength values, only creep rupture strength values. When determining the design stresses using the lowest of the time dependent and time-independent stress values (see EN 13480-3 §5.1, §5.2 and §5.3), only the creep rupture strength values are known. Hence deriving the design stresses will leave the user with only the creep rupture strength values. Especially for temperatures in the range of approx. 560 °C < T < 640 °C, these results in high design stresses, that are higher than the material can handle. One can easily verify this using e.g. ASME Sect. II part D. This obviously has to do with the absence of yield strength values in this temperature range. For calculations, this will give unrealistic results.

Answer proposed by the author of the question

Either

- revise EN 10216-5 to provide yield strength values at this temperature range, such that when determining design stresses, this will result in conservative results, or
- revise EN 13480 in such a way the designer is warned for this flaw in the design code.

Answer of the maintenance group

EN 10216-5 shall be revised to provide yield strength values at this temperature range.

CEN/TC 267 will transfer this issue to ECISS/TC 110 in charge of EN 10216-5.

Question from:

Name Hubert Velten
Company ZETON BV
Country The Netherlands
Date 2014-08-18

European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 3-012_2014_ACP

Type of question: **Interpretation**

Registration number	*Date of submission*	*Target date for answer*	*Date of acceptance*
3-012-2014	18/08/2014	29/10/2014	29/10/2014

Part number	*Page number*	*Subclause number*	*Reference of the standard used*
3			EN 13480-3:2012, clause 4.5

Question

Onset of creep regime

It seems to be unclear where in EN 13480 creep (approximately) starts for specific materials. This information is required when dealing with, for example, EN 13480-5 para 8.2.1, table 8.2-1 and table 8.4.2-1. These tables and paragraphs specify that the amount of NDE can be dependent on whether piping is in the creep regime.

Answer proposed by the author of the question

Since EN 13480 is used a lot in collaboration with EN 1092-1 flanges, use data from EN 1092-1 to determine the onset of creep for specific materials, when these tables list such data. For cases that are not clear towards this aspect, provide additional data in EN 13480.

Answer of the maintenance group

The user needs to compare "time-dependent" and "time-independent" allowable stresses.

This issue is under discussion in CEN/TC 269/WG 1 in charge of the development of a common approach on "creep" within the Pressure Equipment Sector (development of the draft prCEN/TR 764-9 "Pressure equipment and assemblies – Part 9: Creep design").

Question from:

Name Hubert Velten
Company ZETON BV
Country The Netherlands
Date 2014-08-18

European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 3-013_2014_ACP

Type of question: **Interpretation**

Registration number	*Date of submission*	*Target date for answer*	*Date of acceptance*
3-013-2014	18/08/2014	29/10/2014	29/10/2014

Part number	*Page number*	*Subclause number*	*Reference of the standard used*
3			EN 13480-3:2012, 4.5 and 6.1

Question

Applying the joint coefficient for circumferential butt welds

Question/comment : this question is regarding the application of the joint coefficient z. A few aspects are unclear. Refer to part 3, page 22 and page 26 of part 3 (Ch. 6.1).

1. From paragraph 4.5 it is clear that when a piping system only has circumferential welds, a joint coefficient does not have to be applied. So, when making up a piping system with only circumferential butt welds and applying zero or random NDE (like UT or RT) as per EN 13480-5 table 8.2-1, this would mean *z = 1.0* in equation 6.1-1 from EN 13480-3 Ch 6.1. This seems to be a conflicting requirement with PED 97/23/EC, Annex I (Essential Safety Requirements), para 7.2, as a circumferential butt weld is a welded joint requires z = 0.7 or z = 0.85 for zero or random NDE (other than visual), respectively.
2. Second, what causes confusion is the way of writing equations and applying the font, specifically in the equations 6.1-1 up to and including 6.1-4. At certain parts in the equation, the symbolics can't determine if it's z (joint coefficient) or Z (section modulus), and if it's written in italics or not. This way of writing equations in EN 13480 causes confusion. Note that there are several other parts in EN 13480 where the text font is unclear.

