



BN ACIER PERIODICAL INFORMATION LETTER

N. 08 - November 2005

Data available at about one month of the end of this year already allow to get a sufficiently precise idea of the yearly normative activity of BN Acier for 2005.

In particular the number of French standards under the scope of BN Acier, published in 2005, should reach again the level of the highest numbers of publications, noted during the last 10 years with probably 47 published standards. However we can again note a significant deviation between this number and the prevision of publication made at the beginning of the year that was estimated to be a record between 70 and 80 standards. This deviation is again due to delays in the preparation of the corresponding draft standards at the European or international level.

It should be noted that among the above mentioned 47 standards, there are the first 6 harmonized European Standards under Construction Products Directive (CPD, Ref. 89/106/EEC) concerning steel products, allowing to « affix » CE marking on these products used in the construction field, in particular hot-rolled structural steels and reinforcing steels (see PIL n. 7). A seventh harmonized European Standard under CPD concerning self-supporting metallic sheets for roof covering and wall cladding or lining, EN 14782 (see following article), has just been approved and will be published as NF EN probably in next March.

MECHANICAL TESTING OF METALLIC MATERIALS

Most ISO/TC 164 sub-committees held meetings in Teddington near London during the week between 10th and 15th October 2005. The main points to consider from these meetings are as follows:

- for SC 1 "Uniaxial testing":

The working group ISO/TC 164/WG 4 was asked to prepare the draft revision of ISO 6892 (tensile testing method at ambient temperature) in order to launch the CD enquiry at the beginning of 2006 and if possible the DIS enquiry in September 2006; the elements concerning the measurement uncertainty, prepared by ISO/TC 164/WG 5, will be inserted to these drafts. The registration of a new work item concerning tensile testing with very high strain rates was unanimously decided; the project leader designated for this work item is T. YAGI (JISF, Japan). On another hand, working groups ISO/TC 164/WG 3, in charge of the revision of ISO 376 (calibration of force measuring devices for the verification of tensile testing machines) et ISO/TC 164/WG 6, in charge of the revision of ISO 9513 (calibration of extensometers used in uniaxial testing), also subject of EN ISO, presented the state of their works.

- for SC 2 "Ductility testing":

The comments expressed during DIS enquiry on ISO/DIS 10113 (plastic strain ratio) and already available were discussed; it was decided to leave the secretary take care of the possible additional comments made until the end of this enquiry (9 November 2005) and, if the DIS vote is positive, to submit the revised text taking into account the agreed comments to FDIS voting in 2006. The comments expressed on ISO/CD 10275 (tensile strain hardening exponent) and ISO/CD 20032 (method of evaluation of tensile properties of superplastic metallic materials) were discussed; draft DISs will be prepared taking into account the agreed comments and will be submitted to enquiry in 2006. The comments expressed on the two drafts prepared by

the working group in charge of the preparation of the revision of ISO 12004 (forming limit diagrams), ISO/WD 12004-1 and 2, were discussed; committee drafts (CDs) will be prepared taking into account the agreed comments and will be submitted to CD enquiry in 2006. The discussion of the comments expressed following to the proposal of change of statute of ISO/TS 16630 concerning the hole expansion test (transformation into ISO standard) lead to decide to submit a revised version of the document taking into account the agreed comments to CD enquiry. Following a Japanese proposal, it was decided to register a new work item « Metallic materials – Sheet and strip – Method for springback evaluation in stretch bending » in the work program of the sub-committee.

- for SC 3 "Hardness testing":

It was decided to leave the ad hoc working group of ISO/TC 164/SC 3 deal with the comments expressed during parallel enquiry on ISO/DIS 14577-4 concerning instrumented indentation testing on coatings. Without any objection of the working group, a revised draft will be prepared and submitted to parallel voting (CEN formal vote and ISO/FDIS vote) about in the middle of 2006.

- for SC 4P "Impact testing":

The comments expressed during DIS enquiry on the amendment to ISO 14556 (instrumented impact testing) concerning sub-size test pieces were discussed; it was decided to prepare the final draft (FDIS) taking into account the agreed comments and to submit it to parallel voting (CEN formal vote and ISO/FDIS vote) in 2006. The comments expressed on the committee drafts ISO/CD 148-2 and 3 concerning impact testing (verification of pendulums, reference test pieces) during CD enquiry were discussed; it was decided to submit the revised text taking into account the agreed comments to parallel enquiry (CEN enquiry and DIS enquiry) in 2006. On another hand, the working group in charge of uncertainty issues for ISO 148-1 to 3 presented the state of its thoughts.

