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RUBBER FABRIC PLATES SPECIFICATIONS
TY 105 1044-76

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The present specifications pertains to rubber fabric plates which has got working capacity in all climatic areas, at an ambient air temperature from minus 55°C to plus 50°C, resistance to the influence of oils, fuels and solvents in case of their falling on plateS.

Example of designation of rubber fabric plates as per present specification:

PTn TY 1051044-76.

1. TECHNICAL REQUIREMENTS

Plates should comply with the requirements of the present specifications and be manufactured as per technological schedule, approved in the established order.

- 1.1.0. Basic dimensions.
- 1.1.1. Plates should be manufactured final cut with a length at least 20 m and width 500 ÷ 1400 mm.
 Limit deviation on width should be ±20 mm.
 Concrete width of plates is specified during order.
- 1.1.2. Thickness of plates should be (10.0 ± 1.5) mm.
- 1.1.3. Non parallel edges of plates should be within the limits of tolerance on width of plates.
- 1.2.0. Characteristics.
- 1.2.1. Plates should consist of fabric core of layer cut design and a double side rubber facing.

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1.2.2. Rubber core is manufactured from 6 layings of polyamide fabric TK-200-2 having rubber layer between fabric layings.

NOTE: It is allowed to manufacture fabric core out of 7 layers of fabric <code>bKH/</code> -150 without rubber facing. Technical requirements and guarantee for rubber fabric plates made of fabric <code>bKH/</code> - 150 are set by guaranteed parts list.

- 1.2.3. Breaking strength of plate should be not less than 1000 N/mm (kgs/cm)
- 1.2.4. Building strength during separation between facing and core should be atleast 3.0 N/mm (kgf/cm) between layings at least 3.5 N/mm (kgf/cm)
- 1.2.5. Facing rubber should comply with the requirements in GOST 15152-69 (Group I, class A) Physicomechanical parameters of facing rubber should comply with norms given in Table 1.

Table 1.

Nomenclature of parameters	Norms for rubbers.
Conventional tensile strength, Mpa (kgf/cm ²)	14.7 (150)
Elongation during rupture, %, at least	350
Tearing strength, N/mm (kgf/cm) at least	58.8 (60)
Reduction of elongation after ageing in air, % at least	30
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(1)

Shore hardness A

60-70

Temperature limit of brittleness, C, not more than

minus 55

- 1.2.6. Plates should have working efficiency at a temperature down to minus 55°C in case of falling of oil and fuel.
- 1.2.7. The surface of plate should be dmooth without folds, cracks, spills. Other inclusions of dimensions more than 5 mm and cavities (drops) having dimension upto 5 mm in a quantity not more than 4 pieces per 10 m² surface are not allowed.

The traces of face, imprints from the ends of press plate, traces of repairing the defective places and waviness of plate frame having a total area 0.5 m² per 10 m² surface, spots, differing in colour from general surface, similarly, traces from folds of external layings, without influencing total thickness of plate, are allowed on the plate surface.

1.2.8. One of the layings may be shifted on one side along the edge of plate at *xsections having length not more than 1.5 m and a total length, not excee-

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ding 10% from the length of plate.

- 1.3.0. Marking.
- 1.3.1. The plates should have sharp marking in the form of the engraving impression. Marking should be at the ends and in the centre of plate.
- 1.3.2. The marking should contain: Nomenclature on trade mark of manufacturing plant, date of manufacture (year) and designation of the plate.
- 1.3.3. Fabric tag should be glued at the end of each plate indicating:
 - a. Nomenclature or trademark of manufacturing plant;
 - b. Date of manufacture (year, month)
 - c. Designation of plate;
 - d. Q.I.D. Stamp.
- 1.4.0. Packing.

Rubber fabric plates should be folded up in roll and tied up at a few plates with a fabric tape.

2. ACCEPTANCE RULES

- 2.1.0. Plates are supplied in batches. Plates in a quantity not exceeding 20 pcs., accompanied by one document on quality (certificate drawn up as per appendix 1) are considered to be in a batch.
- 2.2.0. For checking the compliance of plates with the requirements of the present specifications, QID

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of manufacturing plant carries out their tests, specified in Table 2.

Table 2.

Description of the parameter.	TR Te	& section st proce- dure.	Number of plates, checked from a batch.	
Dimensions:	9 9	- 1 s	# V ND	
Thickness	1.1.2	3.2	100%	
Width	1.1.1	3.2	100%	
Length	1.1.1	3.2	100% -	
External view	1.2.7	3.3	100%	
Rupture strength	1.2.3	3.4	Two plates.	