Answer proposed by the author of the question

1. Rewrite EN 13480-3 chapter 4.5 such that it specifically includes or excludes (depending on what's correct) how the joint coefficient shall be applied for circumferential butt welds in piping systems subject to zero or random NDE.
2. For future issues of EN 13480, check how the equations end up in the code book, and make sure they are spelled correctly, regarding the right font, capitals and italics.

Answer of the maintenance group

EN 13480-3:2012 is not in contradiction with PED 97/23/EC, Annex I, clause 7.2.

The application of the joint coefficient in EN 13480-3:2012 is used only for relevant stress.

The weld coefficient has to be applied to the stress component perpendicular to the weld. For circumferential butt weld, it will be longitudinal stress which is not subject in clauses 6, 7 and 8 of EN 13480-3:2012.

Question from:
Name Hubert Velten
Company ZETON BV
Country The Netherlands
Date 2014-08-18

European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 3-014_2014_ACP

Type of question: **Interpretation**

Registration number	*Date of submission*	*Target date for answer*	*Date of acceptance*
3-014-2014	18/08/2014	29/10/2014	29/10/2014

Part number	*Page number*	*Subclause number*	*Reference of the standard used*
3			EN 13480-3:2012, clause 5.3.1

Question

Definition of circumferential welds in relation to branch welds

Are the type of welds that are required to make 'branch welds', like e.g. integrally reinforced fittings such as weldolets, defined as circumferential welds as defined in para 5.3.1 ?

Answer proposed by the author of the question

Yes.

Answer of the maintenance group

For the internal pressure design, the answer is "Yes".

Question from:

Name Hubert Velten
Company ZETON BV
Country The Netherlands
Date 2014-08-18

European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 3-015_2014_ACP

Type of question: **Interpretation**

Registration number	*Date of submission*	*Target date for answer*	*Date of acceptance*
3-015-2014	18/08/2014	29/10/2014	29/10/2014

Part number	*Page number*	*Subclause number*	*Reference of the standard used*
3			EN 13480-3:2012, clause 6.1

Question

Nomenclature missing or inconsistent

EN 13480 uses different nomenclatures in its several parts. These nomenclatures are either

- confusing; for example, EN 13480-3 table 3-2.1 specifies the Greek epsilon symbol Ɛ to indicate additional thickness resulting from the selection of the ordered thickness (Ch. 4.3). In EN 13480-2 table 3.2-1, Ɛ has a different meaning (strain). Although both parts of the EN 13480 clearly define the meaning of the symbol, it would be better to have one overall nomenclature throughout the whole EN 13480 series, as EN 13480 (even though it consist of several parts) should be read as 1 whole standard (refer to EN 13480-1 Foreword, 8th paragraph). It is misleading if a symbol would have 2 meanings throughout one document.
- or lack info. For example, the definitions of D_o and D_i in EN 13480-3 Ch. 6.1 are not clear. Are these the outer and inner diameter? Should they include allowances or tolerances? How are they calculated?

Answer proposed by the author of the question

1. Provide one nomenclature (e.g. in EN 13480-1) which covers all symbols and its units covered in EN 13480.
2. Make this nomenclature is lined up/complies with other symbols used in other sub-referenced standards, like EN 10216-5, EN 10028-5, EN 10253-2, etc.

Ultimately this will result in more willingness at the industry to start and keep on using the EN 13480 standard.

Answer of the maintenance group

MHD answer is given in the question 3-009-2014 on thickness calculation and tolerances.

D is defined in EN 13480-1:2012 and D_o and D_i are defined in EN 13480-3:2012.

It is not planned to make a new nomenclature. A revision of EN 764-1 "Pressure equipment – Terminology" is imminent to be published in 2014/2015.

