**IS 4994 : 2024**

***भारतीय मानक***

***Indian Standard***

**ईएनटी शल्य चिकित्सा उपकरण –– सीधे संदंश –– वॉल्शम** **पैटर्न –– विशिष्टि**

*(*पहला पुनरीक्षण)

**ENT Surgery Instruments — Redressing Forceps — Walsham's pattern –– Specification**

)*First Revision)*

ICS 11.040.30

© BIS 2024

भारतीय मानक ब्यूरो

BUREAU OF INDIAN STANDARDS

मानक भवन, 9 बहादुर शाह ज़फर मार्ग, नई दिल्ली - 110002

MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG

NEW DELHI - 110002

[www.bis.gov.in](http://www.bis.org.in) [www.standardsbis.in](http://www.standardsbis.in)

**XXXXXX Price Group X**

Ear, Nose, Throat and Head & Neck Surgery (ENT - H&N) Instruments Sectional Committee,

MHD 04.

FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards after the draft finalized by the Ear, Nose, Throat and Head & Neck Surgery (ENT - H&N) Instruments Sectional Committee had been approved by the Medical Equipment and Hospital Planning Division Council.

This standard was originally published in 1969. The First revision of this standard has been brought out to align it with 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.

Indian Standard

ENT SURGERY INSTRUMENTS — REDRESSING FORCEPS — WALSHAM'S PATTERN –– SPECIFICATION

### SCOPE

This standard covers the requirements of Walsham's redressing forceps right, left and straightening.

### 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 7531: 1990 | Surgical instruments – Corrosion resistance of stainless-steel surgical instruments – Methods of tests (first revision) |
| IS 3642 (Part 1) :1990 | Surgical instruments – Specification: Part 1 Non – cutting, articulated instruments (second revision) |
| IS 1570 (Part 5): 1985 | Schedules for wrought steels: Part 5 stainless and heat – Resisting steels (second revision) |
| IS/ISO 7153-1 : 2016 | Surgical instruments – Materials: Part 1 metals |
| IS 1501 (Part 1) : 2020 ISO 6507-1 : 2018 | Metallic Materials — Vickers Hardness Test Part 1 Test Method |

### SHAPE AND DIMENSIONS

* 1. The shape and dimensions of right and left Walsham's redressing forceps shall be as given in **Fig. 1.**
  2. The shape and dimensions of straightening Walsham's redressing forceps shall be as given in **Fig. 2.**
  3. **Joint**

The joint of the forceps shall be a recessed screw joint as given in **Fig. 1** and **2** or a box joint. The other requirements of the joint shall be the same as prescribed in 6 of Section 2 of IS 3642(Part 1

7.5



14

11

1.5 3



R7

3.5

SECTION X-X SCREW JOINT, RECESSED

R15

7

3

SECTION Y-Y



5 5



Y

Y

15

50

87

6

230±5

9

SECTION C-C

C

C

15

90

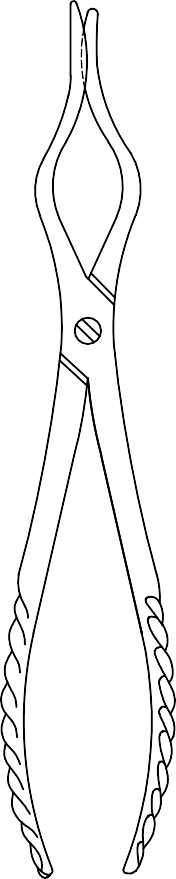
4.5

SECTION D-D

D

D 30

R6.5



R25

R20

21

R25

X

X

38 MAX.

20

RIGHT

6.5



**All dimensions in millimeters.**

**FIG. 1 Walsham's Redressing Forceps Left and Right**

10

7

SECTION X-X SCREW JOINT, RECESSED

SECTION Y-Y



R50

2.5

2.5

12

2



6

Y

Y

45

70

3

190±5

C

C

80

D

D

30

R6

15

15

3 3

R30

X

M2.5 SCREW

X

9

6

SECTION C-C

10



5

26 MAX.

SECTION D-D

20

**All dimensions in millimeters.**

**FIG. 2 Walsham's Redressing Forceps, Straightening**

### MATERIAL

The material used to manufacture forceps shall be stainless steel as specified in IS/ISO 7153-1.

