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स्टीले पैटर्न ओर्थोपेडीक छेनी — विशिष्टि  
( पहला पुनरीक्षण )

Stille Pattern Orthopaedic Chisels —  
Specification  
( First Revision )

ICS 11.040.10

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## FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Orthopaedic Instruments, Implants and Accessories Sectional Committee had been approved by the Medical Equipment and Hospital Planning Division Council.

This standard was first published in 1970. This 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.

The composition of the Committee responsible for formulation of this standard is given in [Annex A](#).

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.

*Indian Standard*

# STILLE PATTERN ORTHOPAEDIC CHISELS — SPECIFICATION

( *First Revision* )

## 1 SCOPE

This standard covers the requirement for Stille pattern chisels, 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 edition of these standards.

<i>IS No.</i>	<i>Title</i>
IS 1570 (Part 5) : 1985	Schedules for wrought steels: Part 5 Stainless and heat-resisting steels ( <i>second revision</i> )
IS 6603 : 2024	Stainless steel semi-finished products, bars, wire rods and bright bars — Specification ( <i>second revision</i> )
IS 7531 : 1990	Surgical Instruments — Corrosion resistance of stainless-steel surgical instruments — Methods of tests ( <i>first revision</i> )

## 3 MATERIAL

The material shall be stainless steel conforming to Designation X30Cr13 of IS 1570 (Part 5) or stainless steel of the following composition:

<i>Sl No.</i>	<i>Constituent</i>	<i>Percent</i>
(1)	(2)	(3)
i)	Carbon	0.35 to 0.45
ii)	Silicon	0.60 <i>Max</i>
iii)	Manganese	0.60 <i>Max</i>
iv)	Chromium	12 to 14
v)	Nickel	0.60 <i>Max</i>
vi)	Sulphur	0.03 <i>Max</i>
vii)	Phosphorus	0.03 <i>Max</i>

## 4 SHAPE AND DIMENSIONS

The shape and dimensions shall be as shown in [Fig. 1](#).

## 5 REQUIREMENTS

### 5.1 Workmanship

All the surfaces of chisel shall be free from pits, burrs, cracks and other surface defects. The cutting edge of the instrument shall be square to the central line, properly sharpened and be free from burrs, feathers, nicks, and waviness. All the other edges shall be rounded.

### 5.2 Finish

The instrument shall be suitably passivated and finished smooth and bright.

### 5.3 Heat Treatment

Evenly hardened and tempered to 500 HV to 550 HV as per IS 6603 for given designation of steel.

### 5.4 Performance

The chisel shall be held in one hand firmly with the cutting edge making an angle of 45° on to a piece of long hard and dry sheep bone. The bone shall be chipped off in small segments by chiselling using a 1 kg hammer. After 20 strokes the head shall not become mushroom shaped. The cutting edge shall not show any sign of damage or loss of cutting efficiency and the shank shall not show any deformation.