Question from:

Name Hubert Velten
Company ZETON BV
Country The Netherlands
Date 2014-08-18

European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 3-016_2014_ACP

Type of question: **Technical**

Registration number	*Date of submission*	*Target date for answer*	*Date of acceptance*
3-016-2014	18/08/2014	29/10/2014	29/10/2014

Part number	*Page number*	*Subclause number*	*Reference of the standard used*
3			EN 13480-3:2012, 10.3.1

Question

Consideration of the calculation pressure p_c for determination of the equivalent full load cycles

Question/comment : According the equation 10.3.1, the calculation pressure p_c has to be used for the determination of the equivalent full load cycles. From the wording/definition, it seems as if this value of the calculation pressure p_c equals that pressure that is considered to be the design pressure, because the design pressure of a piping system is normally considered to be its full load pressure cycle. However, design pressure may be (far!) less than the maximum allowable pressure *PS*. In determining a piping system's design pressure will thus be leading in its fatigue calculation, and this this may lead to unnecessary over-conservative designs.

Answer proposed by the author of the question

Rephrase the definitions of 10.3.1 such that p_c is defined as *PS* of the piping's system under consideration. This approach would then be in line with EN 13445 para. 5.4.2.

Answer of the maintenance group

There are different point of views and interpretation.

This technical question is transferred to the European working group CEN/TC 267/WG 3 "Design and calculation" for further discussion and consideration.

Mr. H.VELTEN (ZETON BV) needs to provide example(s) to CEN/TC 267/WG 3 for clarification on this topic.

Question from:

Name Hubert Velten
Company ZETON BV
Country The Netherlands
Date 2014-08-18

European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 3-017_2014_ACP

Type of question: **Correction**

Registration number	*Date of submission*	*Target date for answer*	*Date of acceptance*
3-017-2014	18/08/2014	29/10/2014	29/10/2014

Part number	*Page number*	*Subclause number*	*Reference of the standard used*
3			EN 13480-3:2012, clause 10.5

Question

Fatigue design

Question/comment : EN 13480-3 para 10.5 makes reference to EN 12953-3 for thermal fatigue design. It is unclear where in EN 12953-3 this is discussed. EN 12952-3, which is referenced in chapter 12.4, however does handle fatigue design. It seems the wrong reference has been used.

Answer proposed by the author of the question

Adjust paragraph 10.5 to reference to EN 12952-3.

Answer of the maintenance group

Editorial correction. Typing error. This will be corrected in the next revision or Issue of EN 13480-3:2012.

Question from:
Name Hubert Velten
Company ZETON BV
Country The Netherlands
Date 2014-08-18

European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 3-018_2014_ACP

Type of question: **Technical**

Registration number	*Date of submission*	*Target date for answer*	*Date of acceptance*
3-018-2014	08/09/2014	29/10/2014	29/10/2014

Part number	*Page number*	*Subclause number*	*Reference of the standard used*
3			EN 13480-3:2012, 4.2.3.4

Question

It is incomprehensible for me how to determine calculation pressure according to subclause 4.2.3.4.

Subclause 4.2.3.3 states that those pressure and temperature combinations have to be used for calculation which lead to the highest wall thickness. That is all right. Subclause 4.2.3.4 however demands the determination of calculation pressures, but does not define how these shall be determined. Furthermore this subclause insists on two minimum conditions which are not comprehensible for me.

In practice of design of power plant external piping a design pressure and a design temperature are used as calculation pressure and calculation temperature respectively. This concept however seems to be derived from the water-tube boilers code EN 12952-3, since the designations design pressure/design temperature do not appear in EN 13480.

Answer proposed by the author of the question

Please supply an interpretation of subclause 4.2.3.4 and maybe an example where the minimum conditions apply.

If necessary, rephrase subclause 4.2.3.4.

Answer of the maintenance group

This technical question is transferred to the European working group CEN/TC 267/WG 3 for further discussion and consideration.

Annex A of EN 764-1:2014/2015 to be considered to rewrite the Clause 4.2 of EN 13480-3:2012.