### WORKMANSHIP AND FINISH

* 1. The instrument shall be free from cracks, seams, burrs, flaws and other defects. The surface shall be finished smooth and bright.
  2. The forceps shall be of a symmetrical and balanced construction and both arms shall match.

### HEAT TREATMENT AND HARDNESS

**6.1 General**

The forceps shall be heat treated using hardening and tempering procedures to produce specified hardness

**6.2 Hardness**

The Vickers hardness of the finished instrument shall be within the range of 360 to 400 HV, when tested in accordance with IS 1501 (Part 1).

### TESTS

* 1. **Corrosion Resistance Test**

The instrument shall satisfy the boiling and autoclaving test as specified in IS 7531.

### MARKING

**8.1** Each forcep shall be clearly and indelibly marked with the manufacturer's name, initials or trademark. The word 'SS' shall also be marked on the handle. The forceps shall be marked with the letters 'R', 'L' and 'S' to indicate right, left and straightening forceps.

### 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.

### PACKING

The forceps shall be packed as agreed to between the purchaser and the supplier or wrapped in a moisture-proof polyethylene bag and then packed in a suitable cardboard box or plastic case. On the package of the product batch Number, Lot Number, and Serial Number shall be mentioned.

**ANNEX A**

(*Foreword*)

**COMMITTEE COMPOSITION**

Ear, Nose, Throat and Head & Neck Surgery (ENT - H&N) Instruments Sectional

Committee, MHD 04

| ***Organization*** | ***Representative(S)*** |
| --- | --- |
| All India Institute of Medical Sciences, New Delhi | Dr. Rakesh Kumar *(Chairperson)* |
| ALPS International, New Delhi | Shri.Alok Narang, |
| Shri. Karan Narang (*Alternate*) |
| All India Institute of Medical Sciences, New Delhi | Dr. Prem Sagar |
| Dr. Arvind Kumar (*Alternate*) |
| All India Institute of Medical Sciences, Bhopal | Dr. VIKAS GUPTA |
| Dr. Ganakalyan Behera (*Alternate*) |
| Association of Indian Medical Device Industry, New Delhi | Shri. Tarlochan Dev |
| Shri. Ankur Bhargava (*Alternate* I*)* |
| Dr. C.S. Prasad (*Alternate* II) |
| Directorate General of Health Services, New Delhi Central | Ms. Dr. Pallika Kumar |
| Government Medical College & Hospital, Chandigarh | Dr. Surinder K Singhal |
| Shri. Nitin Gupta (*Alternate*) |
| Happy Reliable Surgeries Private Limited, Bangalore | Shri. Hemant Savale |
| Shri. Sanjeev Gautam (*Alternate*) |
| India Medtronic Private Limited, Gurugram | Smt. LATIKA VATS |
| Shri. Saurabh Sable (*Alternate* I*)* |
| Shri. Sandeep Verma (*Alternate* II) |
| Indian Institute of Technology Kanpur, Kanpur | Dr. A. R. Harish |
| Kalam Institute of Health Technology, Vishakhapatnam | Dr. Arjun Thimmaiah |
| Shri. Amit Sharma (*Alternate*) |
| Karl Storz Endoscopy India Private Limited, New Delhi | Shri. Sandeep Sethi |
| Shri. Kapil Rana (*Alternate*) |
| Serwell MediEquip, Chennai | Shri. T. Jebin Samuel |
| Shri. R. Radhakrishnan (*Alternate* I*)* |
| Shri. G. Sathish (*Alternate* II) |
| Tata Memorial Center (Hospital), Mumbai | Dr. RICHA VAISH |
| Shri. Vijay Yashwant Mestri (*Alternate* I*)* |
| Dr. Arjun Singh (*Alternate* II) |
| Postgraduate Institute of Medical Education and Research, Chandigarh | Smt. Dr Jaimanti Bakshi |
| IN PERSONAL CAPACITY , D-2 ,Tower 7, Type 5, East Kidwai Nagar, New Delhi-110023 | Dr. Kapil Sikka |
| BIS Directorate General | Shri A. R. Unnikrishnan Scientist ‘G’ And Head (Medical Equipment And Hospital Planning) [Representing Director General (Ex-Officio)] |

*Member Secretary*

Mr. Karthik Reddy Katipally

Scientist ‘B’/Assistant Director

(Medical Equipment And Hospital Planning). Bis