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International Standard



5837/2

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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

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## Implants for surgery — Intramedullary nailing systems — Part 2 : Medullary pins

*Implants chirurgicaux — Systèmes d'enclouage intramédullaire — Partie 2 : Broches médullaires*

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**ITeH STANDARD PREVIEW**  
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[ISO 5837-2:1980](https://standards.iteh.ai/catalog/standards/sist/9b0e54a0-ef6b-4872-8c33-f3e9782eb9dc/iso-5837-2-1980)

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Descriptors : surgical implants, pins, dimensions, specifications.

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing international Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 5837/2 was developed by Technical Committee ISO/TC 150, *Implants for surgery*, and was circulated to the member bodies in August 1979.

It has been approved by the member bodies of the following countries :

Australia	Germany, F. R.	Poland
Belgium	India	Romania
Canada	Italy	Spain
Denmark	Libyan Arab Jamahiriya	USA
France	New Zealand	USSR

No member body expressed disapproval of the document.

# Implants for surgery — Intramedullary nailing systems — Part 2 : Medullary pins

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### 1 Scope and field of application

This International Standard specifies the main dimensions and requirements for medullary pins for use in bone surgery.

nickel alloy (cold worked) in accordance with ISO 5832/1 and ISO 5832/5 respectively.

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Upon request, the supplier of the pins shall produce evidence that the pins have been manufactured from material complying with either Part 1 or Part 5 of ISO 5832.

### 2 References

ISO 3651/2, *Austenitic stainless steels — Determination of resistance to intergranular corrosion — Part 2 : Corrosion test in a sulphuric acid/copper sulphate medium in the presence of copper turnings (Monypenny Strauss test)*.

ISO 5832/1, *Implants for surgery — Metallic materials — Part 1 : Wrought stainless steel*.

ISO 5832/5, *Implants for surgery — Metallic materials — Part 5 : Wrought cobalt-chromium-tungsten-nickel alloy*.

### 3 Material

Medullary pins shall be made either of stainless steel of composition A or B, or from wrought cobalt-chromium-tungsten-

### 4 Method of manufacture

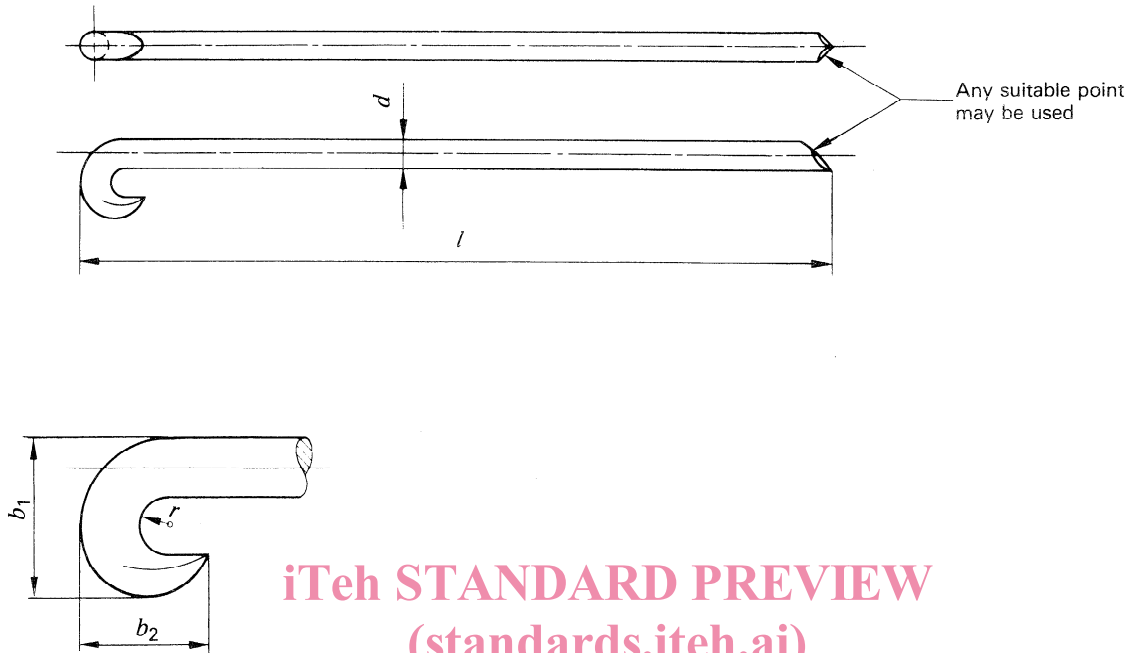
The pins shall be manufactured by a cold-drawing or a cold-working process. Welds are not permissible. If local heating is needed for re-shaping the points of nails made of stainless steel, this can only be permitted provided that the whole of the final product can be shown to satisfy the intergranular corrosion test according to ISO 3651/2.

### 5 Finish

The external surface finish shall be free from burs, scratches and other defects visible to the naked eye. Particular care shall be taken with regard to the quality of finish of the surface of the curved *r* portion of the pin.

6 Dimensions

The dimensions of the pins, as shown in the figure, shall conform to those specified in the table.



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Figure — Medullary pins — Critical dimensions  
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Table — Dimensions of medullary pins

Dimensions in millimetres

Range for diameter <sup>1)</sup>	<i>d</i>	2,25 to 2,75	2,75 to 3,25	3,75 to 4,25	4,75 to 5,25	6,15 to 6,55
Preferred diameters <sup>2)</sup>	<i>d</i>	2,5	3	4	5	6,3
<i>b</i> <sub>1</sub>	min.	3 × <i>d</i>				
<i>b</i> <sub>2</sub>	± 0,5	5	6,5	8	10	13
<i>r</i>	min.	0,5 × <i>d</i>				
Range		25 to 100	100 to 250	150 to 300	200 to 360	280 to 420
<i>l</i> ± 0,1	increment	5	10	10	10	10

1) Diameter *d* is the largest cross-sectional measurement;

tolerance on diameter or cross-section :  $\begin{matrix} 0 \\ -0,1 \end{matrix}$

2) According to ISO 3, Preferred numbers — Series of preferred numbers.