- for SC 4F "Fracture mechanics testing" and "Fracture":

New areas of work were presented at the SC4F meeting at Teddington:

- Proposed standard methods for instrumented pre-cracked Charpy impact testing of steels and other metallic materials. This item was presented by the Belgian delegation on behalf of an ESIS round robin program.
- Method of Constraint Loss of CTOD Fracture Toughness for Fracture Assessment of Steel Components. This item was presented by the Japanese delegation with the participation of JFE Steel Corp. A round robin test program is needed to investigate further in this topic. Candidate laboratories willing to participate in the round robin are welcomed.

- for SC 5 "Fatigue testing":

Variable amplitude fatigue testing

ISO/TFC164 met at Teddington (UK) in the NPL premises in October 2005.

The working document ISO/WD 12110-1 on variable amplitude fatigue testing (general principles) was discussed in the SC5 meeting. The document was modified according to the decisions made at the meeting. The main changes are:

- 1 Scope: This standard can be transposed to other loading modes than force controlled mode but precautions may be taken. Thus this document describes force controlled variable amplitude fatigue testing. Moreover this standard is restricted to single actuator loading.
- 9 Conducting fatigue testing under variable amplitude conditions: This article is focused on force controlled fatigue test and makes systematically reference to ISO 1099.



- 11.2.3 Test operation (part of test report): All deviations from ISO 1099 and all changes in the test setup shall be mentioned in the test report.

ISO/WD 12110-2 on counting and data reduction methods remains unchanged for the time being.

Both documents are posted in the ISO website for viewing and comments. The comments can be uploaded in the ISO website or sent directly to BN Acier. The ISO standards drafting website is password protected. BN Acier can provide all interested parties with a copy of the working drafts.

Force-controlled fatigue testing

ISO/DIS1099 passed the DIS balloting without any technical comments. Hence FDIS ballot is not mandatory and may be by-passed: the document will be directly published as an ISO standard. This standard will be available in the English language only at publication stage. The French version will be available in 2006.

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STEELS FOR CONCRETE STRUCTURES

1°) Reinforcing steels

The meeting to discuss the comments expressed during the public enquiry on the following French draft standards: NF A 35-015, NF A 35-016-1 and 2, NF A 35-019-1 and 2, concerning reinforcing steels and complementary to EN 10080 « Steel for the reinforcement of concrete – Weldable reinforcing steel - General », was held on 6 September 2005. This meeting made possible to decide what to do with all those comments.

One of the major decisions which were taken during this meeting was not to a priori keep in NF A 35-016-1 and 2 the grade B500C that showed the highest specified ductility values (total elongation at maximum force A_{gt} , tensile strength/yield strength ratio R_m/R_e). It was agreed to make a consultation of the paraseismic standardization committee (CNPS) managed by « Bureau de Normalisation des Techniques du Bâtiment » (BNTB), in charge of the preparation of the national annex to Eurocode 8, on this decision.

This set of standards should be published during the first quarter 2006. This set should be completed by the revision of the standards NF A 35-024 concerning welded fabric made of wire of diameter less than 5 mm and NF A 35-027 concerning fabricated reinforcements, and the new standard NF A 35-028 concerning lattice girders. The publication of these standards is scheduled between May and September 2006.

ISO/TC 17/SC 16 met from 25th to 27th October 2005 in London. The comments expressed on ISO/DIS 6935-1 (plain reinforcing bars) and ISO/DIS 6935-2 (ribbed reinforcing bars) were discussed; final draft standards (FDISs) will be prepared taking into account the agreed comments and will be submitted to FDIS voting in 2006. The comments expressed on ISO/DIS 15835-1 and 2 concerning mechanical splices for bars were discussed; taking into account the large number of technical comments expressed on these texts, a 2nd DIS enquiry will be carried out in 2006 on the revised texts prepared by an ad hoc working group.

2°) Prestressing steels

The second COCOR vote on prEN 10138-1 to 3 that specify the general requirements of prestressing steels and the requirements for prestressing wire and strands again lead to disapproval.

A meeting of ECISS/TC 19/SC 2, held on 20th September 2005 made possible the discussion of the comments expressed during this second COCOR vote. It was decided to prepare new drafts and to submit them to an enquiry within the sub-committee until the end of November 2005 before launching a new COCOR vote at the beginning of 2006.

