ORDNANCE FACTORY PROJECT, HYDERABAD

FINAL TRANSLATION SHEET FOR DRAWINGS

Description of Item QIP

Drawing No. _____ Date Typed _____

Sheet No. _____ Date Verified _____

STATE STANDARD OF USSR

SEAMLESS STEEL TUBES, COLD DEFORMED RANGE

GOST 8734-75

OFFICIAL PUBLICATION

COMITTEE ON STANDARDS

MOSCOW

Name of Typist _____ Name of Verifier _____

SEAMLESS STEEL TUBES, COLD DEFORMED

GOST 8734-75

SUPERSEDES

GOST 8734-58

By order No. 2604 Dated 13th October, 1975 of USSR State Committee on Standard. This standard is valid from 01.01.1977 to 01.01.1982 non-observance of the Standard is punishable by law.

1. External diameter, wall thickness and theoratical weight of the tubes should confirm to the values indicates in Table 1.

2. Depending upon the relation between external diameter (DH) and wall thickness (S), the tubes are classified in the following way:

   a) Super-thin walled Tubes:

      With a DH/s more than HO and tubes with diameter of 20mm and less, with wall thickness upto 0.5 mm and less.

   b) Thin walled Tubes:

      With DH/S from 12.5 to 40, and tubes with a diameter of 20mm and less with wall thickness upto 1.5mm.

c) Thick walled tubes with a Dn/S from 6 to 12.5.

d) Super thick walled tubes with a Dn/S less than 6.

3) Tubes should be manufactured lengthwise as:-

a) Unsized lengths from 1.5 to 11.5m.

b) Sized lengths from 4.5 to 9m with tolerance as 410 mm lengthwise.

c) Multiple sized lengths from 1.5 to 9m with an allowance of 5mm cut per each cut (if other allowance is not specified in the order) and with the tolerance deviations for the total length not exceeding those specified for tubes of sized lengths, not more than 5% of tubes with unsized lengths - not shorter than 2.5m, are permitted in each batch of tubes with sized lengths.

4) Tolerance on the external diameter and wall thickness of the tubes should not exceed the values indicated in Table 2.

ORDNANCE FACTORY PROJECT, HYDERABAD
FINAL TRANSLATION SHEET FOR DRAWINGS

Description of Item

Drawing No. Date Typed

Sheet No. 3 Date Verified

TABLE - 1:

As per enclosure.

REMARKS:

1) Theoretical weight of 1 meter of length of tube is determined in kilograms as per the following formula:

$$M = 0.02466(46XS\ (DH-S)$$

where

M - weight, kg DH - external diameter, mm; S-Wall thickness, mm. In determining the theoretical weight of 1 m length of tube, the density of steel has been taken as 7.85 GM/Cm^3 as reference value.

2) As per the requirement, of the consumer; it is allowed to manfacture the tubes, with a diameter of 4mm and wal. thickness of - 0.2 to 1.2mm; with diameters of 125mm and 133 mm and wall thickness of 2.0 tp 20mm;
and also of 29 x 5.5; 32 x 8.5; 33 x 1.5; 33 x 8.0; 39 x 3.0; 41 x 5.5; 43 x 6.0; 44 x 3.0; 46 x 3.0 46 x 6.0; 55 x 9.0; 58 x 4.0; 84 x 8.0 mm in dimensions.

Name of Typist Name of Verifier

3. Tubes with diameter of 100mm and above, with the ratio DH/S more than 50, and tubes with the ratio DH/S less than 4 are to be supplied as per the technical documents approved by the customer.
(Revised Edition No. 9 of 1978 Information Directory of Standards)

4. As per agreement between manufacturer and consumer, the tubes can be manufactured with combined tolerances, for example on the external diameter - high accuracy as per GOST 9567-75, and on the wall thickness, normal accuracy or with unilateral tolerance of dimensions. In this case, the value of theoretical weight of the tube per meter length is determined as per the arthametic mean value of the sum of the plus and minus tolerance in Table 2.

TABLE 2:

As per enclosure.

5. Tubes should be manufactured according to the external diameter and wall thickness upon the

customers request, the tubes should be manufactured according to the inner diameter and wall thickness, also according to the external and inner diameter and difference in wall thickness;

Tolerances on inner diameter of the tubes should not exceed the corresponding tolerances on the external diameter.

