BUREAU OF INDIAN STANDARDS

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भारतीय मानक **मसौदा**

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(आई एस 4339 का *दूसरा पुनरीक्षण*)

DRAFT *Indian Standard*

HOUSEHOLD SEWING MACHINES — NEEDLE BAR LINK STUDS — SPECIFICATION

(*Second Revision* of IS 4339)

ICS 61.080

Sewing Machines Sectional Committee, MED 29	**Last date for receipt of comments is 30 May 2022**

FOREWORD

(*Adoption clauses to be added later*)

This standard was first published in 1967 and subsequently revised in 1997.

Major change in this revision is as follows:

a) Thread and squareness dimension of Type A and B needle bar link studs have been modified.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis shall be rounded off in accordance with IS 2:2022 'Rules for rounding off numerical values (*second revision*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

DRAFT *Indian Standard*

HOUSEHOLD SEWING MACHINES — NEEDLE BAR LINK STUDS — SPECIFICATION

(*Second Revision*)

1 SCOPE

This standard covers the requirements for for needle bar link studs for sewing machines for household purposes.

2 REFERENCES

The standards listed below contains provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subjected to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards listed below:

IS No.	*Title*
IS 1501 (Part 1) : 2020 / ISO 6507-1 : 2018	Metallic materials — Vickers hardness test Part 1 Test method (*first revision*)
IS 2500 (Part 1) : 2000/ ISO 2859-1:1999	Sampling procedures for inspection by attributes: Part 1 Sampling schemes indexed by acceptance quality limit (AQL) for lot-by- lot inspection (*third revision*)
4432 : 1988	Case hardening steel (*first revision*)
IS 4905 : 2015/ ISO 24153: 2009	Random sampling and randomization procedures (*first revision*)

3 NOMENCLATURE

The nomenclature of the needle bar link studs shall be as shown in Fig. 1.

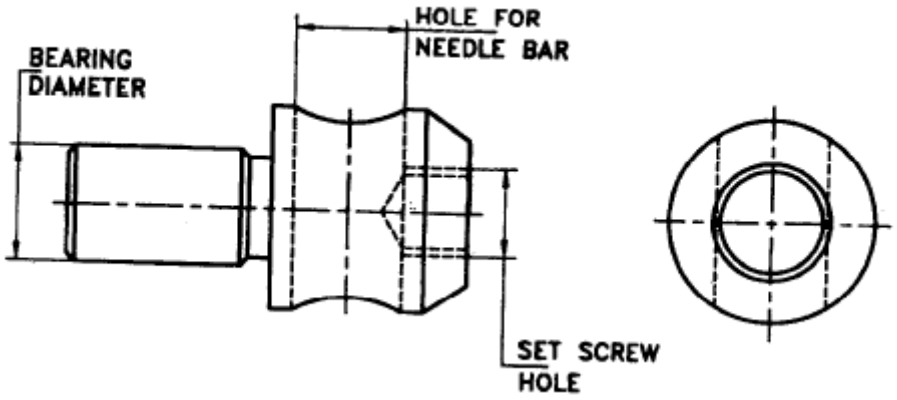


FIG. 1 NOMENCLATURE FOR NEEDLE BAR LINK STUD

4 TYPES

The needle bar link studs shall be either Type A or Type B.

