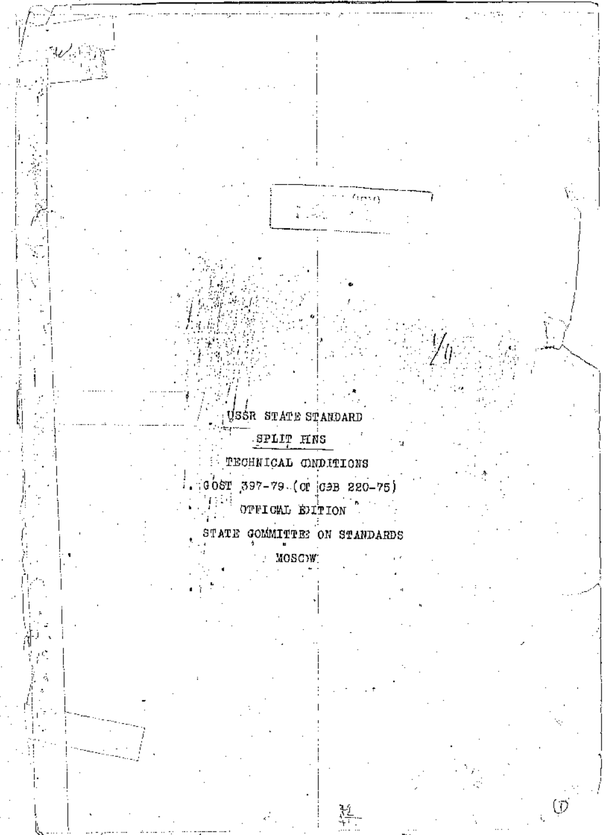


USSR STATE STANDARD

SPLIT PINS

TECHNICAL CONDITIONS

GOST 397-79 (ST SEV 220-75)

OFFICIAL EDITION

STATE COMMITTEE ON STANDARDS

MOSCOW

UDC 621.886.5: 006.354

Group 36
(G 36)

USSR STATE STANDARD

SPLIT PINS TECHNICAL CONDITIONS

GOST 397-79
(ST SEV 220-75)
This supersedes
GOST 397-79

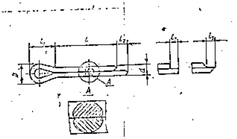
By order No.611 dated 16th February, 1979 this standard is valid

From 01.07.1979
To 01.07.1984

Nonobservance of this standard is punishable by law.

The present standard relates to split pins with conventional diameter ranging from 0.6 to 20 mm.

The requirements established by this standard are in full conformity with ST SEV 220-75.



1. STRUCTURE AND DIMENSIONS

1.1 The structure and dimensions of split pins must conform to those shown in Fig. 1 and Tables 1 and 2.

Official Edition

Reprinting Forbidden

Reissued October, 1979

Table 2

Length of split pin l		Theoretical weight of 1000 nos split pins, kg for nominal diameter d_c in mm														
Nominal	Tolerance	0.6	0.8	1.0	1.2	1.6	2.0	2.5	3.2	4.0	5.0	6.3	8.0	10	13	16	20
4		0.008															
5	-0.5	0.010	0.021														
6		0.011	0.024	0.042													
8		0.013	0.029	0.053	0.068	0.140											
10		0.016	0.034	0.061	0.079	0.162	0.268										
12		0.018	0.039	0.070	0.090	0.185	0.324	0.544									
14			0.044	0.079	0.101	0.207	0.362	0.603	1.08								
16	-0.8		0.050	0.088	0.112	0.230	0.400	0.663	1.17								
18				0.097	0.123	0.252	0.441	0.723	1.27	2.23							
20				0.106	0.134	0.275	0.479	0.782	1.37	2.39							
22					0.146	0.279	0.517	0.842	1.46	2.55	4.18						
25					0.162	0.331	0.573	0.931	1.61	2.79	4.55						
28						0.365	0.630	1.021	1.75	3.03	4.93						
32	-1.2					0.410	0.705	1.140	1.95	3.35	5.43	9.8					
36							0.781	1.268	2.14	3.67	5.93	10.7					
40							0.856	1.387	2.33	3.99	6.43	11.5	19.7				
45								1.536	2.58	4.39	7.05	12.5	21.7	37.9			

