TECHNICAL DOSSIER

MANUFACTURING of steels

in accordance with implementation rules TRA 500

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Manufacturer | | | |  | | |
| Straightening | | Cut with length | Bending | | | Welding |
| Production site | | | | Headquarters | | |
| Address |  | | | Address |  | |
| Tel |  | | | Tel |  | |
| Email |  | | | Email |  | |

|  |  |  |  |
| --- | --- | --- | --- |
|  | Inspection body | PROCERTUS | Manufacturer |
| Checked □ | Checked □ |
| Agreement □ | Agreement □ |
| Date |  |  |  |
| Name  Initials  Seal |  |  |  |

|  |
| --- |
| Remarks of the inspection body |
|  |

|  |
| --- |
| Remarks of the Manufacturer |
|  |

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| --- |
| Remarks of PROCERTUS |
|  |

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| --- | --- | --- | --- |
| Revision Number | Object of the modification | Page(s) concerned | Date of the modification |
|  |  |  |  |

Declaration of the Manufacturer

The technical dossier (DT) herewith formed integral part of the convention of the company mentioned above, of authorization of use of mark BENOR for the MANUFACTURING of steels in accordance with the implementing regulation TRA 500 and the PTV 306 carried out in its seat of manufacturing. The manufacturer declares that the contents of this technical dossier are entirely in conformity with the real situation with the seat of manufacturing at the date of the signature.

Done in

On

The manufacturer,

Tables of content

Flow Chart

Description as well of the administrative organization as production engineering

sales organization

Staff quality

PERSON IN CHARGE OF THE SERVICE QUALITY

|  |  |  |
| --- | --- | --- |
|  | **Holder** | **Substitute** |
| Name |  |  |
| First Name |  |  |
| Function |  |  |

STAFF OF CONTROL

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name and First Name** | **Function** | **Substitute** |
| 1 |  |  |  |
| 2 |  |  |  |
| 3 |  |  |  |
| 4 |  |  |  |
| 5 |  |  |  |

EXTERNAL LABORATORIES

Used by the producer, as part of his own control, for tests that he cannot carry out in his own laboratory, or in the event of laboratory failure.

|  |  |
| --- | --- |
| **Name** | **Address** |
|  |  |
|  |  |

1. File Straightening
   1. Steel to be worked

Recall: - all steels to be worked must be BENOR, except for steel BE 220 S

- All steels not benorisable as all the accessories are indicated on the delivery order.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **N° Steel** | **Nature** | **Process of development** | **Grade** | Source | Range of diameters |
| A1 |  |  |  |  |  |
| A2 |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

NATURE : Bars, crowns, lattice, rods rectified by another Manufacturer,… /smooth, with prints, bolts

PROCESS OF DEVELOPMENT: micro-alloyed, drawn bar without reduction of section, cold drawn,…

GRADE : BE 500 () (E) (R) (T) S, DE 500 BS, not benorisable

SOURCE : producer + N°PROCERTUS and / or Manufacturer + n° PROCERTUS (\*)

(\*)This table does not relate to the steels bought and resold such as.

* 1. Machine of Straightening, cutting and bending

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Machine N°Mi** | **Type** | **Identification** | **Operation carried out** | N° Appendix |
| A1 |  |  |  |  |
| A2 |  |  |  |  |
|  |  |  |  |  |

TYPE : (Rollers or rotor, simple or doubles)

IDENTIFICATION : mark, standard, year of construction,…

OPERATION CARRIED OUT : cross, Straightening, bending

APPENDIX : description of the machine Mr.i + parameters of adjustment of the machine Mi as well as the acceptable variations according to steels used Aj

* 1. Steels and diameters worked by the machines of cutting, bending and/or Straightening

|  |  |  |  |
| --- | --- | --- | --- |
| **Machine N°Mi** | **N° Steel** | **Range of the diameters** | **Operation carried out or products manufactured (\*, \*\*)** |
| A1 |  |  |  |
| A2 |  |  |  |
|  |  |  |  |

(\*) Case of use of a machine for a specific product.

(\*\*) The method of control for the determination of the radius of curvature and the corner of bending is… and is described in a precise way in the part “Description of control of planning and the means of production”

1. File welding
   1. Welders

* Description of the category of the welders 1 (ømin which can be welded is…)
* Description of the category of the welders 2 (ømax which can be welded is…)
* Parameters of welding: if the duration of the welding and the products of welding (øof the electrode) change according to the connection to make, use the table of the §2.2.3 then and indicate the duration of the welding and the products as parameters.
  + 1. Example of card welder

The supplemented individual record sheets of all the welders are taken again in the register of the production

|  |  |  |
| --- | --- | --- |
| N° | Photograph  (standard identity card) | Coordinates of the Manufacturer  Name and first name of the welder |
| Method of welding (+ welding) and possibly category (1 or 2): | | |
| Type reinforcing steels which must be welded. | | |
| Type reinforcing steels which must be welded. | | |
| Type reinforcing steels which must be welded. | | |
| Statute of reception by type (initial, periodic, revision) | | |
| Date to which the welds were sampled: | | |
| Date to which the welds underwent a test: | | |
| Results of the tests (included the follow-up if the results are not satisfactory) | | |
| Date to which the qualification was granted: | | |

* + 1. Example of list of welders

|  |  |  |
| --- | --- | --- |
| N° | Name | Rank |
| 1 |  |  |
| 2 |  |  |
| …. |  |  |

* 1. Welding machines
     1. Machines of semi-automatic welding

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| --- | --- | --- | --- | --- |
| **Machine N°Mi** | **Identification** | **Products of welding** | **Statute** | N° Appendix |
| A1 |  |  |  |  |
| A2 |  |  |  |  |
|  |  |  |  |  |

If 2 methods of semi-automatic welding are present, it is necessary to separate information.