### 5.5 Corrosion Resistance Test

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

## 6 MARKING

**6.1** The product 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.

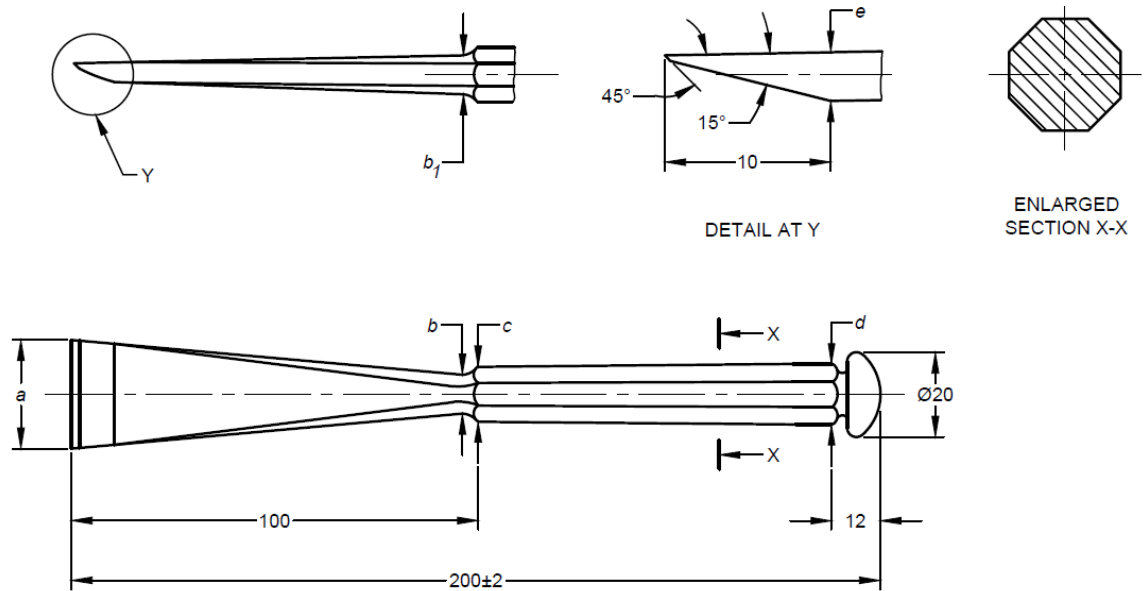
**6.2 BIS Certification Marking**

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 thereunder, and the

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

**7 PACKING**

The packing shall be as agreed to between the purchaser and the supplier



$a^*$	$b^*$	$b_1^*$	$c^*$	$d^*$	$e^*$
(1)	(2)	(3)	(4)	(5)	(6)
6	5.0	5.0	8	10	1.3
12	6.0	6.0	10	12	2.5
18	7.0	6.0	11	13	3.0
24	8.0	7.0	12	14	3.5
30	9.0	8.0	12	14	4.0

All dimensions in millimetres.  
FIG.1 CHISEL, STILLE PATTERN

## ANNEX A

*(Foreword)*

## COMMITTEE COMPOSITION

Orthopaedic Instruments, Implants and Accessories Sectional Committee, MHD 02

<i>Organization</i>	<i>Representative(s)</i>
In Personal Capacity ( <i>D 255 Swarn Nagri, Sector 31, opposite Kamla gate of Jaypee Green, Greater Noida- 201315</i> )	DR SUDHIR KUMAR ( <i>Chairperson</i> )
Artificial Limbs Manufacturing Corporation of India, Kanpur	SHRI A. K. SINGH SHRI VISHAL SHUKLA ( <i>Alternate</i> )
Association of Indian Medical Device Industry, New Delhi	SHRI ANUJ DUREJA SHRI ANKUR BHARGAVA ( <i>Alternate I</i> ) SHRI DEEPAK GUPTA ( <i>Alternate II</i> )
CSIR - Central Glass And Ceramic Research Institute, Kolkata	DR BISWANATH KUNDU DR VAMSI K BALLA ( <i>Alternate</i> )
CSIR - National Chemical Laboratory, Pune	DR MAHESH J KULKARNI DR BHUSHAN P. CHAUDHARI ( <i>Alternate</i> )
Central Drugs Standard Control Organization, New Delhi	DR ASEEM SAHU SHRI AJAI BASIL ( <i>Alternate</i> )
Consumer Coordination Council, New Delhi	DR P. RAMARAO MS NEETU CHAUHAN ( <i>Alternate</i> )
Healthium Medtech Limited, Noida	SHRI RAAJJHESH R KULKARNI SHRI PANKAJ DAWAR ( <i>Alternate</i> )
Indian Institute of Technology Kanpur, Kanpur	DR KANTESH BALANI
Johnson And Johnson Private Limited, Mumbai	SHRI HEMANT SONAWANE MS HIMANI GUPTA ( <i>Alternate</i> )
Kalam Institute of Health Technology, Vishakhapatnam	SHRI SREERAJ PALLATH RAJAN SHRI SANTOSH KUMAR BALIVADA ( <i>Alternate</i> )
Pandit Bhagwat Dayal Sharma Post Graduate Institute of Medical Sciences, Rohtak	DR ROOP SINGH
Sree Chitra Tirunal Institute for Medical Sciences & Technology, Thiruvananthapuram	DR MANOJ KOMATH
Stryker India Private Limited, Gurugram	SHRI DEEPAK SHARMA SHRI GAJENDER SHARMA ( <i>Alternate</i> )
Sunways Inor Medical Devices Private Limited, Gundlav	SHRI SORAB R. PATEL SHRI AATISH ANUPAM SHROFF ( <i>Alternate</i> )
BIS Directorate General	SHRI A. R. UNNIKRISHNAN SCIENTIST 'G' AND HEAD (MEDICAL EQUIPMENT AND HOSPITAL PLANNING) [REPRESENTING DIRECTOR GENERAL ( <i>Ex-officio</i> )]

*Member Secretary*

SHRI VINIT VIDYADHAR BANSOD  
SCIENTIST 'C'/DEPUTY DIRECTOR  
(MEDICAL EQUIPMENT AND HOSPITAL PLANNING), BIS





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### Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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