

DOSSIER TECHNIQUE	DTD	289
	REV 4	2023/6

DOSSIER TECHNIQUE D'APPLICATION DE LA MARQUE BENOR DANS LE SECTEUR DES PRODUITS EN ACIER DE PRECONTRAINTE

REVISION 4

BENOR asbl



Approuvé par l'Organe d'Administration le 23/06/2023

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Technical file

DTD 289 Revision 04

Application of the BENOR mark in the sector of prestressing steels (wire and strands) - Assessment methods applicable to the “Users of the Mark”

Producers - Technical file

1 Presentation of the technical file

During the prior examination to the granting of the authorization of use of BENOR mark (TRA 282 § 3.1 and § 3.2.2), the applicant must present a technical file. This file at least contains the data which are referred to in the following chapters.

The prestressing steel producer must hold this file constantly up to date and any modification shall be spontaneously communicated to OCAB-OCBS. The purpose of this is to show with technical arguments that product quality is not jeopardised as a result of these modifications.

All the data of this file are to be regarded as confidential and will be communicated to thirds only with the agreement of the applicant.

2 Information concerning the producing factory

- Head office of the company.
- Geographical situation of the producing factory.
- Schematic flow chart of the factory establishing the respective independence of the departments of production and control.
- Complete flow chart of the control department.

3 Information concerning the production

3.1 Wire rod

3.1.1 Supply wire rod

- Sources of supply in wire rod including the processes of steelmaking, chemical composition of the product (see NBN I10-001, § 3 and TRA 282 § 3.2.2), casting modes and manufacturing processes;
- Installation of an internal procedure of qualification of the wire rod used including the technical specifications imposed by the factory to the raw material suppliers.

3.1.2 Wire rod controls

- either the test results on the wire rod delivered, carried out and transmitted by the supplier of the wire rod, and from which the prestressing steel producer can deduce that the delivered wire rod answers its requirements for quality;
- or controls (methods and frequencies), that the prestressing steel producer carried out himself on the delivered wire rod.

3.2 Zinc layer

- List and small description of the type(s) of galvanizing used by the producer.

3.3 Sheath and protection products

- Sources of supply in grease, wax and basic ready-to-use material (pellets) used to make the sheath;
- Procedure of reception of these materials.

3.4 Manufacturing process

Diagram of the manufacturing process clearly highlighting the succession of the various operations (thermal, chemical, mechanical, thermomechanical, ... treatments) and process controls (nature and frequency) carried out at the time of each operation (TRA 282 § 3.5.1).

3.5 End products

3.5.1 Properties of end products (TRA 282 § 3.1 and 4.1.2)

- Complete description of the products (number of wires, diameters, section, mechanical properties and time properties, according to NBN I10-001 to 003 and 008, and PTV 311, 312, 314 and 315).
- Possible approvals the products profit from other certification bodies as well national as foreign (to provide the integral photocopy of all the authorizations delivered by these organizations).

- An appendix contains a list which shows for each family of products (TRA 282, § 2.2.3) and for each diameter certified in these families which wire rod (with information of the type, origin and diameter) is used to produce each one of these reinforcements of prestressing.

This list is supplemented with a table that informs for each combination, the date of validation by the sectorial organisation or his representative and the test results about:

- mechanical specifications (tensile and deviated tensile test), defined in the laboratory of the factory of the prestressing steel producer or of the external laboratory;
- properties depending on time, namely the level of relieving, the fatigue strength and the stress corrosion resistance, determined in the laboratory of the factory of the prestressing steel producer or of the external laboratory.

These tests can be carried out within the framework of other regulations of certification.

A copy of the test results concerned (with identification of the evaluated producer) must be available for information of the organization of inspection by the producer of the prestressing steel.

3.5.2 Information relating to the production schedule

The authorization of BENOR mark is delivered by family (TRA 282, § 2.2.3). The prestressing steel producer must also clearly indicate:

1. the families for whom he profits/wishes to profit from the authorization of use of BENOR mark;
2. within each one of these families, the producer must indicate the produced reinforcements and specify for each one if the production is current or occasional.

3.5.3 Conditions of marking, storage and of delivery condition of the end products

The prestressing steel producer is held to respect his own instructions and thus to announce any modification. For this purpose, he joins a model of label to the file which must be affixed with the prestressing steel delivered. The labels must at least carry the indications appearing in § 3.3.1 of TRA 282.

The prestressing steel producer describes in a detailed way the procedure according to which the labels must be affixed.

4 Information relating to the methods of control

- Listing of machines and equipments for testing and control of conformity to the specifications. Frequency of the calibrations and organization(s) having carried out the last calibration of each machine (§ 2.2.4.1 of the TRA 282).
- Method of recording of the results of the industrial self-control and means of statistical exploitation of these results (§ 4.4 of the TRA 282).

5 History of the revisions

Revisions 0 to 2, creation, adaptations

Revision 3

- Reference to TRA 282

Revision 4

- Inclusion of properties regarding the zinc layer, the sheath and protection products
- Corrections to references to TRA 282