Table 1

ventional diameter of it pin d_0*		0.6	0.8	1.0	1.2	1.6	2.0	2.5	3.2	4.0	5.0	6.3	8.0	10.0	13.0	16.0	20.0
d	Maximum	0.5	0.7	0.9	1.0	1.4**	1.8**	2.3	2.9	3.7	4.6	5.9	7.5	9.5	12.4	15.4	19.3
	Minimum	0.4	0.6	0.8	0.9	1.3	1.7	2.1	2.7	3.5	4.4	5.7	7.3	9.3	12.1	15.1	19.0
l_2	Maximum	1.6	1.0	1.6	2.5	2.5	2.5	2.5	3.2	4.0	4.0	4.0	4.0	6.3	6.3	6.3	6.3
	Minimum	0.8	0.8	0.8	1.3	1.3	1.3	1.3	1.6	2.0	2.0	2.0	2.0	3.2	3.2	3.2	3.2
$l_1 \approx$		2.0	2.4	3.0	3.0	3.2	4.0	5.0	6.4	8.0	10.0	12.6	16.0	20.0	26.0	32.0	[illegible]
D	Maximum	1.0	1.4	1.8	2.0	2.8	3.6	4.6	5.8	7.4	9.2	11.8	15.0	19.0	24.0	30.8	38.5
	Minimum	0.9	1.2	1.6	1.7	2.4	3.2	4.0	5.1	6.5	8.0	10.3	13.1	16.6	21.7	27.0	33.8
ommended meters parts nted	Bolt over	—	2.5	3.5	4.5	5.5	7.0	9.0	11.0	14.0	20.0	27.0	39.0	56.0	80.0	120.0	170.0
	upto	2.5	3.5	4.5	5.5	7.0	9.0	11.0	14.0	20.0	27.0	39.0	56.0	80.0	120.0	170.0	—
	Dowel axis, over	—	2.0	3.0	4.0	5.0	6.0	8.0	9.0	12.0	17.0	23.0	29.0	44.0	69.0	110.0	160.0
	upto	2.0	3.0	4.0*	5.0	6.0	8.0	9.0	12.0	17.0	23.0	29.0	44.0	69.0	110.0	160.0	—

* The conventional diameter of the split pin d_0 is equated to the diameter of the split pin hole.

** Values of d_{max} may be increased to 1.45 and 1.85 respectively by agreement between manufacturer and customer.

Table 2 Contd.

Length of split pin l		Theoretical weight of 1000 nos optic basis, kg for nominal diameter d_0 in mm														
Nominal	Tolerance	0.6	0.8	1.0	1.2	1.6	2.0	2.5	3.2	4.0	5.0	6.3	8.0	10	13	16	20
50								1.685	2.82	4.79	7.80	13.6	23.6	40.6			
56									3.11	5.27	8.55	14.8	25.4	43.9			
63									3.44	5.83	9.43	16.3	27.7	47.7			
71										6.47	10.42	17.9	30.4	52.0	94		
80										7.18	11.55	19.8	33.6	57.0	103		
90											12.80	21.9	36.8	62.4	112		
100											14.01	23.9	40.2	67.8	121		
112												26.4	44.3	74.3	132	215	
125												29.1	48.7	81.4	144	233	
140													52.7	89.6	158	255	
160													60.6	100.5	177	284	467
180														111.4	195	312	512
200														122.3	124	341	558
224															236	375	612
250															260	413	671
280																456	738

Note. The weight shown in the Table must be multiplied by 1.080 to obtain the weight of brass pins and by 0.356 for aluminium alloy pins.

2. Technical Requirements

2.1 Split pins must be manufactured in accordance with the requirements of the present standard and according to working drawings approved in the established manner.

2.2 Split pins must be manufactured out of low carbon steels. Split pins may be made out of corrosion resistant steels or out of nonferrous metals and their alloys.

Recommended material grades and their conventional designations are in accordance with Table 3.

Table 3

Material		Plating	
Material	Conventional Designation	Type	Conventional Designation
Low carbon steels with carbon content not over 0.2% as per GOST 1050-74 and GOST 380-71	0	Zinc plating with chromatising Cadmium plating with chromatising oxide Phosphating Oxidising	01 02 06 05
Corrosion-resistant steel 12x18 H 10 T to GOST 5632-72	2	Nickel plating Oxidising	03 05
AMg to GOST 4784-74, A63 to GOST 15527-70	3	Without any plating	00

2.3 Split pins made out of corrosion-resistant steel must, in justifiable cases, be subjected to heat treatment.

2.4 Split pins must be plated if so required by the customer.

2.5 The types of plating and their conventional designation must conform to those set out in Table 3. The metallic plating thickness is 6 to 12 microns.

When split pins are made out of plated wires, absence of plating at the edge of the legs is permissible.

In the case of readymade split pins absence of plating on on the inner surface of the legs is permissible.

2.6 Burrs, cracks and rust are not permitted on the surface of split pins. Sharp notches are not permitted where the head and body meet.

2.7 Crumpling due to the feed mechanism and longitudinal scratches on the branches of split pins are permitted.

2.8 Misalignment of the two legs is permissible provided the split pin dimensions are not changed beyond the limits for the conventional diameter d_o.

2.9 A gap between the legs of the split pin is permissible provided it does not change the size of the split pin beyond the limits of the conventional diameter d_o and provided the diameter of the split pin with the legs pressed together is in conformity with diameter d.

3. ACCEPTANCE RULES

3.1 Acceptance rules are as specified in GOST 17769-2 as far as normal accuracy articles are concerned.

4. INSPECTION AND TESTING METHODS

4.1 The external appearance of split pins must be checked by inspection without using magnifying devices.

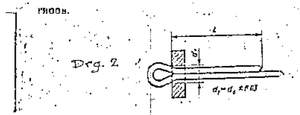
4.2 Split pin dimensions must be checked using limit gauges or universal measuring tools which insure the necessary measuring accuracy.