Question from:
Name Marian Juengling
Company Mitsubishi Hitachi Power Systems Europe ***Country*** Germany
Date 2014-09-08

European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 3-019_2014_ACP

Type of question: **Interpretation**

Registration number	*Date of submission*	*Target date for answer*	*Date of acceptance*
3-019-2014	21/10/2014	29/10/2014	29/10/2014

Part number	*Page number*	*Subclause number*	*Reference of the standard used*
3			EN 13480-3:2012, 10.2e)

Question

Subject: Clause 10.2 - Exemption from detailed fatigue analysis

Paragraph 10.2e) in EN 13480-3:2012 indicates 3 conditions that need to be fulfilled in order to avoid applying a detailed fatigue analysis.

Paragraph 10.3.2.1 specifies a simplified fatigue analysis « *where cyclic loading requiring calculation arises only from variations in pressure* ».

If the 2nd condition (external mechanical loading) and the 3rd condition (thickness and thermal cycles) from 10.2e) of EN 13480-3 are met but the 1st condition (full pressure cycles not exceeding 1000) is not met, can we just apply a simplified fatigue analysis?

Answer proposed by the author of the question

Yes

Considering that it is only the 1st condition of 10.2e) that is not met, we can conclude that it is the variations in pressure that dominate the design fatigue.

Answer of the maintenance group

Conditions 2 and 3 of clause 10.2e) being checked, this means that only the verification of resistance to fatigue under cyclic pressure is significant.

Therefore, clause 10.3 can be applied, taking into account that « only variations in pressure » require a fatigue analysis.

For other stresses, they are considered non-significant regarding the verification of resistance to fatigue.

Question from:
Name Juliette Boucher
Company EDF
Country France
Date 2014-10-21

European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 4-001_2014_ACP

Type of question: **Interpretation**

Registration number	*Date of submission*	*Target date for answer*	*Date of acceptance*
4-001-2014	2014-10-06	2014-10-29	29/10/2014

Part number	*Page number*	*Subclause number*	*Reference of the standard used*
4			EN 13480-4:2012, Table 9.14.1-1

Question

Subject : Table 9.14.1-1 PWHT / Tabelle 9.14.1-1 — Wärmenachbehandlung

In the german version of **EN 13480-4:2012 / Table 9.14.1-1** — Wärmenachbehandlung /

Description of reference **e**.

*„e Bei da <= 114,3 mm und w <= 7,1 mm kann auf die PWHT möglicherweise verzichtet werden, wenn die Vorwärmtemperatur mindestens 200 °C beträgt und **für den Betrieb keine PWHT erforderlich ist**."*

Question SVS :

Which rule or standard give us the information if PWHT is required for ***operation - condition***?

For us this sentence is not really clear. Thank you in advance for your help

Answer proposed by the author of the question

—

Answer of the maintenance group

At the moment there is no standard (or specification) published or well-known which denies a PWHT. The application of PWHT (yes/no) is the responsibility of the manufacturer especially for the purpose of long term use.

Question from:

Name PÖHLER Tim

Company SVS Strahlpumpen u. Vakuumsysteme ***Country*** Germany

Date 2014-10-06

European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 5-001_2014_ACP

Type of question: **Correction**

Registration number	*Date of submission*	*Target date for answer*	*Date of acceptance*
5-001-2014	13/01/2014	28/02/2014	28/02/2014

Part number	*Page number*	*Subclause number*	*Reference of the standard used*
5			EN 13480-5:2012, 8.1.1.1 e)

Question

In the standard EN 13480-5:2012, in 8.1.1.1 e) and Annex Y h), there are references to 8.4.5 that does not exist in the standard.

