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भारतीय मानक मसौदा

पशु शल्य चिकित्सा उपकरण - खुर परीक्षण चिमटा -  
विशिष्टि

(IS 10963 का पहला पुनरीक्षण)

*Draft Indian Standard*

**VETERINARY SURGICAL INSTRUMENTS - HOOF  
TESTING FORCEPS - SPECIFICATION**

*(First Revision of IS 10963)*

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Veterinary Hospital Planning and Surgical  
Instruments Sectional Committee, MHD 13

Last date for comments: 18 August 2024

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FOREWORD

*(Formal clauses will be added later)*

This Indian Standard was originally published in 1984 with the title 'Veterinary Surgical Instruments – Hoof Testing Forceps - Specification'. This revision has been brought out to align the cross-references to the latest editions.

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*)'

## 1 SCOPE

This Indian Standard specifies requirements for hoof testing forceps used in veterinary surgery.

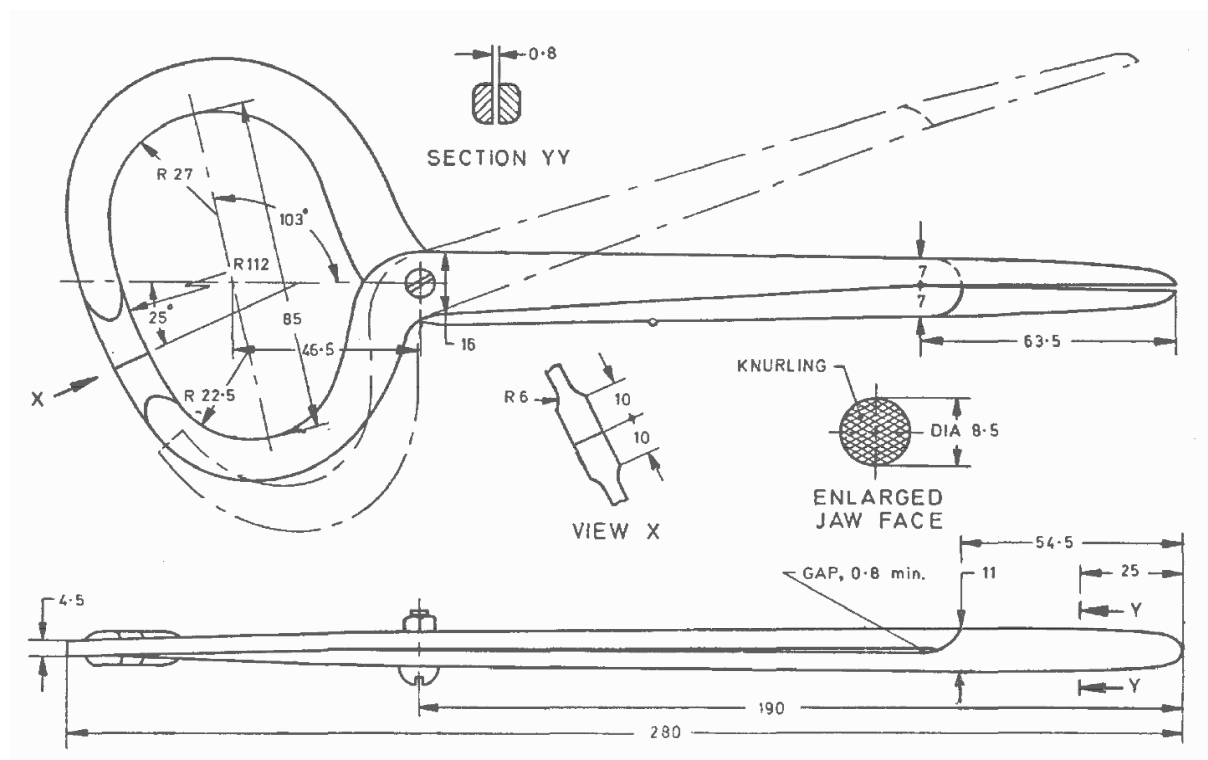
## 2 REFERENCES

The standards given below contain 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 subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of these standards.

IS No.	Title
IS 2102 (Part 1):1993	General tolerances: Part 1 tolerances for linear and angular dimensions without individual tolerance indications (Third Revision)
IS 6603:2024	Stainless Steel Semi-Finished Products, Bars, Wire Rods and Bright Bars - Specification (Second Revision)
IS 1501 (Part 1): 2020	Metallic Materials — Vickers Hardness Test Part 1 Test Method (Fifth Revision)
IS 7531:1990	Surgical instruments - Corrosion resistance of stainless steel surgical instruments - Methods of tests (First Revision)

## 3. SHAPE AND DIMENSIONS

3.1 The dimensions of the hoof testing forceps shall be as given in Fig. 1.



All dimensions in millimeters.

Fig. 1 Forceps, Hoof Testing

### **3.2 Tolerances**

Deviations shall conform to the Coarse class of IS 2102 (Part 1)

## **4 MATERIAL**

### **4.1 Components**

Stainless steel conforming to designation X20Cr13 or X30Cr13 of IS 6603.

### **4.2 Screw**

The screw shall be of the same material as used for forceps.

## **5 MANUFACTURES, WORKMANSHIP AND FINISH**

5.1 Forceps shall be free from pits, burrs, cracks, flaws and all other surface defects.

5.2 The knurling on the jaws shall be well defined and without pitting.

5.3 The edges, except for knurling shall be even, rounded and nowhere sharp.

5.4 With the handles open at 20 degrees, there shall be no undue play at the joint. There shall be no undue stiffness.

5.5 The forceps shall be passivated and polished bright.

## **6. HARDNESS**

The forceps shall have hardness of 400 *HV* to 500 *HV* when tested in accordance with IS 1501.

## **7. TESTS**

### **7.1 Functional Test**

7.1.1. A piece of mild steel flat 3 mm thick shall be placed between the jaws. The handle shall be pressed firmly together with one hand and an attempt shall be made with the other to remove the mild steel flat. The flat shall not be easily pulled. The forceps on opening shall not show any sign of damage.

7.1.2. A block of hard wood 20 mm thick shall be placed between the knurled jaws of the forceps. A load of 45 kg shall be applied gradually to the tips of the handles (22.5kg on each handle) and allowed to act for 2 min. There shall be no distortion in the screw, when a load of 22.5 kg is placed on either both jaws or bars of the handle while closing the hoof tester. On completion of the test, the forceps shall show no sign of damage.

## 7.2 Corrosion Resistance

The forceps shall pass the test given in IS 7531: 1975 'Method for boiling and autoclaving test for corrosion resistance of stainless steel surgical instruments'.

## 8. MARKING

The forceps shall be legibly and indelibly stamped with the following:

- a) Name of manufacturer, its initials or recognized trade-mark, year of manufacture and,
- b) The words 'Stainless Steel' or letters 'SS'.

### 8.1 BIS Certification Marking

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 products may be marked with the Standard Mark.

## 9. PACKING

As specified in the contract or order, or agreed to between the purchaser and the supplier.