5 MATERIAL

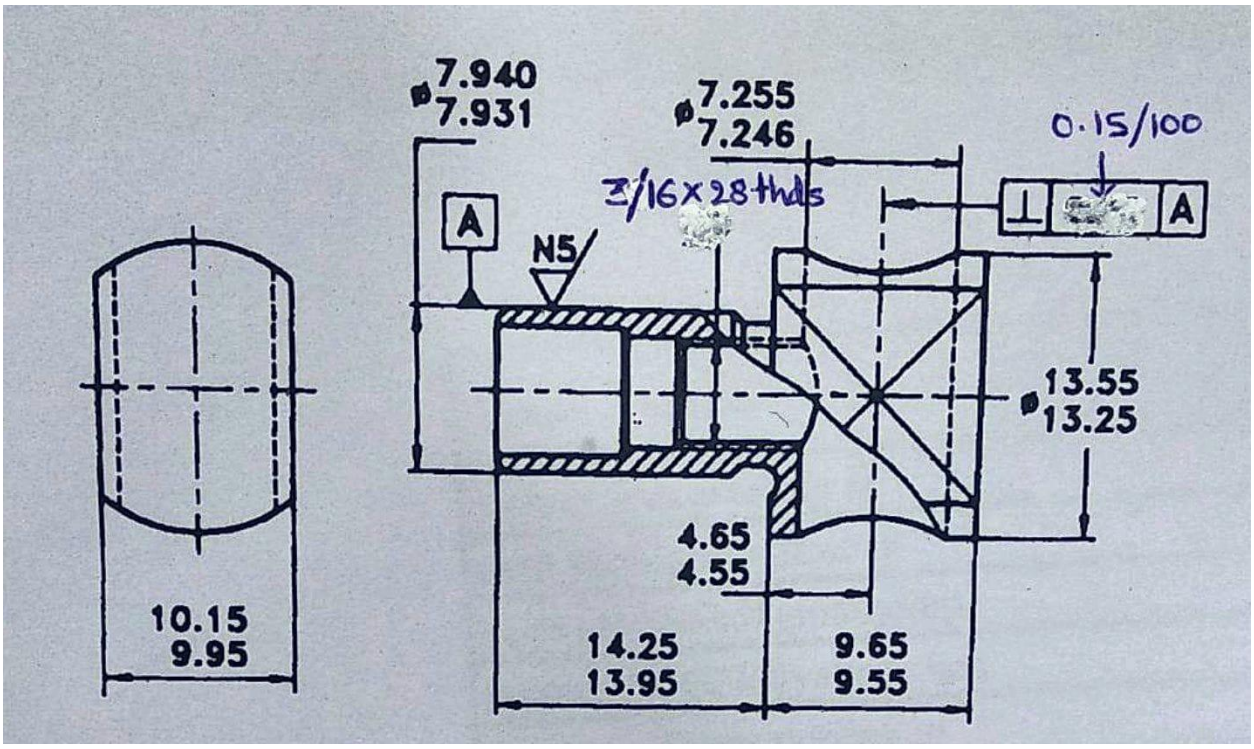
Needle bar link studs shall be manufactured from any suitable case hardening steel (*see* IS 4432).

6 HARDNESS

The bearing diameter of the needle bar link studs shall be case hardened to a depth of 0.5 mm to attain hardness value of 550 HV [*see* IS 1501 (Part 1) / ISO 6507-1].

7 DIMENSIONS AND TOLERANCES

The main dimensions and tolerances shall be as shown in Fig. 2 and Fig. 3.



All dimensions are in millimeters.

FIG. 2 DIMENSIONS FOR NEEDLE BAR LINK STUD – TYPE A

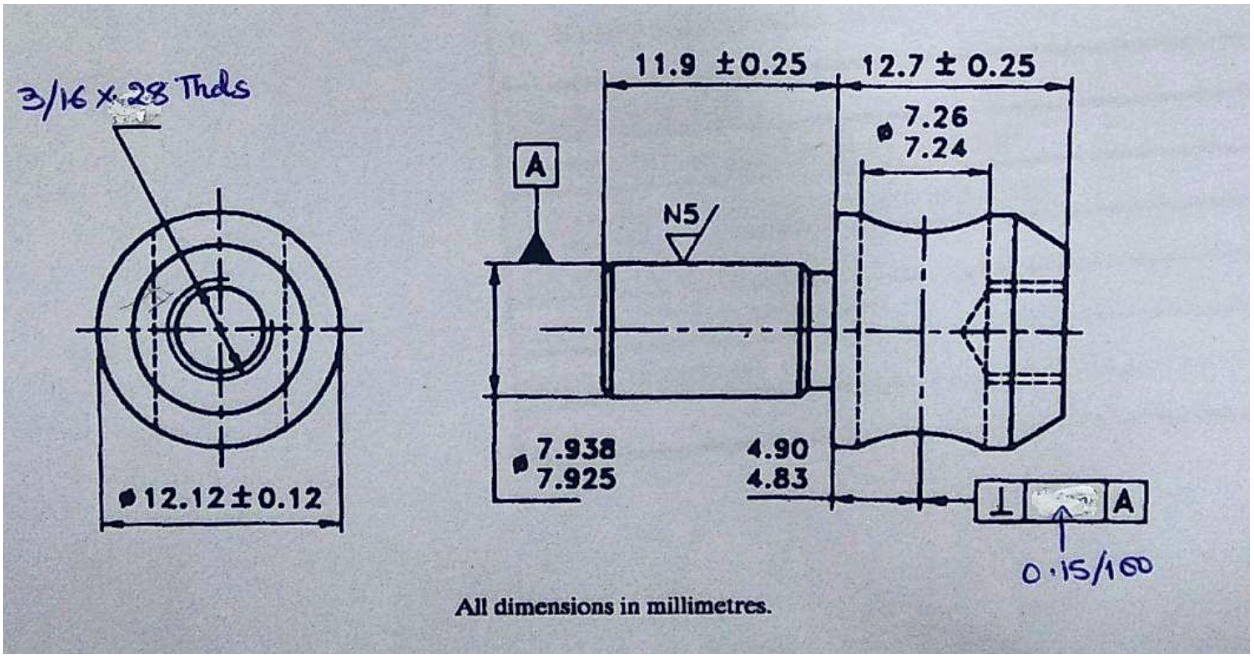


FIG. 3 DIMENSIONS FOR NEEDLE BAR LINK STUD – TYPE A

8 WORKMANSHIP AND FINISH

The needle bar link studs shall be well finished all over and shall be free from defects such as flaws, burrs, cracks, and rust.