Answer proposed by the author of the question

—

Answer of the maintenance group

To be considered for the next Issue of EN 13480-5:2012.
Correction to be carried out for the English and French versions. German version is correct.
Corrected page 24 to be edited. Write the heading as follows: "**8.4.5 Testing techniques and acceptance levels**"

Question from:

Name Pierre CARPENTIER

Company SIS ***Country*** Sweden

Date 2014-01-13

European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 5-002_2014_ACP

Type of question: **Interpretation**

Registration number	*Date of submission*	*Target date for answer*	*Date of acceptance*
5-002-2014	13/01/2014	28/02/2014	28/02/2014

Part number	*Page number*	*Subclause number*	*Reference of the standard used*
5			EN 13480-5:2012, clause 8.4.2

Question

Acceptance Criteria
According to table 8.4-1 “NDT techniques…” the minimum required acceptance level for radiographic tests is “2” plus additional requirements of table 8.4-3.
Than according to standard EN 12517 and table 1 acceptance level “2” correspond to quality level “C” according EN ISO 5817.
Now look again at standard EN 13480 and table 8.4-2, surface imperfection 515 – root concavity. This table requires quality level “B”.
E.g.
On radiographic report of weld is written acceptance level “2” because of imperfection 515, does it mean that this weld fulfilled the requirements of standard or not?

Answer proposed by the author of the question

—

Answer of the maintenance group

Answer to the question: No.

Question from:

Name Witold OSSOWSKI

Company Urzad Dozoru Technicznego ***Country*** Poland

Date 2014-01-13

European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 5-003_2014_ACP

Type of question: **Technical**

Registration number	*Date of submission*	*Target date for answer*	*Date of acceptance*
5-003-2014	02/02/2014	02/03/2014	29/10/2014

Part number	*Page number*	*Subclause number*	*Reference of the standard used*
5			EN 13480-5:2012, clause 8.1.2

Question

8.1.2 Examination of weld quality by sample inspection

Where the required extent of non-destructive testing is less than 100 %, the specified NDT techniques shall be employed at the earliest stage practicable in the fabrication process to ensure that sound welds are achieved. The timing shall be agreed between the parties involved.
Sample joints to be examined shall be:
• randomly selected;
• representative of a group of welds.
At least one complete sample joint shall be examined over the whole circumference of the joint. Where the number of sample joints required is small, combinations of thicker sections and smaller diameters or thinner sections and greater diameters shall be given preference.
NOTE A group of welds is a quantity of welds, welded by one welder or welding operator, in accordance with a specific welding procedure specification.
In above *NOTE*, is not defined what a group of welds is.

Answer proposed by the author of the question

The Dutch Rules for Pressure Vessels (RToD) gives the following definition: "An examination group contains welds carried out per structural component by one welder within the limits of one welding procedure qualification. Examples of structural components are: • Furnace wall, • Economizer, • Super-heater, • Pressure vessel if consisting of one component"
Using the above explanation, I suggest to define a group of welds as a structural component as being a "Pressure vessel if consisting of one component" equal to: • **per piping-system** or• **per line-number**
Particularly because the group of welds are welds in industrial piping systems
Proposed correction on **8.1.2 Examination of weld quality by sample inspection:**
NOTE A group of welds is a quantity of welds, welded by one welder or welding operator, in accordance with a specific welding procedure specification within a piping-system or per line-number

Answer of the maintenance group

This technical question needs to be discussed in the European Working Group CEN/TC 267/WG 5 "*Industrial piping and pipelines - Inspection and testing*" since it concerns a general definition that applies to different type of piping construction and also field and workshop welding.

Question from:
Name Mr. F.M.J. GRIJPINK
Company BAM Leidingen & Industrie bv
Country The Netherlands
Date 2014-02-02

European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 5-004_2014_ACP

Type of question: **Technical**

Registration number	*Date of submission*	*Target date for answer*	*Date of acceptance*
5-004-2014	18/08/2014	29/10/2014	29/10/2014

Part number	*Page number*	*Subclause number*	*Reference of the standard used*
5			EN 13480-5:2012, clause 8.2

Question

Application of unlisted materials

Question/comment :
What are the NDE requirements pertaining to materials applied for piping systems within EN 13480 that are not listed in table 8.2-1? For example, when using pipe according EN 10216-5 grade 1.4958 or 1.4959. These materials seem to be in group 43 acc. CEN ISO/TR 15608, however, this is not clear (either).

