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भारतीय मानक मसौदा

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(आई एस 4341 का दूसरा पुनरीक्षण)

Draft Indian Standard

**HOUSEHOLD SEWING MACHINES — FEED BAR ROLLERS AND STUDS —
SPECIFICATION**

(Second Revision of IS 4341)

ICS 61.080

Sewing Machine Sectional
Committee, MED 29

Last date for receipt of
comments is **07 January 2024**

FOREWORD

This standard was first published in 1967 and subsequently revised in 1997. The present revision has been taken up with a view to incorporating the modifications found necessary as a result of experience gained on the use of this standard. Also, in this revision, the standard has been brought into the latest style and format of Indian Standard, and references to Indian Standards, wherever applicable have been updated. The BIS certification marking clause has been modified to align with the revised *Bureau of Indian Standards Act, 2016*

For general requirements of sewing machines IS 1610 'Household sewing machines — General requirement may be referred.

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 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 places retained in the rounded-off value should be the same as that of the specified value in this standard.

1 SCOPE

This standard specifies the requirements for two types of feed bar rollers and studs for sewing machines for household purposes.

2 REFERENCES

The standards listed below contain provisions which, through their references in the text, constitute the provision of this standard. At the time of publication, editions indicated were valid. All standards are subject to revision and parties to the agreement based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below:

<i>IS No.</i>	<i>Title</i>
IS 1501 (Part 1) : 2020 ISO 6507-1:2018	Metallic Materials — Vickers Hardness Test Part 1 Test Method (<i>fifth revision</i>)
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 (<i>third revision</i>)
4432 : 1988	Specification for case hardening steels (<i>first revision</i>)
IS 4905 : 2015 ISO 24153: 2009	Random sampling and randomization procedures (<i>first revision</i>)

3 NOMENCLATURE

The nomenclature of feed bar rollers and studs shall be as indicated in Fig. 1.

4 TYPES

The feed bar rollers and studs shall be either Type 'A' or Type 'B'.

5 MATERIAL

The rollers and studs shall be manufactured from any suitable case hardening steel (*see* IS 4432)

6 HARDNESS

The rollers shall be case hardened to attain a hardness value of 400 HV, *Min* [*see* IS 1501 (Part 1)].

7 DIMENSIONS AND TOLERANCES

7.1 The dimensions and tolerances for feed bar rollers and studs shall be as shown in Fig. 2 and 3.

7.2 The error in the concentricity of the external bearing face of the roller when rotated about the main hole of the roller shall not exceed 0.01 mm.

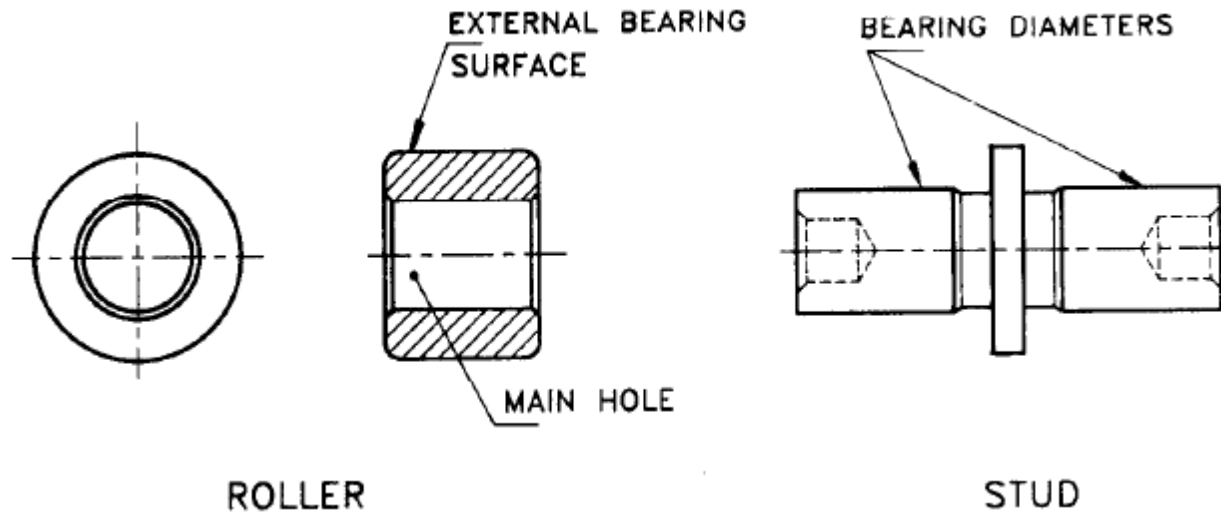
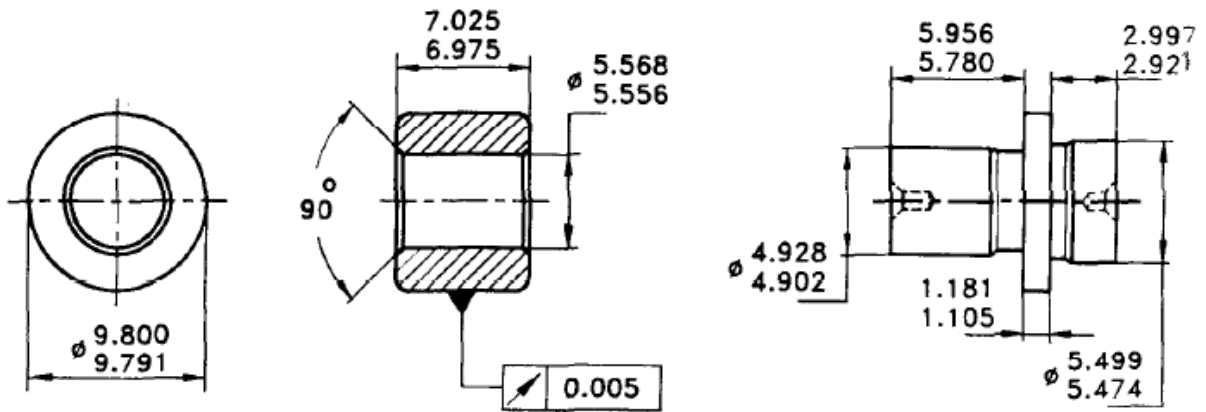
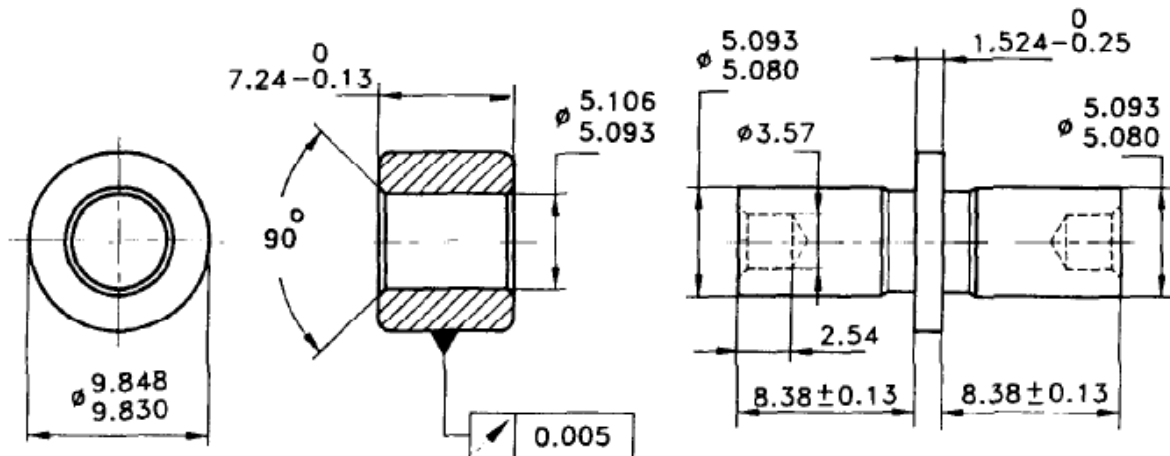


