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BUREAU OF INDIAN STANDARDS

DRAFT FOR COMMENTS ONLY

भारतीय मानक मसौदा

क्लैंप, हड्डी, लोमैन प्रकार के लिए विशिष्टि

(IS 6319 का पहला पुनरीक्षण)

Draft Indian Standard

Specification for Clamp, Bone, Lowman Type

(*First Revision of IS 6319*)

[ICS 11.040.40]

Orthopaedic Instruments, Implants and Accessories Sectional Committee, MHD 02

Last date for comments: **12 September 2023**

FOREWORD

(Formal clause will be added later)

This standard was originally published in 1971. The first revision of this standard has been brought out to align it with the recent developments and to bring the standard in line with the latest style and format of Indian Standards.

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 same as that of the specified value in this standard.

1 SCOPE

This standard specifies the requirements for Lowman type bone clamp used for holding bones in orthopaedic 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.

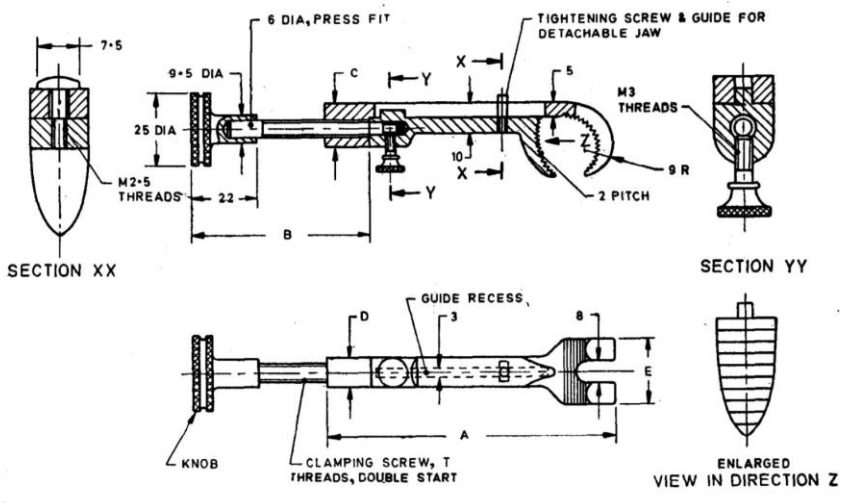
IS No.	*Title*
IS 1570 (Part 5): 1985	Schedules for wrought steels: Part 5 Stainless and heat-resisting steels (*second revision*)
IS 7531 : 1990	Surgical Instruments – Corrosion resistance of stainless-steel surgical instruments – Methods of tests (*first revision*)

3 MATERIAL

The material shall be stainless steel conforming to Designation X30Cr13 of IS 1570 (Part 5).

4 SHAPE AND DIMENSIONS

The shape and dimensions shall be as per Fig.1.



Size (1)	A (2)	B (3)	C (4)	D (5)	E (6)	T (7)
Small	100	60	15	10	22	M6
Large	170	90	20	12	40	M7

All dimensions in millimetres

FIG. 1 CLAMP, BONE, LOWMAN TYPE

5 WORKMANSHIP AND FINISH

The teeth, threads, and knurling, wherever provided, shall be well formed and clean. The instrument shall be symmetrical and well balanced. It shall be free from cracks, burrs, pits, flaws, seams, and other surface defects. The clamping screw shall move smoothly and shall not come off the detachable jaw. The guide recess shall be uniform and sliding motion of the detachable jaw shall be smooth and free from jerks. The detachable jaw shall be capable of being detached from the main part and when tightened it shall have no side play. The instrument shall be passivated and polished bright.

6 HEAT TREATMENT

The instrument shall be hardened and tempered to 410 to 460 *HV*.

7 TESTS

7.1 Performance Test

Clamp a sheep's bone having a minimum diameter of 20 mm in the bone clamp by manually screwing the clamping screw, the bone shall be held rigidly by the instrument, the detachable jaw shall not become loose and the instrument shall not be damaged.

7.2 Corrosion Resistance Test

The forceps shall satisfy the requirements when tested in accordance with IS 7531.

8 MARKING

8.1 The clamp shall be legibly and indelibly marked with the identification of the source of manufacture; designation of the instrument and letters 'SS' to indicate that the instruments are made of stainless steel.

8.2 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 there under, and the product(s) may be marked with the Standard Mark.

9 PACKING

The packing shall be as agreed to between the purchaser and the supplier. However, it is recommended that each clamp should be wrapped in wax paper or kept in a polyethylene bag and then packed in a carton.