2.3. Plates, having passed tests as per para 2.2; are subjected to tests as per prameters in a quantity specified in Table 3.

Table 3.

	Description of parameters				Tech.	. & section Test pro- cedure.	Number of plates being checked, periodicity of tests.	
	Ben	ding stre	ength		1.2.4	3.5	2 plates from each batch.	
	Phy:	sical med ameters o	chanica of rubl	al er	· · · · · · · · · · · · · · · · · · ·		& once in a month.	
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2.4. In case of unsatisfactory test results against one of the parameters specified in paras 2.2 and 2.3 repeated tests are carried out on a doubled quantity of samples, taken from the same plate or rubber charge.

In case of unsatisfactory results of repeated tests, tests are carried out on each plate from the same batch.

2.5. In case of unsatisfactory results as per para 2.3, tests are carried out from each batch on rubbarmixture charge till satisfactory results are obtained on five batches or charges running.

3. TEST PROCEDURE

- 3.1. Resistance of plates to accidental falling of oils, fuels and solvents, and also frost resistance and not checked, but are guaranted by the manufacturing plant.
- 3.2. Length and width of plates are measured with metal measuring reel of type 3nK-2-30 AHT/10 as per GOST 7502-80, Thickness of plates Thickness measuring gauge of type TP-25-60 as per GOST 11358-74, having a division value 0.1 mm.
- 3.3. External view is checked visually. Permissible deviations as per external view, specified in para 1.2.7 and 1.2.8, are checked with metallic measuring rule as per GOST 427-75.

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3.4. For testing the finished plates for determining the rupture strength, three blanks are cut from samples having width not less than 50 mm and length not less than 400 mm.

Before tests, the cut blank sample should be separated by separate layings. The extreme threads should be removed or cut. Width working section of samples for tests should be (25.0 ± 0.5) mm. Length of working section of sample should be (200.0 ± 1.0) mm.

Samples are tested on rupture machine, which should ensure the rate of travel of movable clamp (100 ± 10) mm/min- and power within the limits of not less than double and not more than ten times the rupture load of fabric laying.

Strength of laying during rupture on base is determined while testing two samples each of any layings from each of three blanks of plate specimens.

Strength P in N/mm (kgf/cm) of the laying width is calculated as per formula:

$$P = \frac{P_1}{B}$$

where,

P4 = rupture streath of the laying sample, N (Kgf)

B = width of the laying sample, mm (cm)

The mean arithmetic value of six readings is taken

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to be the test results.

Rupture strength of plates is determined as the product of the mean arithmetic value of the laying strength by the number of layings in the plate.

- 3.5. Bonding strength during laminations is determined as per GOST 6768-75 with the following additions:
 - Samples for tests are manufactured of width
 (25.0 ± 0.5) mm and length not less than 175mm;
 - Determination is carried out not less than on three pairs of samples from each plate.
 - In the first place, the rubber facing is flaked, thereafter consequently each layer till the centre of sample. The same is done with the second sample, but from the other side.

Rate of travel of the rupture machine clamp (100 \pm 10) mm/min.

During tests, atleast 8 pairs of minimum and maximum value are noted on section of length 80-100 mm.

- 3.6. Physical-mechanical parameters of facing rubber are determined:
 - Conditional extension strength, relative elongation during rupture as per GOST 270-75;
 - Rupture strength as per GOST 262-79;
 - Change of relative elongation after ageing in air at a temperature 70°C for 72 hours as per GOST 9.024-74;

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Hardness on device shore A as per GOST 263-75;
 Temperature limit of fragility as per GOST 7912-74.