4.3 Split pin diameter must be checked on the finished article in two mutually perpendicular planes.

4.4 The device shown in drg.2 must be used in measuring the length of split pin.

4.5 Split pins of conventional diameter upto 5 mm must withstand not less than 3 bendings without any sign of rupture or crack; split pins of conventional diameter over 5 mm must withstand two bendings.

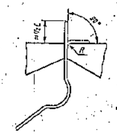
Drg. 2



The bend test is carried out by separating the legs and clamping one of them between the jaws of a vice (drg.3) such that bending takes place in the straight portion of the leg.

The edges of the jaws must have a rounding off radius R as shown in Table 4.

The end of the split pin is bent at 90°, brought back to its initial position and bent again in the same direction.



Dvg.3. Черт. 3

Table 4

Conventional diameter d_o	Rounding off radius R for edges of jaws of vice
Upto 2	0.5
Over 2 Upto 5	0.8
Over 5	1.2

Each displacement of the end by 90^0 is treated as one bend.

Testing is done at the rate of not more than one bend per secon

5.PACKING AND MARKING

5.1 Packing and case marking for split pins are as specified in GOST 18160-72.

5.2 Split pins having anticorrosive plating are not greased.

6.Conventional Designation of Split Pins

6.1 Split pins must be designated according to the scheme shown for the example of a split pin with convention diameter 5 mm, length 28 mm made out of corrosion-resistant steel with zinc plating of thickness 9 microns.

Split Pin 5 x 28.2.019 GOST 397-79

BASE SI UNITS

Quantity	Unit		
	Name	Russian symbol	International symbol
Length	metre	м	m
Weight (Mass)	kilogram	к	kg
Time	second	с	s
Current	ampere	А	A
Thermodynamic temperature	kelvin	К	K
Amount of substance	mole	моль	mol
Intensity of light	candela	кд	cd

SUPPLEMENTARY SI UNITS

Plane angle	radian	рад	rad
Solid angle	steradian	ср	sr

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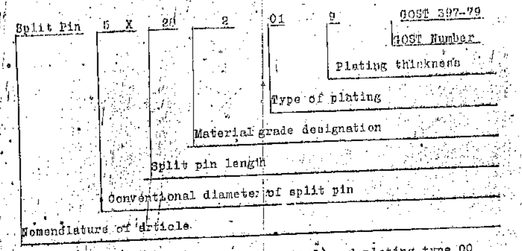

Note: Material grade 0 (low carbon steel) and plating type 00 (without plating) are not indicated in the designation.

Example of conventional designation of split pin with conventional diameter 5 mm, length 28 mm made out of low carbon steel without plating.

Split pin 5 x 28 GOST 397-79

(Correlation of GOST and OT CEB not translated)

DERIVED SI UNITS WITH PROPRIETORY NAMES

Quantity	Unit		Expression for derived unit	
	Name	Symbol	using other units	using base SI units
Frequency	hertz	Hz	-	s^{-1}
Force	newton	N	-	$m.kg.s^{-1}$
Pressure	pascal	Pa	N/m^2	$m^{-1}.kg.s^{-1}$
Energy, work, heat	joule	J	N.m	$m^2.kg.s^{-2}$
Power, energy, flow	watt	W	J/s	$m^2.kg.s^{-3}$
Quantity of electricity, electric charge	coulomb	C	A.s	s.A
Electric potential	volt	V	W/A	$m^2.kg.s^{-3}.A^{-1}$
Electric capacitance	farad	F	C/V	$m^{-2}.kg^{-1}.s^4.A^2$
Electric resistance	ohm		V/A	$m^2.kg.s^{-3}.A^{-2}$
Conductance	siemens	S	A/V	$m^{-2}.kg^{-1}.s^3.A^2$
Magnetic flux	weber	Wb	V.s	$m^2.kg.s^{-2}.A^{-1}$
Magnetic induction	tesla	T	Wb/m^2	$kg.s^{-2}.A^{-1}$
Inductance	henry	H	Wb/A	$m^2.kg.s^{-2}.A^{-2}$
Luminous flux	lumen	lm	-	cd.sr. *
Illumination	lux	lx	-	$m^{-2}.cd.sr.$ *
Nucleid activity	beckerel	bk	-	s^{-1}
Radiation dosage	grey	gr	-	$m^2.s^{-2}$

* The supplementary unit steradian figures along with base SI units in these two expressions.

BASE SI UNITS

Quantity	Unit		
	Name	Russian symbol	International symbol
Length	metre	м	m
Weight (Mass)	kilogram	к	kg
Time	second	с	s
Current	ampere	А	A
Thermodynamic temperature	kelvin	К	K
Amount of substance	mole	моль	mol
Intensity of light	candela	кд	cd

SUPPLEMENTARY SI UNITS

Plane angle	radian	рад	rad
Solid angle	steradian	ср	sr