VdS-Leaflet

Issue of "Product Specific Test Plans" (Quality Plans) for products for fixed fire-fighting systems according to the EU Construction Products Regulation (CPR)[1)]

More and more products for fixed fire-fighting systems (i.e. extinguishing systems, fire detection and alarm systems, smoke and heat control systems) fall within the scope of the CPR. This includes all products which are covered by a European product standard that is accepted and announced by the European Union as harmonised standard for the CPR.

Note: In the Official Journal of the European Union a list of the harmonised standards for the CPR is published regularly. On the Internet this information is available also in the NANDO data base of the European Commission (currently at https://ec.europa.eu/growth/single-market/european-standards/harmonised-standards/construction-products_en).

In the CPR several systems of the "Assessment and verification of the constancy of performance" are defined. But for products for fixed fire-fighting systems the European Commission has uniformly implemented the procedure "system 1" which requires the manufacturer to involve a Notified Body. In system 1 the manufacturer and the Notified Body have the following tasks:

The manufacturer shall draw up the declaration of performance and determine the product-type on the basis of the assessments and verifications of constancy of performance.

The manufacturer undertakes the following steps:

- implementation and execution of factory production control (FPC)
- further testing of samples taken at the factory by the manufacturer in accordance with his prescribed test plan;

The notified product certification body shall decide on the issuing of the certificate of constancy of performance on the basis of the outcome of the following assessments and verifications::

- an assessment of the performance of the construction product carried out on the basis of testing, calculation, tabulated values or descriptive documentation of the product;
- initial inspection of the factory (manufacturing plant) and the FPC (including assessment of the product specific test plan)
- continuing surveillance, assessment and evaluation of factory production control.

The factory production control requirements of the CPR necessitate the permanent internal control of production exercised by the manufacturer.

All the elements, requirements and provisions adopted by the manufacturer shall be documented in a systematic manner in the form of written policies and procedures and shall be kept up-to-date. These production control system documents build a common basis for the quality management and enable the achievement of the declared per-

1) REGULATION (EU) No 305/2011 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 2011 laying down harmonised conditions for the marketing of construction products and repealing Council Directive 89/106/EEC

2) The CPR differentiates between the manufacturer and the factory (manufacturing plant). The manufacturer is the legal person who is responsible for the product and holder of the Certificate of Constancy of Performance. The factory is production place of the manufacturer and also identified in the Certificate of Constancy of Performance

formance characteristics of the product and the effective operation of the production control system to be checked.

In addition, the manufacturer, on his sole responsibility, shall test samples taken from the own production at his factory in accordance with his prescribed product specific test plan. This test plan shall be assessed in accordance with the requirements by the Notified Body.

Note 1: In many harmonised standards this test plan is also addressed as quality plan.

Note 2: The manufacturer may subcontract designated activities. Where subcontracting takes place (e.g. to the factory), the manufacturer shall retain the overall control of the product and ensure that he receives all the information that is necessary to fulfil his responsibilities. The manufacturer may in no circumstances pass these responsibilities on to a subcontractor.

Basis

- Legal basis of the manufacturer's duty to draw up a test plan for the sampling and testing of samples from his own production are the CPR, the provisions for the assessment and verification of the constancy of performance and the additional requirements of the applicable harmonised product standard.
- The harmonised product standard identifies in the Annex ZA the system for the assessment and verification of constancy of performance. For all products for fixed fire-fighting systems the system 1 applies. System 1 refers to Annex V, clause 1.2, of the Regulation 305/2011 (CPR), amended by the Delegated Regulation (EU) No 568/2014 and defines that the manufacturer shall execute a factory production control and "further testing of samples taken at the manufacturing plant by the manufacturer in accordance with the prescribed test plan."
- The applicable harmonised European standards are more specific on the requirements on the FPC and the testing according to a "product specific test plan".
- This "product specific test plan" (quality plan) corresponds to the „pre scribed test plan" and must not be confused with quality management plans from other standards.

Why is a quality plan needed?

The FPC system shall, under consideration of the harmonised standard, ensure that products placed on the market correspond with the declaration of performance.

The FPC system shall include a quality plan, which identifies procedures to demonstrate compliance of the product at appropriate stages, i.e.:

a) the controls and tests to be carried out prior to and/or during manufacture according to a frequency laid down in the test plan,

and/or

b) the verifications and tests to be carried out on finished products according to a frequency laid down in the test plan

Who is responsible for the content of the Quality plan?

