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(- Signed)

Approved by: Eng. Y. Samoocha
(- Signed)
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Appendices:
1. **Standard specification for quality control Q-APP-02**.
1. **GENERAL**

This specification deals with the requirements of the Israel Electric Corporation pertaining the supply of steel for the manufacture of towers and various structures.

This specification defines the manufacturing characteristics required (as per DIN) as well as requirements pertaining to dimensions and to delivery, shipping marks, bundling, quality control and the documentation required for the publication of the tender, and upon placing an order.

In case of discrepancies or non-conformity between the documents, priority shall be as follows: The present specification; The DIN.

2. **THRESHOLD CONDITIONS:**

Acc. To the attached documents of the supply and storage division.

3. **DOCUMENTS FOR THE PROPOSAL**

3.1 The supplier must submit proof - by means of adequate documentation (the documentation must be from the National Standards Institute or from an objective, known quality laboratory), that the steel offered will be manufactured at a mill that meets the quality assurance requirements of ISO 9001:2000 or ISO 9001:2008 acc.(para.2).

3.2 Declaration indicating that the proposal fully satisfies the requirements of this specification.

3.3 The name of the manufacturer of the steel, which is proposed by the bidder.

3.4 The bidder will fill a summary table (for each bid).
### Item no. acc. Bid documents | Type of steel | Manufacture accord. DIN 17100 Y/N | Standards of prod. dimens. (para. 3) | Tolerance mm (para. 4) | Si (%) contents 0.12-0.25 or less than 0.04
---|---|---|---|---|---

### 4. MANUFACTURING STANDARDS

The measurements and tolerances of the profiles must conform to the following standards:

#### 4.1 Angle Iron

- Hot Rolled Round Edge Equal Angles - according to DIN 1028.
- Hot Rolled Round Edge Unequal Angles - according to DIN 1029.

#### 4.2 Channel Profiles

- Hot Rolled Round Edge/Channels - according to DIN 1026.

#### 4.3 Flat Profiles and Strips

- Hot Rolled Flat Steel for General Purposes 5/10-60/150 - according to DIN 1017.
- Hot Rolled Wide Plates 5/150-60/1250 - according to DIN 59200.
- Hot Rolled Strips, Hot Rolled Sheets 0.8/10-10/120 - according to DIN 1016.

#### 4.4 Plates

- Hot Rolled Plates (3 mm to 150 mm thick) - according to DIN 1543.
5. LENGTH TO BE SUPPLIED AND APPLICABLE TOLERANCE

5.1 Steel Angles from steel RST 37-2 in 6 m. length.
   Tolerance: up to L50X50X5 include. - ± 100 mm.
   from L60X60X6 + 100 mm/-0 mm.
   angle L60X40X7 - ± 100 mm.

5.2 Steel Angles from high quality steel St 52-3 in 6 m. and 9 m.
   Lengths tolerance: + 100 mm/-0 mm.

5.3 Channels in lengths of 6 m., 8.5 m., 9 m. and 12 m.
   Tolerance: + 100 mm/-0 mm.

5.4 Flats and Strips in lengths of 3.0 m., 3.5 m. and 4.0 m.
   Tolerance: +/-100 mm.

5.5 Plates

   Width of plates: 1 m., 1.5 m.
   In lengths as states below:
   Up to 10 mm. thickness (incl.) as specified in the order.
   Over 10 mm. thickness and up to 40 mm. (incl.) 2 m., 2.5 m. and 3 m.

   Tolerance according to above listed standards.

6. MATERIAL

   The following qualities are standard requirements:
   Killed carbon steel RST 37-2 Standard quality
   Killed carbon steel ST 52-3U or ST 52-3N High quality steel
Manufacture of steel to conform to German Industry DIN 17100 -
(“Steel for General Structural Purposes”).
According to para. 8.4.4.4 of DIN 17100, the steel is to be manufactured “suitable for
hot galvanizing”.