Welders concerned: Number + names

IDENTIFICATION : mark, standard, year of construction, …

PRODUITS DE SOUDAGE : mark, standard, ø wire, gas

STATUT : initial, periodic or revision.

APPENDIX : the description of the machine Mi + parameters of the machine Mi as well as the acceptable variations according to steel used Aj+ the types of assemblies carried out are described by means of the table attached which gives, if necessary, parameters used according to the assemblies (parameters A, B, C, p. e.g. time of welding).

* + 1. Automatic Machines of welding

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| --- | --- | --- | --- | --- |
| **Machine N°Mi** | **Identification** | **Name of the trained operators** | **StatutE** | N° Appendix |
| A1 |  |  |  |  |
| A2 |  |  |  |  |
|  |  |  |  |  |

IDENTIFICATION : mark, standard, year of construction, …

STATUT : initial, periodic or revision.

APPENDIX : the description of the machine Mi + parameters of adjustment of the machine Mi like their acceptable variations according to steel used + the types of assemblies carried out are described by means of the table attached which gives the parameters used according to the assemblies (parameters A, B, C,…). To Envisage a table by type and mark of the machine.

* + 1. Spot welding - Types of assemblies
* Welding process:
* Machines:

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Welded Reinforcements** | | Transversely welded ø (mm) | | | | | | | | | | | |
| Ø (mm) | Steel | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 25 |  |  | 40 |
| Parameters (A,B, C …)(\*) | | | | | | | | | | | |
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(\*) The empty left boxes represent assemblies which are not welded by points.

1. File of production control
   1. Description of the type periodic inspection of worked reinforcing steel (rectified and/or welded)

* Person in Charge;
* Recording;
* Follow-up ….
  1. Description of the control scheme

(at least points mentioned again in the TRA500)

The diagram of approval must define the recording and check operations of those so as to cover all the activities at the beginning of the entry of steel, and marking and identification of the products so that the conformity of the delivered products is guaranteed and the assured traceability.

* 1. Organization and control of the manufacturing and control of reinforcing steel
* Plan taking again the machine installation of with their designation, the storage sections, the advance of steels during the production, …
* Description of the organization of the production since the reception of the order
* Control of the plans of reception and delivery forms (data missing, …).
* Investigation of what is not achievable or which does not respect the standards and which will be the object of exemptions.
* Document authorizing the drafting about manufacturing OF with remarks so of the exemption(s) or missing data are expected. This document can, for example, appear itself as a simple card which accompanies the plans and/or delivery forms.

… until the delivery with including the exemptions which are the consequence of non realizable products or not complying with the regulations of standards.

* Model of OF, models of label (possibly different colours).
* Model of label.
* Model of delivery form.
  1. Training of the welders
  2. Document management specific
  3. Treatment of reinforcing steels not accepted
  4. Control procedure of reinforcing steel worked (coming from power stations of reinforcements not BENOR)
  5. Statement of other assemblies

Description of possible other assemblies applied: clips, son of binding, adhesives,…

* 1. Accessories (except BENOR)

Description of the additional utilities: sleeves, pipes, anchorings, means of lifting,…

3.10 Secondary Treatments (except BENOR)

Description of the various secondary treatments applied

1. Description of the measuring and test equipment

The means with which can be examined during the manufacturing of a product for which the manufacturer obtained enabling for the use of the mark BENOR, which the criteria of TRA 500 and PTV 306 are respected; and this for the complete production under mark BENOR starting from supply (material BENOR) until the delivery of the worked product, including the reception and the analysis of the documents (forms and plans), the exemptions of the documents by the manufacturer at his own customer,…

* Equipment for the execution of the tensile test;
* Equipment for the measuring of the geometry of the ribs or imprints;
* Method of control for the determination of the radius of curvature and the angle of bending
* Apparatus concerning the control of the welded joint (8Æ on 8Æ bending on mandrel of 20 mm on welding beyond 180°) + recording, identification and conservation of the samples of test

1. Description of the plan of control concerning the means of production

* Execution of controls
* Recording of controls
* Marking and identification

1. Others
   1. Example of card of execution of specific control related to administration

Date from Control :

N° of the order concerned (PO):

Person in Charge of the object of control:

Controlled manufacturing:

Result of control:

* Satisfactory > OK.
* Observation(s) with no non-conformity > OK with copy of the form sent to the person responsible for the object of inspection.
* Observation(s) with non-conformity > non-conformity form to be attached to this form with follow-up to the person responsible for the non-conformity.

Observation(s):

Date, name and signature

* 1. Example of specific control sheet in technical matter.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **N° de Control** | **N° of Machine** | **Operator** | **N° of order (OF)** | **Reference Mark concerned (on the OF)** | **Control diameter** | **And source Quality Control of steel** | **Other controls carried out** | **Observations (possibly card of nonconformity)** |
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* 1. Example of card of nonconformity

CONCERN

|  |  |
| --- | --- |
| **Control command** |  |
| **Control about manufacturing** |  |
| **Control on machine** |  |
| **Control storage** |  |
| **Control delivery order** |  |
| **Control loading** |  |
| **Specific Control Sheet related to administration N°** |  |
| **Specific Control Sheet related to administration N°** |  |
| **Complaint of the customer** |  |

|  |  |  |  |
| --- | --- | --- | --- |
| N° of order (OF) |  | Name of the customer |  |
| N° of the delivery order |  | Name of the person in charge of control |  |
| Delivery date |  | Date from the report |  |

|  |
| --- |
| Description of nonconformity |
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| Proposal for corrective measures |
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| --- |
| Name of the person entitled to judge |
|  |

OPINION: favoUrable  UNfavoUrable