

HOT ROLLED STRUCTURAL, ALLOYED HIGH GRADE STEEL 45 x H2 MASPECIFICATIONS: TY14-1-1725-76

INDEX: 84/284872501 - 40001K, 4;

	-		
			,
			e.
THEMOTOR	HOT ROLLED, STRUCTURAL, ALLOYED, HIGH GLADE STEEL 45 x H2MTA	TY	14-1-1725-76
TYPED R.SUJATHA.			
CHECKED PP SG 8.11.85 APPROVED CTV		SHEET	No. OF SHEETS
APPROVED S W		_1	5

These specifications cover hot-rolled, structural, alloyed high- rade steel 45 x H2 MpA-w, 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 Centents would not exceed 0.020%.

 Variations of carbon contents are not permissible.
- 2.2. Round bars are supplied in a heat treated state (annealing r 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.

	²	
All SHEET MIL OF DOCUMENT SHIPMATURE BATE	TY 14 - 1 - 1725 - 76.	29027
	1	2

			Hardness (indentation dia.	2.6 - 2.8 EAT TREATMENT. tched templates kage cavity	Central porosity
			Impact strength	HAT F	and laminations. C
	-	NOT LESS THAN	Relative Elongation % S _S		ures and lam
		PROPERTIES NO	Relative Reduction	. 35 RINDING ARE is carried of steel's	conchoidal fractures
TABLE		MECHANICAL	Ultimate strength	30 ANCE of s	fractures, conc
	mes end mar end dan pay end gan gan son dan eng		Yield Pt. kgf/mm2.	NS WITH	fish scale
		HEAT TREATMENT	CONDITIONS.	oil hardening at 870 ± 10°C Tempering at 220 ± 10°C. NOTE: ONLY SP and fraces, traces,	tures,
N TEMPS IN	n, OF BO	NOTE OF	SIDATURE BATE	TY14-1-1725-76.	3

of macrostructure should be of class 0.5 and better.

Spot heterogenuity, total ghost, edge ghost, liquation square, shrinkage liquation and pinhead blisters are not allowed in macrostructure of steel.

Layer by layer crystallization, having class 3 and better, is not a reason for rejection.

- 2.5. Cracks, oxide spots, laps, slag inclusions and hair cracks are not permissible on external surface of round bars. The manufacturer guarantees absence of inner hair cracks in round bars. The customer may test finished components for hair cracks by magnetic method.
- 2.6. Contamination of steel with non-metallic inclusions with respect to oxides, sulphides and silicates should not exceed class 2 as per any mentioned above

specimen with respect to one type of non-metallic inclusions. Class 2.5 is allowed on 2.7. Other requirements is to steel should be in conformity with GOST 4543-71.

3. ACCEPTANCE RULES AND TEST METHODS.

3.1. Round bars are subjected to acceptance in batches, including round bars of the same melt and the same diameter.

Round bars, manufactured of metal ingots of electroclag remelting, using fluxes of the same batch, under the same technological conditions, belong to the same melt of electroslag remelting.

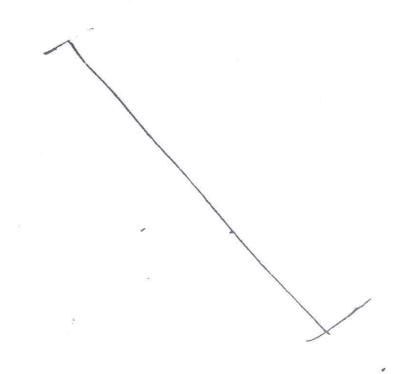
	7	
ALL SHEET MA OF BOTHERT SIGNATURE BATE	TY 14 - 1 - 1725 - 76.	P-ICC)

- 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 cut on specimens, of TYPE ITI, 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

 **" (45 x H2M⊕A -U) •



ALL SHEET No. OF BOCUMENT STOMATIME BATE"

TY14-1-1725-76.

57007