For the tubes with inner diameter of 10 mm and less, tolerances in the internal diameter are set as per the agreement between the manufacture and the consumer.

6. The ovality and difference in wall thickness should not go beyond the tolerances, external corresponding to the diameter and wall thickness.

7. Tube curvature at any area over 1 meter of length should not exceed:-

3 mm - for tubes with a diameter of 5 to 8mm;
2 mm - for tubes with a diameter of 8 to 10mm;
1.5 mm - for tubes with diameter above 10 mm.

ORDNANCE FACTORY PROJECT, HYDERABAD
FINAL TRANSLATION SHEET FOR DRAWINGS

Description of Item

Drawing No. Date Typed

Sheet No. 6 Date Verified

Upon customers request, the curvature of a tube with a diameter of 20 to 90 mm should not exceed 1 mm per 1 meter of length.

REMARK:

For the tubes, with the ratio DH/S external diameter DH, with the wall thickness 50 and above, manufactured without heat treatment, the standards for curvature are set upon reching agreement between the manufacturer and the customer.

8. Material for tubes and technical requirements for them are as per GOST 8733-74.

Example for Conventional Designation:

Tube with an external/of 70 mm, wall / diameter thickness 2.0 mm, length in multiple of 1250 mm, from of steel grade 20, supplied with the chemical composition (as per group B) as per GOST 8733-74 HP is designated as:

$$\text{Tube } \frac{70 \times 2 \times 1250 \text{ HP GOST } 8734\text{-}75}{\text{b } 20 \text{ GOST } 8733\text{-}74}$$

the same, with a length of 6000 mm (sized length), out of steel grade 20, and supplied

Name of Typist Name of Verifier

Description of Item

Drawing No. Date Typed

Sheet No. 7 Date Verified

with the mechanical properties and chemical composition (as per Group B).

As per GOST 8733-74 is designated as:-

$$\text{Tube } \frac{70 \times 2 \times 1000 \times \text{GOST } 8734\text{-}75}{\text{B } 20 \text{ GOST } 8733\text{-}74}$$

The same, with combined tolerances (on the diameter - high accuracy, as per GOST 9567-75 on the wall thickness - normal accuracy)

$$\text{Tube } \frac{70\text{h} \times 2 \times 6000 \text{ GOST } 8734\text{-}75}{\text{A } 20 \text{ GOST } 8733\text{-}74}$$

The same, of unsized length, supplied without standardizing (fixing) the mechanical properties and chemical composition but indicating the hydraulic pressure (as per group A). GOST 8733-74

$$\text{Tube } \frac{70 \times 2 \text{ GOST } 8734\text{-}75}{\text{A GOST } 8733\text{-}74}$$

The same, out of steel grade 10, supplied with the mechanical properties checked on heat treated samples, and the chemical composition (as per group B), as per GOST 8733-74 is designated as:-

$$\text{Tube } \frac{70 \times 2 \text{ GOST } 8734\text{-}75}{\text{B } 10 \text{ GOST } 8733\text{-}74}$$

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ORDNANCE FACTORY PROJECT, HYDERABAD

FINAL TRANSLATION SHEET FOR DRAWINGS

Description of Item

Drawing No. Date Typed

Sheet No. 8 Date Verified

Tube with an inner diameter of 70 mm and wall thickness 2.5 mm of unsized length, grade of steel 40 x , supplied as per group B, GOST 8733-74 is designated as:

$$\text{Tube } \frac{\text{DBH } 70 \times 2.5 \text{ GOST } 8734\text{-}75}{\text{B } 40\,\text{x} \quad \text{GOST } 8733\text{-}74}$$

TABLE - 2

Dimension of the Tubes	Tolerances
External Diameter, mm:	
from 5 to 10	± 0.15 mm
above 10 to 30	± 0.30 mm
above 30 to 50	± 0.40 mm
above 50	± 0.8%
Wall thickness, mm:	
upto 1	± 0.12 mm
from 1 to 5	± 10%
from 1 to 2.5 when the diameter is of 110 mm and more	± 12.5%
above 5	± 8%