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METALLIC ROOFING AND WALL CLADDING PRODUCTS

prEN 14782, the draft European Standard harmonized according to CPD on self-supporting metallic sheets was unanimously approved by the CEN committee members that participated to CEN formal vote which ended on 25th October 2005. The corresponding French standard, NF EN 14782, should be published in March 2006.

The ratification (approval) of this standard being scheduled at the end of November 2005, CE marking of the corresponding products should then be possible, for the manufacturers of these products, from 1st September 2006, and should become mandatory from 1st September 2007.

In addition Technical Committee CEN/TC 128/SC 7 « Metallic discontinuously laid roofing and wall cladding products » should finalize during its next meeting to be held on 25 November 2005 in Brussels, the draft European Standard harmonized according to CPD on fully supported metallic sheets and strips (prEN 14873).

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CONTINUOUSLY COATED FLAT PRODUCTS FOR AUTOMOTIVE APPLICATIONS (ECISS/TC 27)

prEN10292 on hot-dip coated high strength steels

The public enquiry ended on 2005-09-23 in France. The French expert group met at BN Acier on 2005-10-19 to deal with the comments and define the French point of view. The French vote was sent to the ECISS/TC27 Secretariat after final approval by the French experts who attended the meeting. ECISS/TC27 meeting is expected in early 2006.

prEN10336 on coated multiphase steels

The French public enquiry ended on 2005-11-10. The French expert group meeting is planned for 2005-11-24. The European enquiry will close on 2005-12-15.

This project deals with dualphase, TRIP, partially-martensitic, complex phase ... steels in both hot and cold rolled conditions. Many kinds of metallic coatings are involved (Z, ZF, AS...). Both hot dip and electrolytic processes are concerned.



ECISS/TC 27 meeting on prEN 10336 will be combined with that on prEN 10292. It is expected for early 2006.

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STEEL NAMES

NF EN 10027-1 has been published by AFNOR in August 2005 and is now in force. This standard can be purchased through the AFNOR website.

NF EN 10027-1 sets the rules for giving symbolic designations (steel names) to steel grades referenced in European and national standards and drafts. The steel numbers are the subject of NF EN 10027-2 which remains unchanged.

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HOT ROLLED STEELS FOR BUILDING APPLICATIONS (ECISS/TC10)

The document CEN/TR 10347 has been drafted and finalized in early 2005. It is now being submitted to Technical Committee Approval until 2005-12-20 in France. The expert group BNAC 10-00 is the French mirror committee of ECISS/TC10 and has received the document for approval and comments.

CEN/TR 10347 will be a Technical Report and as such is an guidance documents which provides the reader with information and recommendations but not requirements. That is why it is not submitted to CEN Public Enquiry and Formal Vote like European Standards drafts.

CEN/TR 10347 the title of which is "Guidance for forming of structural steels in processing" deals with hot and cold forming issues and flame straightening.

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CONTINUOUSLY ORGANIC COATED FLAT PRODUCTS FOR BUILDING APPLICATIONS (BNAC 27-00)

The "application guide" GA A 36-335 has been drafted by the French expert group BNAC 2700 with the cooperation of SNPPA. A formal expert group enquiry took place in summer 2005 to meet AFNOR requirements although the relevant French experts participated actively in drafting the document. The document was sent to AFNOR in late October 2005 for publication.

The purpose of GA A 36-335 is to establish the link between newly published NFEN10326 and French standard P 34-310 which is widely used by the French building industry. In particular, P 34-310 and hence GA A 36-335 allows for ordering shifted thickness tolerances (the tolerance scatter band is not centered on the nominal thickness) whereas NF EN 10326 does not.

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END OF LIFE TYRES

The newly established French expert group on non reusable end-of-life tyres met in Lyon on 2005-09-22. The purpose of the meeting was to set up a work program and create working groups dedicated to specific topics included in the work program. BN Acier registered in the working group on assessment of products obtained from primary shredding.

The working group Chairman distributed a first draft for comments and the working group is due to meet on 2005-12-09 at AFNOR.

It must be reminded that the steel industry participates actively in used tyre recycling through recovery of the steel components present in tyres and through using used tyres as secondary recovered fuel in electric furnace steelmaking.

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TRAINING COURSE FOR THE EXPERTS OF THE STANDARDIZATION COMMITTEES OF BN ACIER

A first session of training to standardization of the experts of the standardization committees managed by BN Acier was organized on 10th November 2005. Two other sessions will be organized on 15th December 2005 and 17th January 2006.