- The manufacturer in sole responsibility.

The Notified Body checks and assesses the quality plan regarding compliance with the requirements and its correct implementation, as part of the initial inspection of the manufacturing plant and the continuing surveillance of the FPC. In addition the Notified Body checks regularly whether the manufacturer executes all measures that are necessary to verify the declared tperformance characteristics (e.g. fire detector: response sensitivity).

Check of the quality plan by VdS Schadenverhütung

- As Notified Body, VdS applies the provisions of the quality plan at the evaluation of the initial inspection of the factory, at the continuing surveillance and at the evaluation of the factory production control system. VdS Schadenverhütung checks whether the quality plan is appropriate to maintain the product characteristics as guaranteed by the manufacturer according to a harmonised standard.
- A quality plan which has been positively checked by VdS Schadenverhütung is basis for the certification procedure. With the Certificate of constancy of performance it is stated "that the factory production control conducted by the manufacturer is assessed to ensure the constancy of performance of the construction product."

- The provisions in the quality plan oblige the manufacturer to do the stated tests.
- The quality plan serves as basis for the continuing surveillance in the factory of the manufacturer. The auditors check – among other things – whether the tests that are listed in the quality plan are executed and documented, with the objective that the declared performances are met. They assess the factory production control system and its documentation and they check whether in case of nonconformities the necessary action has been taken. Furthermore it is assessed whether the essential resources are available.

Content and scope of the quality plan

The quality plan shall

- be a released/approved document of the manufacturer, and also
- be a released/approved document in the factory of the manufacturer,
- clearly identify the products covered by the quality plan,
- contain a reference to the related harmonised standard(s),
- contain the address of the manufacturer and of his factories,
- identify the sample size for the individual tests,
- describe the tests (in accordance with the standard or demonstrably correlating),
- describe the frequency of the tests to be conducted, and
- contain evaluation criteria .

Note: Not in all cases the test method described in the harmonised standard is useful or cost-efficient for the verification of the declared constancy of a performance. It is up to the manufacturer to apply an alternative, correlating, test procedure, provided that he can demonstrate plausibly that this procedure leads to the same result compared to the method described in the standard. Also in this case, non-conforming products shall be identified and separated reliably.

The quality plan may refer to written test or work procedures.

One A4-page as table or flowchart may be sufficient as quality plan for simple products.

What does not need to be contained in the quality plan?

Measures from the requirements to the FPC system which are fixed in the harmonised product standard in accordance with standard ISO 9001 do not need to be contained in the quality plan, if these measures are already part of the global quality management system.

Two examples for quality plans

Example quality plan for a mechanical product

QUALITY PLAN
Page 1 of 1

< name and adress >
Manufacturer

CO_2-LP-selector valve
Product

< model >
Model designation

< doc. no, rev. >
Document No & Revision

EN 12094-5
Related dated Product Standard

< name and adress >
Factory

< part no >
Part No

< date and name >
released

work steps / job / sample	documents, evaluation criteria	notes
water pressure test on valve body		test according to standard
test on finished product, at 100%: leakage test on closing component	work instruction	test according to standard
test on finished product, at 100%: function test at normal temperature	work instruction	test according to standard

Example quality plan for an electrical/electronic product

QUALITY PLAN
Page 1 of 1

< name and adress >
Manufacturer

< doc. no, rev. >
Document No & Revision

Signalgeber
Product

< model >
Model designation

EN 54-3:2006
Related dated Product Standard

< name and adress >
Factory

< part no >
Part No

< date and name >
released

work steps / job / sample	documents, evaluation criteria	notes
function test, at 100%: function main board	work and test instruction measuring and test software	
visual check of assembly of main board and terminal board, at 100%	work instruction product specific work and test instruction	
test of final assembly, at 100%	work instruction	
sound pressure level measurement, **at100%:** performed on minimum one certified tone inside test box	work and test instruction proof of correlation to free field compliance with limits according to standard	correlating test
full sound test, at 2% of each production lot, but minimum 5 sounders of daily production: performed on minimum one certified tone	test instruction compliance with electrical and acoustic limits according to standard	test according to standard

Note: This quality plan applies also to the following models with parallel certificate (models are identical in construction):

manufacturer	model designation	part no	release Q-plan
< name 1 and address 1>	< model 1 >	< part no 1 >	< date 1 >
< name 2 and address 2>	< model 2 >	< part no 2 >	< date 2 >
< name 3 and address 3>	< model 3 >	< part no 3 >	< date 3 >

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