FIG. 1 NOMENCLATURE FOR FEED BAR ROLLER AND STUD



All dimensions in millimetres.

FIG. 2 DIMENSIONS FOR FEED BAR ROLLER AND STUD — TYPE A



All dimensions in millimetres.

FIG. 3 DIMENSIONS FOR FEED BAR ROLLER AND STUD — TYPE B

8 WORKMANSHIP AND FINISH

8.1 The main hole and external bearing surface of the roller shall be ground to smooth finish and shall be free from rust, dust, etc.

8.2 The bearing diameter of the stud shall be precision ground to a smooth finish and shall be free from rust, dust, etc.

9 SAMPLING

Unless otherwise agreed to between the purchaser and the supplier the sampling plan as given in Annex A shall be followed. For further information reference may be made to IS 2500 (Part 1) and IS 4905.

10 MARKING

10.1 Each piece of the feed bar roller and stud shall be legibly and indelibly marked with the following:

- a) Source of manufacture and trade-mark, if any; and
- b) Type of feed bar roller and stud.

10.2 BIS Certification Marking

The product may also be marked with the Standard Mark.

10.2.1 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 feed holder rollers and studs shall be given a suitable anti rust coating and wrapped in polyethylene bags. The wrapped feed bar rollers and studs 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 feed bar rollers 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 feed bar rollers to be selected at random for this purpose shall be in accordance with col 1 and 2 of Table 1.

A-1.3 If the items are packed individually, in order to ensure the randomness of selection, random number tables shall be used. In cases such tables are not available the following procedure may be adopted.

‘Starting from any feed bar roller 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 feed bar roller thus counted shall be selected to constitute the sample.’

A-1.4 If the feed bar rollers 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 feed holder rollers shall be picked up from its different parts so as to obtain the required number of needle bar link studs specified in col 1 and 2 of Table 1.

A-2 NUMBER OF TESTS AND CRITERIA FOR CONFORMITY

A-2.1 The feed bar rollers selected according to **A-1.2** and **A-1.3** or **A-1.4** shall be examined for dimensions and tolerances (*see 7*) and workmanship and finish (*see 8*). If the number of feed bar rollers failing to meet one or more of the requirements mentioned above is less than or equal to the permissible number of defectives given in col 3 of Table 1, the lot shall be declared as conforming to the requirements of these characteristics.

A-2.2 In the case of those lots which have been found satisfactory according to **A-2.1**, a number of feed bar rollers equal to the sample size indicated in col 4 of Table 1, shall be subjected to hardness test (*see 6*). Any roller failing to meet the requirement for harness shall be considered to be defective.

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

Table 1 Scale of Sampling and Permissible Number of Defects
(Clauses A-1.2, A-1.4, A-2.1 and A-2.2)

No. of Feed Bar Rollers in the Lot <i>N</i>			For Dimensions, Tolerances, and Workmanship and Finish		Sample Size for Hardness
			Sample Size <i>n</i>	Permissible No. of Defectives*	
(1)			(2)	(3)	(4)
Up	to	15	5	0	2
16	to	40	8	0	3
41	to	110	13	0	3
111	to	300	20	1	5
301	to	500	32	1	6
501	to	800	50	2	8
801	to 1	300	80	3	10
1 301	and	above	125	5	15
* This ensures that lots containing one and a half percent or less defectives will be accepted most of the time					