Contact persons: All BN Acier engineers

Standards under the scope of BN Acier published between August and November 2005

NF EN 10080 (September 2005)	Steel for the reinforcement of concrete - Weldable reinforcing steel - General
NF EN 10088-1 (September 2005)	Stainless steels - Part 1 : list of stainless steels
NF EN 10088-2 (September 2005)	Stainless steels - Part 2 : technical delivery conditions for sheet/plate and strip of corrosion resisting steels for general purposes
NF EN 10088-3 (September 2005)	Stainless steels - Part 3 : technical delivery conditions for semi-finished products, bars, rods, wire, sections and bright products of corrosion resisting steels for general purposes
NF EN 10207 (September 2005)	Steels for simple pressure vessels - Technical delivery requirements for plates, strips and bars
NF EN 10217-7 (August 2005)	Welded steel tubes for pressure purposes - Technical delivery conditions - Part 7 : stainless steel tubes
NF EN 10224/A1 (October 2005)	Non-alloy steel tubes and fittings for the conveyance of water and other aqueous liquids - Technical delivery conditions
NF EN 10305-6 (November 2005)	Steel tubes for precision applications - Technical delivery conditions - Part 6 : welded cold drawn tubes for hydraulic and pneumatic power systems
NF EN 10311 (September 2005)	Joints for the connection of steel tubes and fittings for the conveyance of water and other aqueous liquids
NF EN 10312/A1 (October 2005)	Welded stainless steel tubes for the conveyance of water and other aqueous liquids - Technical delivery conditions
NF EN 10328 (August 2005)	Iron and steel - Determination of the conventional depth of hardening after surface heating
NF EN 10333 (September 2005)	Steel for packaging - Flat steel products intended for use in contact with foodstuffs, products and beverages for human and animal consumption - Tin coated steel (tinplate)
NF EN 10334 (September 2005)	Steel for packaging - Flat steel products intended for use in contact with foodstuffs, products and beverages for human and animal consumption - Non-coated steel (blackplate)
NF EN 10335 (September 2005)	Steel for packaging - Flat steel products intended for use in contact with foodstuffs, products or beverages for human and animal consumption - Non alloyed electrolytic chromium/chromium oxide coated steel
NF EN 10342 (November 2005)	Magnetic materials - Classification of surface insulations of electrical steel, strip and laminations
NF EN ISO 7438 (November 2005)	Metallic materials - Bend test
ISO 4998 (November 2005)	Continuous hot-dip zinc-coated carbon steel sheet of structural quality
ISO 4999 (November 2005)	Continuous hot-dip terne (lead alloy) coated cold-reduced carbon steel sheet of commercial drawing and structural qualities
ISO 7438 (June 2005) *	Metallic materials - Bend test

* Not mentioned in BN ACIER PIL n. 7

Next meetings between end November 2005 to March 2006

25 November 2005	CEN//TC 128/SC 7 « Metallic roofing and cladding products » – <i>Brussels</i>
30 November 2005	ISO/TC 17/SC 3 « Steels for structural purposes » - <i>Saint-Denis</i>
6 December 2005	AFNOR – COS 26 - <i>Saint-Denis</i>
8 December 2005	ARCELOR « Products Safety » Committee – <i>Luxembourg</i>
15 December 2005	« Standardization » Day - <i>La Défense</i>
19 December 2005	BNAC 19-10 « Reinforcing steels » - <i>La Défense</i>
20 December 2005	BNAC 22-00 – Discussion of comments on prNF EN 10269/A1 - <i>La Défense</i>
5 January 2006	BNAC 01-00 - Discussion of comments on prNF EN ISO 204 - <i>La Défense</i>
10 January 2006	AFNOR – PUNR « Tyre recycling » - <i>Saint-Denis</i>
12 January 2006	General committee « Steels-Tubes »- <i>La Défense</i>
17 January 2006	« Standardization » Day - <i>La Défense</i>
24 January 2006	AFNOR « COS environnement » - <i>Saint-Denis</i>
25 January 2006	AFNOR « COS 26 » - <i>Saint-Denis</i>
9 February 2006	SG 17 Sector Group « Structural steels » of notified bodies under DPD - <i>Milan</i>
16 February 2006	BNAC 22-00 - Discussion of comments on prNF EN 10028-7 - <i>La Défense</i>
9 March 2006	DGCCRF – Food contact - <i>Paris</i>
14 March 2006	ECISS/TC 19/SC 1 « Reinforcing steels » - <i>Düsseldorf</i>
20-21 March 2006	CEN/TC 128 - <i>Budapest</i>
23 March 2006	AFCAB – Board - <i>Paris</i>