Answer proposed by the author of the question

Update the respective parts of EN 13480 to include requirements for materials listed under CEN ISO/TR 15608 groups other than 1 through 10.

Answer of the maintenance group

The reader shall refer to EN 13480-2 Table D.2-1 for classification of steels and refer to line 260 to line 298 for grades listed in EN 10216-5.
The two mentioned austenitic steels are grouped in group 8.2 in accordance with CEN ISO/TR 15608:2000. Joint working Group of Materials responsible for EN 13480-2 is working on the acceptance of the last Edition of CEN ISO/TR 15608:2013. This grouping applies to EN 13480-5.

286 seamless tube EN 10216-5 stainless steel, austenitic X5NiCrAlTi31-20 1.4958 AT Group 8.2
287 seamless tube EN 10216-5 stainless steel, austenitic X8NiCrAlTi32-21 1.4959 AT Group 8.2

Question transferred to the Joint working group CEN/TC 54/WG 52-CEN/TC 267/WG 2.

Question from:
Name Hubert Velten
Company ZETON BV
Country The Netherlands
Date 2014-08-18

European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 6-001_2014_ACP

Type of question: **Interpretation**

Registration number	*Date of submission*	*Target date for answer*	*Date of acceptance*
6-001-2014	27/06/2014	04/08/2014	29/10/2014

Part number	*Page number*	*Subclause number*	*Reference of the standard used*
6			EN 13480-6:2012 clause 5.1

Question

Subject: Minimum wall thicknesses for buried piping

What does the term “minimum wall thickness” used as a Table’s 1 title mean? Is it correct design/calculation procedure for buried piping?:

1st – minimum required thickness without allowances and tolerances to withstand pressure (e) must be calculated according to EN13480-3,

2nd – ordered thickness (e_{ord}) including allowances and tolerances must be calculated as a greater or equal to sum of $e_{ord} \geq e + c_0 + c_1 + c_2$,

3rd – Calculated ordered thickness (e_{ord}) should be compared with minimum wall thickness for buried piping resultant (EN13480-6, 5.1, Table 1). If calculated e_{ord} is smaller than minimum wall thickness for specified nominal size (DN), the e_{ord} shall be chosen as a not smaller than value (minimum wall thickness) in Table 1.

Answer proposed by the author of the question

—

Answer of the maintenance group

The minimum wall thickness is the maximum of the minimum required thickness (*e*) from 13480-3:2012 and the minimum wall thickness from Table 1 of EN 13480-6:2012. Then allowances must be added.

Question from:

Name Wojciech Dudek
Company BSiPG Gazoprojekt S.A. ***Country*** Poland
Date 2014-06-27

European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 8-001_2014_ACP

Type of question: **Correction**

Registration number	*Date of submission*	*Target date for answer*	*Date of acceptance*
8-001-2014	24/09/2014	29/10/2014	29/10/2014

Part number	*Page number*	*Subclause number*	*Reference of the standard used*
8			EN 13480-8:2012 clause 7.6.6

Question

Question/comment :

There is an extra *for* in the first line.

Answer proposed by the author of the question

Delete as follows:
"*The requirements according to EN 13480-4:2012, 9.14 are not applicable for industrial piping of ~~for~~ aluminium and aluminium alloys*…"

Answer of the maintenance group

Agreed
Corrected page 21 to be edited for the Publication of EN 13480-8:2012 (Issue 4)

Question from:

Name Ulf MALMSTRÖM
Company UcoTek AB
Country SWEDEN
Date 2014-09-24

European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 8-002_2014_ACP

Type of question: **Correction**

Registration number	*Date of submission*	*Target date for answer*	*Date of acceptance*
8-002-2014	24/09/2014	29/10/2014	29/10/2014

Part number	*Page number*	*Subclause number*	*Reference of the standard used*
8			EN 13480-8:2012 Table 8.5-1

Question

Question/comment :

There is an extra *Class A* in footnote b

Answer proposed by the author of the question

Delete as follows:

"*However, the minimum number of exposure for circumferential weld testing may correspond to the requirements of ~~class A of~~ EN 1435:1997, class A*."

