



Market, environment and objectives of CEN/TC 138 – Non-destructive testing,

as approved by resolution BTC 217/1999

Scope

Standardization of the terminology, equipment, and general principles of methods for non destructive testing by the following means: - acoustic methods; - ionizing radiations; - liquid penetrant testing; - electrical and magnetic methods; - optical and visual methods; - leak testing; X-ray diffraction methods as well as standardization of the principles of qualification and certification of non-destructive testing personnel and methodology for qualification of non destructive testing.

Market, Environment and Objectives

This section establishes a sequential development of thoughts regarding the Market for which the CEN/TC aims to fulfill the needs. This sequence of thoughts starts from a description of the current market situation relevant to the product or product grouping under consideration by the CEN/TC, continues on to an analysis of the different factors motivating/influencing the activities of the CEN/TC, to come to clear description of objectives for the CEN/TC, together with an accompanying strategy how to reach those objectives. Finally, a general 'risk analysis' is included highlighting issues that may delay or stop the CEN/TC achieving its set objectives.

Market Situation

Non destructive testing are important to assume the security of persons, properties,...; and also the quality of products, so they concern various types of partners :

- national Authorities
- Industries where the security is involved such as industries about energies (nuclear, gas, ..) transport (aerospace, train; car, petrochemical, civil engineering);
- basic industries (steel –rolled, forged, cast, tubes–, aluminium,..., welding) ;
- mechanical industries : pressure vessels.
- laboratories and inspection bodies (material manufacturing, pre- and in-service inspection);
- personnel certification bodies;
- manufacturers of equipment for non destructive testing

Taking into account of the diversity of involved industries there are all size of companies.

The testing are made as well in the realization of new equipment as in maintenance.

There is no information available on the economical aspect of NDT but the number of certified people reflects importance of non destructive testing

Number of certified people in 5 European states :

- Austria : \approx 2200
- France : \approx 10000
- Germany : \approx 3900
- Italy : \approx 3400
- UK : \approx 6000

Market Environment

Political, economical, social, technical, legal and international factors that either directly require some or all of the standardization activities proposed by the CEN/TC, or significantly influence the way these activities are carried out are the following:

Standards elaborated in the frame of CEN/TC 138 are general test method standards useful for all partners and considered as “reference standard” for “application standards” drafted by others CEN/TC or ECISS/TC in the frame of specific application such as forgings, tubes, welding... There are also general standards such as qualification and certification of personnel which objectives are to harmonize practices between certification bodies to authorize mutual recognitions.

Standards giving procedures of non-destructive testing are classified as Harmonized Supporting Standard in the frame of Pressure Equipment Directive and the others are “supporting standards”.

Standards are referenced by the national codes for the fabrication of pressure vessel equipment.

Standards give the right answer when the safety and economic consequences of inadequate NDT are particularly severe.

A lot of standards prepared by CEN/TC 138 is under the Vienna agreement and will be CEN/ISO standards. Such NDT Standards should facilitate the International trade in the worldwide market.

Objectives of the CEN/TC and Strategies for their Achievement

Objectives of the CEN/TC

To elaborate for each Non Destructive Testing (NDT) method a set of standards which give the possibility to compare results

- by verification of instrument or products to perform the testing in comparable conditions,
- by using of the same procedures,
- by using of a common terminology,

in the context of the mandate M/071 which support the Pressure equipment Directive 97/23/EEC.

To elaborate standards for qualification and certification of NDT personnel and for qualification of methods

Strategies adopted to reach the Objectives

The following priorities were precised for the elaboration of standards:

-for terminology : → general terms

→ terms common to all methods

→ specific terms to each method

- for each method : general principles and verification of equipment;

- to favour as often as possible the application of the Vienna agreement in order that the standards prepared by CEN/TC 138 be adopted at the International level;

- to - to ensure translation in the three official languages of CEN for the CEN/TC 138 meetings;

- to exchange documents by E-mail each time as possible;

to maintain liaisons as close as possible with others CEN or ECISS technical committees involved in specific NDT in order to the standards prepared by CEN/TC 138 are referenced in others application standards and the needs expressed by these specific TC can be taken into consideration.

Important : Each WG is asked to give, each time it is possible, the highest priority to standards mandated in the frame of PED

Risk analysis

The completion of the following item presents some risk:

WI 00138053 Automated ultrasonic examination: lack of paper, specification or national standards; for the time being there is no technical background available.

For some other items, delays are foreseeable at the time been taking into account of the present stage of the work and the difficulties to reach the following stage. This delay are mentioned at appropriate item under comments