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भारतीय मानक मसौदा  
कंटशर नेल के लिए एक्सट्रैक्टर — विशिष्टि  
भाग 2 स्ट्राइकर प्रकार  
(IS 7105-2 का पहला पुनरीक्षण)

***Draft Indian Standard***  
**Extractor for Kuntscher Nail — Specification**  
**Part 2 Striker Type**  
(*First Revision of IS 7105-2*)

ICS 11.040.30

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Orthopaedic Instruments, Implants and Accessories Sectional Committee, MHD 02 Last date for comments: **27 November 2024**

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FOREWORD

(*Formal clauses will be added later*)

This standard was first published in 1986. The first revision of this standard has been brought out to align the cross references to latest 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*)'.

## 1 SCOPE

This standard specifies dimensional and other requirements for striker type extractor for Kuntscher nail used 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.

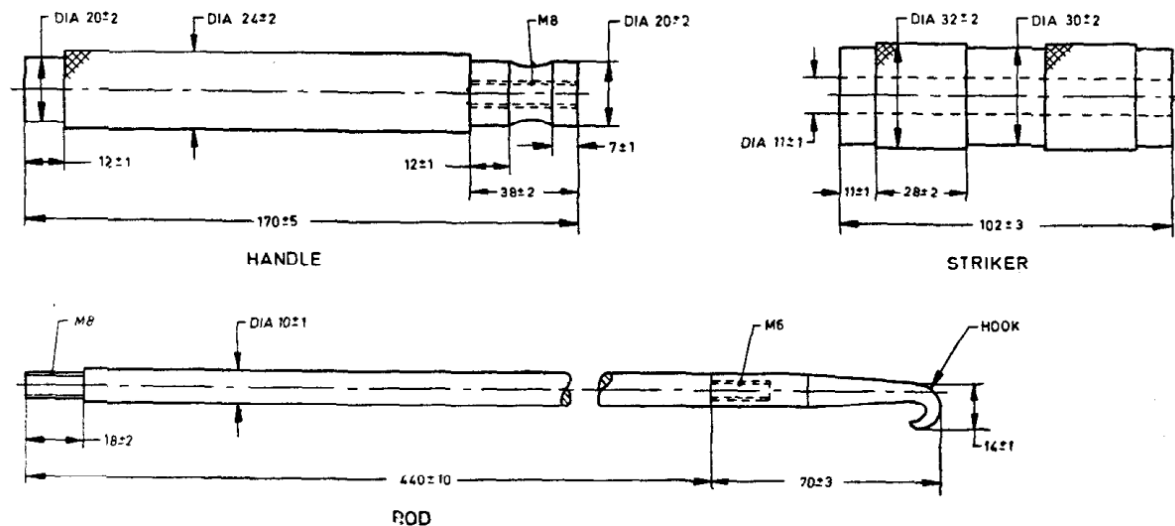
<i>IS No.</i>	<i>Title</i>
IS 1070: 2023	Reagent Grade Water — Specification ( <i>fourth revision</i> )
IS 6603: 2024	Stainless Steel Semi-Finished Products, Bars, Wire Rods and Bright Bars — Specification ( <i>second revision</i> )

## 3 MATERIAL

Shall be according to designation 30Cr13 of IS 6603.

## 4 SHAPE AND DIMENSIONS

As shown in Fig. 1



All dimensions in millimeters.

FIG. 1 EXTRACTOR FOR KUNTSCHER NAIL, STRIKER TYPE

## 5 HEAT TREATMENT

Shall be hardened and tempered to 400 to 450 NV.

## 6 WORKMANSHIP AND FINISH

**6.1** The parts of the extractor shall be formed in one piece.

**6.2** The hook end shall be rounded as shown in Fig. 1.

## **7 SURFACE CONDITION**

### **7.1 General**

**7.1.1** All surfaces shall be free from pores, crevices and grinding marks. The instruments shall be supplied free from residual scale acid, grease and grinding and polishing materials.

**7.1.2** Compliance with these requirements shall be checked by inspection using normal vision (corrected, if necessary).

### **7.2 Surface Finish**

The surface finish shall be one of, or a combination of the following:

- A. mirror polished;
- B. reflection-reducing, for example, satin finish, matt black finish; and
- C. an applied surface coating, for example, for insulation purposes.

**NOTE** — The satin finish should be effected by an appropriate procedure such as grinding, brushing, electropolishing and, in addition, satin finishing (glass beading or satin brushing). The finish should be uniform and smooth and it should reduce glare.

Instruments of mirror finish should be adequately ground to remove all surface imperfections and polished to remove grinding marks, resulting in a mirror finish. The mirror finish should be effected by an appropriate procedure, such as polishing, brushing, electropolishing and mirror buffing.

### **7.3 Passivation and Final Treatment**

The instruments shall, unless the metallurgical characteristics of the instruments (for example, the presence of brazed or soldered joints) renders it inappropriate, be treated by a suitable passivation process.

**NOTE** — Examples of methods of passivation are by electropolishing or by treating with 10 percent (v/v) nitric acid solution for not less than 30 min at a temperature of not less than 10°C and not exceeding 60°C. The instruments should then be rinsed in water and dried in hot air.

## **8 TESTS**

### **8.1 Corrosion Resistance Test**

Scrub the instrument with soap and warm water, rinse in hot water and then dip in 95 percent ethyl alcohol. Dry the instrument, immerse in copper sulphate solution at room temperature for 6 minutes and wash with fresh water or wet cotton wool.

The copper sulphate solution shall be made up as follows:

Copper sulphate (CuSO <sub>4</sub> .5H <sub>2</sub> O)	4.0 g
Sulphuric acid (H <sub>2</sub> SO <sub>4</sub> ) (Sp gr 1.84)	10.0 g

Distilled water (*see* IS 1070). 90.0 ml

There shall be no red stains or spots on the instrument, but dulling of the polished surface may be permitted.

## **8.2 Performance Test**

The handle end shall be gripped in a suitable vice and the hook end shall be pulled by applying a load of 50 kg. The extractor shall not be damaged after completion of the test.

## **9 MARKING**

Shall be marked with the manufacturer's name or recognized trade-mark.

### **9.1 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 product(s) may be marked with the Standard Mark.

## **10 PACKING**

As agreed to between the purchaser and the supplier.