4. TRANSPORTATION AND STORAGE

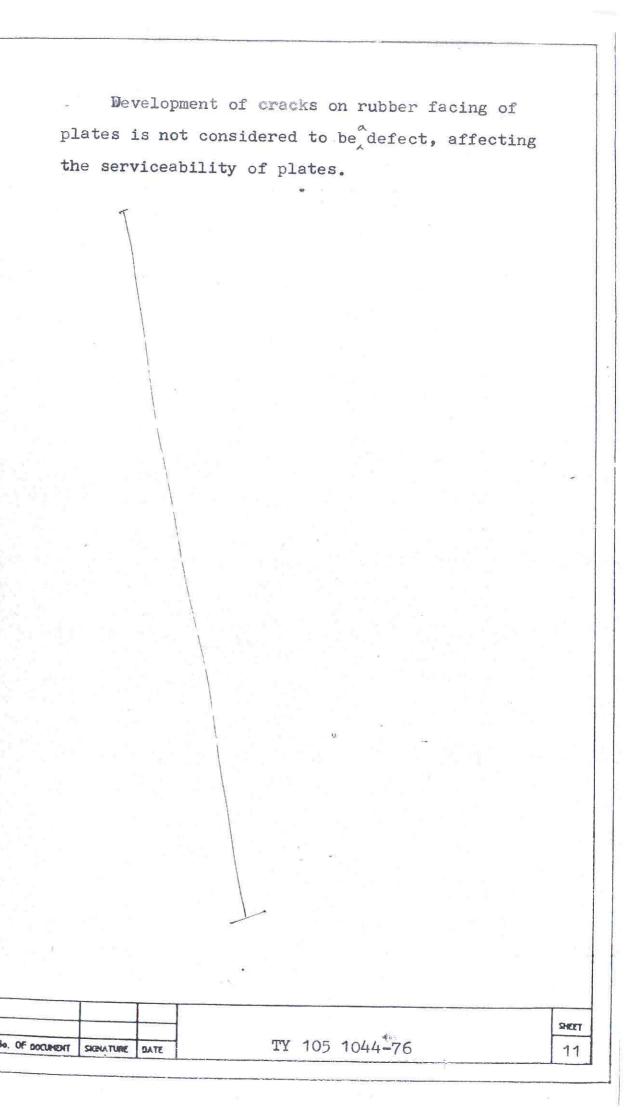
- 4.1. Plates are transported by any type of transport in closed transportation means.
- 4.2. Plates should be stored ata temperature not less than -55°C. During storage, plates should be protected against the influence of direct sun rays, against ingress of substances, damaging the rubber.
- 4.3. Storage life of plates, folded up in rolls, should not exceed 3 months. For a layer storage, plates should be unfolded or cut into plants on components.

5. MANUFACTURER'S GUARANTEE

- plant. Manufacturer guarantees the compliance of plates with the requirements of present specifications provided the conditions of use, storage and transportation, set by the present specifications are observed.
- 5.2. Serviceability of plates is guaranteed for 7 yrs. including storage life at store house for 2 years maximum.

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Appendix 1.

Name of the Manufacturing Plant.

CERTIFICATE

Specifications.

1. General information about plates.
Rubber fabric plates
Designation of plates
Quantity
Batch no.

2. Basic Technical data

Date of manufacture.

Length, m.

Thickness, mm.

width, mm.

Plates are serviceable at an ambient temperature +55°C to +50°C.

Rupture strength of plates, N/mm (kgf/cm)...... Bonding strength between layings, N/mm (kgf/cm)

Bonding strength between core and facing, N/mm (kgf/cm).....

3. Acceptance Certificate.

Rubber fabric plates batch no.....complies with specificationsand fit for use.

QID Representative

Date of manufacture.

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4. Storage information.

Plates should be stored at a temperature not less than -55°C. During storage, plates should be protected against the influence of direct sun rays against ingress of substances, affecting the rubber.

5. Guarantee.

Serviceability of plates is guaranteed for 7 years including storage life in storehouse for not more than 2 years.

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LIST OF STANDARD TECHNICAL DOCUMENTS, REFERRED TO IN TY 1051044-76.

- "Technical rubber articles for regions with tropical climate. General technical requirements EC3KC" GOST 15152-69.
- "Indicator Thickness measuring gauges with division value 0.01 and 0.1 mm. Specifications" GOST 11358-74.
- 3. "Metal measuring reels. Specifications".
 GOST 7502-80.
- 4. "Metal measuring rules. "Specifications" GOST 427-75.
- 5. "Rubber and rubberized fabric. Method of determining the bonding strength between layers during lamination "GOST 6768-75.
- 6. "Rubber Method of determining the elastic strengt.
 properties during extension" GOST 270-75.
- 7. "Rubber Method of determining the rupture strength" GOST 262-79.
- 8. "Rubber. Test procedure for resistance to thermic age EC3KC GOST 9.024-74.
- 9. "Rubber method of determining the hardness with WOP-A GOST 263-75.
- 10. "Rubber Method of determining the temperature limit of fragility" GOST 7912-74.

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