Answer of the maintenance group

Agreed
Corrected page 25 to be edited for the Publication of EN 13480-8:2012 (Issue 4)

Question from:

Name Ulf MALMSTRÖM
Company UcoTek AB
Country SWEDEN
Date 2014-09-24

European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 8-003_2014_ACP

Type of question: **Correction**

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8-003-2014	24/09/2014	29/10/2014	29/10/2014

Part number	*Page number*	*Subclause number*	*Reference of the standard used*
8			EN 13480-8:2012 clause 8.6

Question

Question/comment :

The text below Table 8.6-1 refers to two sections: a) and b), but there is no section b).

Answer proposed by the author of the question

Insert b) in front of the paragraph immediately above Table 8.6-1, which begins as follows:

"*Unless the requirements for production test plates given in a) apply, for all material production test plates are required for each lot of welded pipes. …*"

Answer of the maintenance group

Agreed
Corrected page 26 to be edited for the Publication of EN 13480-8:2012 (Issue 4)

Question from:

Name Ulf MALMSTRÖM
Company UcoTek AB
Country SWEDEN
Date 2014-09-24

European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 8-004_2014_ACP

Type of question: **Correction**

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8-004-2014	24/09/2014	29/10/2014	29/10/2014

Part number	*Page number*	*Subclause number*	*Reference of the standard used*
8			EN 13480-8:2012 clause 9.2

Question

Question/comment :

The text in the 1st line is inconsistent with changes made throughout the document.

Answer proposed by the author of the question

Change the beginning of the text to be as follows:

"*The requirements according to EN 13480-5:2012, 9.3.3 shall apply. …*"

Answer of the maintenance group

Agreed
Corrected page 27 to be edited for the Publication of EN 13480-8:2012 (Issue 4)

Question from:

Name Ulf MALMSTRÖM
Company UcoTek AB
Country SWEDEN
Date 2014-09-24

European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 8-005_2014_ACP

Type of question: **Correction**

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8-005-2014	24/09/2014	29/10/2014	29/10/2014

Part number	*Page number*	*Subclause number*	*Reference of the standard used*
8			EN 13480-8:2012 clause 9.2 b)

Question

Question/comment :

The text in the 2nd line is inconsistent with changes made throughout the document.

Answer proposed by the author of the question

Delete the four words "*of this European Standard*"

Answer of the maintenance group

Proposal, change with "*of this Standard*", "*of this document*", or "*of this Part of the Standard*"

Question from:

Name Ulf MALMSTRÖM
Company UcoTek AB
Country SWEDEN
Date 2014-09-24

European Committee for Standardization
Comité Européen de Normalisation
Europaïsches Komitee für Normung

EN 13480 MHD
form 8-006_2014_ACP

Type of question: **Correction**

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8-006-2014	24/09/2014	29/10/2014	29/10/2014

Part number	*Page number*	*Subclause number*	*Reference of the standard used*
8			EN 13480-8:2012 clause 9.3

Question

Question/comment :

The text "*For recognized third party see EN 764-3."* remains and has even been moved from a note to normal text.

However, the references to 3rd party inspection in the two paragraphs above have now been rmoved, so it seems that this text no longer serves any purpose.

Answer proposed by the author of the question

Delete the text "*For recognized third party see EN 764-3."*

Answer of the maintenance group

Agreed

Delete the text "*For recognized third party see EN 764-3."*

Question from:
Name Ulf MALMSTRÖM
Company UcoTek AB
Country SWEDEN
Date 2014-09-24