Steel RST37-2 :
According European standard - EN10025:2004 comparable to steel S235JR

Steel ST52-3U :
According European standard - EN10025:2004 comparable to steel S355JO

Steel ST52-3U - only for Hot Rolled Round Edge Equal Angles.

Steel ST52-3N :
According European standard - EN10025:2004 comparable to steel S355J2

Steels are to have Si contents less than 0.04% or from 0.12 to 0.25%.

7. PACKING

All items to be sorted and tied into bundles of equal thickness, width, length and
material.

The number of pieces per bundle package will be less than 25 units. The bundles that
have more than 25 units need permission from Israel Electric Corporation.
Maximum weight per bundle shall not exceed 2,500 kg.

Bundles of 6 and 9 m lengths are to be secured in at least three places with double 6
mm. thick steel wire bindings.

Bundles of 8.5 m., 9.0 m. and 12 m. lengths are to be tied in at least four places with
double 6 mm. thick steel wire bindings.

A plastic or metal tag with the following details must be attached to every bundle:

1. Steel quality
2. Name of Manufacturer
3. Number of items per bundle
4. Dimensions of items (thickness, width, length and tolerance)
5. Purchase order no.
6. Weight of bundle

8. **MARKING**

ST 52-3 Steel to be distinctly marked. Marking to be effected by clear painting on the side of the profile reading: “ST 52-3” or by painting the end of the profiles with white paint.

9. **QUALITY ASSURANCE**

Manufacturer Quality Assurance Program shall meet the requirements described in para 2.

10. **QUALITY CONTROL**

Quality control requirements will be according to I.E.C standard Q-APP-02.

11. **DELIVERY APPROVAL CONDITIONS**

Before the shipment, the supplier must furnish original mill Certificates as per DIN 50049 with respect to the chemical composition of the steel, its strength and elongation as per DIN 17100. In addition the Israel Electric Corporation reserves the right to carry out quality acceptance tests either at the manufacturing mill or on arrival of steel at IEC stores.

These tests will be decisive as to the quality of the shipment, and its acceptance or rejection.

These test do not release the supplier from any responsibility regarding the quality of the material supplied, or any other discrepancies from defined requirements in this specification. In the event that the supplied steel fails to conform to IEC requirements, the local representative will be invited to propose a solution. Additional expenses, if any, will be borne by the supplier and not by I.E.C.
12. **REVISIONS**:

1. Page no. 4 - para. 3.4 - added plates according to DIN 1543 (12/88).

2. Page no. 4 - para. 4.3 - added new channel 9 m length (5.10.89).

3. Page no. 1 - changed the name.
   - Page no. 2 - Changed the names of para. 5 and para. 6.
   - Page no. 3 - added the quantity of silicon.
   - Page no. 5 - additional comments.
   - Revision dated October 1990.

4. Page no. 3 - para. 2 - alteration of galvanizing requirements and silicone contents.

5. Page no. 5 - quality assurance requirements were removed adherence to the “Standards Quality Assurance Requirements” 02-1G wad added.

6. Page no. 5 - quality assurance requirements were removed adherence to the “Standards Quality Assurance Requirements” 03-1A wad added. Revision dated January 1995.

7. Page no. 6 - added technical documents to be submitted by the bidder with the date of submitting the bid. Revision dated March 1995.

8. Page no. 5, 6 - added requirements according ISO 9002.


10. Revision of silicon quantity in para. 2 and para. 7.
    - Added type of steel comparable to europian standard EN10025, EN10027.

11. Changed type of steel comparable to europian standard EN10025, EN10027
    - Revision dated November 1998.

12. Add requirements for ISO in para. 2.
    Specification was overwriting according a new format.
13. Removed the demand that number of pieces per bundle package is to be equal and in multiples of 10 units (for light profiles) and 5 units (for heavy profiles). Para.7.
Threshold conditions removed from specification to the attached document
Para.. 2
Revision dated July 2005.

Revision dated December 2009.