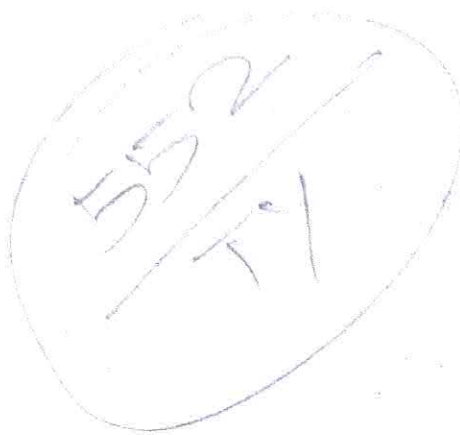


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HOT ROLLED STRUCTURAL, ALLOYED  
HIGH GRADE STEEL 45 x H2 MFA-

SPECIFICATIONS: TY14-1-1725-76

INDEX: 84/284872601 - 40001K, V

Sheet	No. OF DOCUMENT	SIGNATURE	DATE	HOT ROLLED, STRUCTURAL, ALLOYED, HIGH GRADE STEEL 45 x H2MFA		TY 14-1-1725-76	
TYPED		R.SUJATHA.				SHEET	No. OF SHEETS
CHECKED	PP/SG	8.11.85	1			5	
APPROVED		8/V					

These specifications cover hot-rolled, structural, alloyed high-strength steel 45 x H2 MFA-14, meant for manufacturing the torsion bars by hot upsetting method with subsequent machining.

### 1. RANGE.

1.1. Steel is supplied in a form of round bars with diameter not more than 80mm. The length of round bars should be specified in supply order. Requirements to the steel range should conform to GOST 2590-71 for usual accuracy of rolling.

### 2. TECHNICAL REQUIREMENTS

2.1. Chemical composition of steel and permissible deviation from the chemical and composition should conform to GOST 4543-71. In this case, sulphur contents should not exceed 0.010%, and Phosphorus Contents should not exceed 0.020%. Variations of carbon contents are not permissible.

2.2. Round bars are supplied in a heat treated state (annealing or normalizing and high temperature tempering) with Brinell hardness not more than 269 (indentation diameter should not be less than 3.7mm.)

Heat treatment conditions are determined by the Supplier.

2.3. Mechanical properties of steel should conform to the rated values given in the table key to table on page 2.

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TABLE

MECHANICAL PROPERTIES NOT LESS THAN

HEAT TREATMENT  
CONDITIONS.

Yield Pt. kgf/mm <sup>2</sup> . σ <sub>T</sub>	Ultimate st- rength kgf/mm <sup>2</sup> . σ <sub>L</sub>	Relative Reduction % Y	Relative Elongation % S <sub>5</sub>	Impact st- rength kgf/cm <sup>2</sup> α <sub>H</sub>	Hardness (in- dentation dia. mm.)
150	180	35	8	4	2.6 - - 2.8

Oil hardening  
at 870 ± 10°C  
Tempering at  
220 ± 10°C.

NOTE: ONLY SPECIMENS WITH ALLOWANCE FOR GRINDING ARE SUBJECTED TO THAT HEAT TREATMENT.

2.4. Check for macrostructure of steel is carried out on transverse, etched templates and fractures. The macrostructure of steel should not have shrinkage cavity traces, porosity, blisters, cracks, slug inclusions silver spots flakes silkfractures, fish scale fractures, conchoidal fractures and laminations. Central porosity





3.2. Contamination of steel with non-metallic inclusions is determined on 6 specimens by method III 5 according to GOST 1778-70.

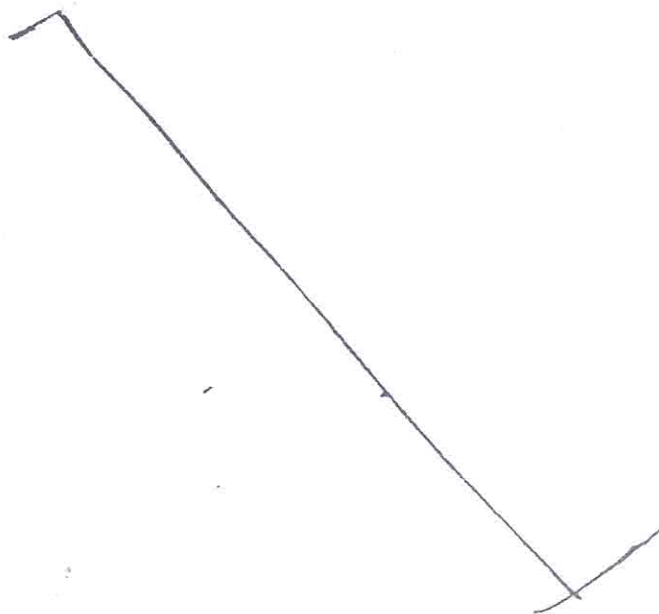
3.3. Specimens are selected for tests as per second alternative, specified in GOST 7564-73. Tension tests are carried out on specimens, of TYPE III, number 7, GOST 1497-73.

3.4. Other acceptance rules and test methods are as per GOST 4543-71.

#### 4. PACKING AND MARKING.

4.1. Packing and marking should be carried out in accordance with GOST 4543-71.

4.2. Round bars are additionally marked with letter "Ш" (45 x H2MΦA -Ш) .



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