9 SAMPLING

Unless otherwise agreed between the supplier and the purchaser, the sampling plan as given in Annex A shall be followed. For further information, reference may be made to IS 2500 (Part 1) / ISO 2859-1 and IS 2500 (Part 1) / ISO 2859-1.

10 MARKING

Each piece of the needle bar link stud shall be legibly and indelibly marked with the following:
a) Name of manufacturer and trade-mark, if any; and
b) Type of oscillating shaft.

10.1 BIS Certification Mark

The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act*, 2016 and the Rules and Regulations framed thereunder, and the product(s) may be marked with the Standard Mark.

11 PACKING

Each needle bar link stud shall be given suitable anti-rust coating and wrapped in polyethylene bags. The wrapped needle bar link stud shall be securely packed in accordance with the best prevalent trade practice. Each package shall bear address of the source of manufacture, type and description of contents.

ANNEX A
(*Clause* 9)
SCALE OF SAMPLING AND CRITERIA FOR CONFORMITY

A-1 SCALE OF SAMPLING

A-1.1 Lot

In any consignment, all the needle bar link studs of the same type and manufactured from the same material under essentially similar conditions of manufacture shall be grouped together to constitute a lot.

A-1.2 For ascertaining the conformity of the lot to the requirements of the specification, tests shall be carried out for each lot separately. The number of needle bar link studs to be selected at random for this purpose shall be in accordance with column (2) and (3) of Table 1.

A-1.3 If the needle bar link studs are packed individually, in order to ensure the randomness of selection, random number tables shall be used. In case such tables are not available, the following procedure may be adopted:

Starting from any needle bar link stud in the lot, count them in one order as 1,2,3 ,..... up to *r* and so on, where *r* is the integral part of *N/n* (*N* being the lot size and *n* the sample size). Each needle bar link stud thus counted shall be selected to constitute the sample.

A-1.4 If the needle bar link studs are packed in different cartons, a suitable number of cartons (not less than 20 percent of the total in the lot subject to a minimum of 2) shall be chosen at random. From each of the cartons so chosen, an approximately equal number of needle bar link studs shall be picked up from its different parts so as to obtain the required number of needle bar link studs specified in co1umn (2) and (3) of Table 1.

A-2 NUMBER OF TESTS AND CRITERIA FOR CONFORMITY

A-2.1 The needle bar link studs selected according to **A-1.2** and **A-1.3** or **A-l.4** shall be examined for dimensions and tolerances (*see* **7**) and workmanship and finish (*see* **8**). If the number of needle bar link studs failing to meet one or more of the requirements mentioned above is less than or equal to the permissible number of defectives given in column (4) of Table 1, the lot shall be declared as conforming to the requirements of these characteristics.

Table 1 Scale of Sampling and Permissible Number of Defectives
(*Clauses* A-1.2, A-l.4, A-2.1, *and* A-2.2)

Sl No.	Number of Needle Bar	For Dimensions, Tolerances, Workmanship and Finish	Sample Size for Hardness

	Link Studs in a Lot *N*	**Sample Size n**	**Permissible Number of Defectives***	
(1)	(2)	(3)	(4)	(5)
i)	Up to 15	5	0	2
ii)	16 to 40	8	0	3
iii)	41 to 110	13	0	3
iv)	111 to 300	20	1	5
v)	301 to 500	32	1	6
vi)	501 to 800	50	2	8
vii)	801 to 1 300	80	3	10
viii)	1 301 and above	125	5	15

*This ensures that lots containing only 1.5 percent or less defectives shall be accepted most of the time.

A-2.2 In the case of those lots which have been found satisfactory according to **A-2.1**, a number of needle bar link studs equal to the sample size indicated in co1umn (5) of Table 1, shall be subjected to hardness test (*see* **6**). Any needle bar link stud failing to meet-the requirement for hardness shall be considered to be defective.

A-2.2.1 If no defectives are found among the needle bar link studs subjected to the hardness test (*see* **A-2.2**), the lot shall be declared as conforming to the requirements of the specification, otherwise not.