

International Standard



7153/1

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Instruments for surgery — Metallic materials — Part 1 : Stainless steel

Instruments chirurgicaux — Matériaux métalliques — Partie 1 : Acier inoxydable

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (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 authorized 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 7153/1 was developed by Technical Committee ISO/TC 170, *Surgical instruments*, and was circulated to the member bodies in April 1982.

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

Australia	Germany, F.R.	Romania
China	India	South Africa, Rep. of
Czechoslovakia	Korea, Rep. of	Turkey
Denmark	Mexico	United Kingdom
Egypt, Arab Rep. of	New Zealand	USSR
France	Poland	

The member body of the following country expressed disapproval of the document on technical grounds :

Austria

Instruments for surgery — Metallic materials — Part 1 : Stainless steel

1 Scope and field of application

This part of ISO 7153 contains a survey and a selection of stainless steels available for use in the manufacture of surgical instruments, excluding specific instruments for orthopaedic surgery.

NOTE — In selecting grades of steel, shape and dimensions and the delivery condition of the raw products for the manufacture of surgical instruments, it is necessary to take into account aspects, for example the design of the instruments or the production facilities of the manufacturer, which do not conform to the requirements of this part of ISO 7153. For this reason, it is not intended, nor is it possible, that the information given in this part of ISO 7153 should remove the decision-making responsibility from the instrument manufacturer for selecting an appropriate raw product with suitable properties, nor is it intended

to preclude the use of other types of steel in the manufacture of instruments, such as the use of carbon steel for cutting instruments. International Standards for surgical instruments, when published, should be observed when making this decision as they may contain additional or new information to be taken into account when selecting adequate steel grades.

Subsequent parts of ISO 7153 will deal with other metallic materials.

2 References

ISO 683/13, *Heat-treated steels, alloy steels and free-cutting steels — Part 13 : Wrought stainless steels.*

ISO 4957, *Tool steels.*

3 Survey

Table 1 — Steel grades

Reference letter of steel grade (see table 2)	cutting instruments	Preferably used for	
	Examples	non-cutting instruments	fitting parts and other assemblies
Examples			
A		tissue forceps, dressing forceps, retractors, probes	rivets, handles, solid guide pins, screws, nuts
B	bone rongeurs, bone cutting forceps, conchotomes, chisels and gouges, bone curettes, scissors with carbide inserts	forceps, forceps with bow handles, branch forceps, retractors, probes	springs, handles, solid screws, nuts, rivets
C	bone rongeurs, scissors		
D	scissors, bone rongeurs, bone cutting forceps, conchotomes, scalpels, knives, chisels and gouges, bone curettes		
E	scalpels		
F	scalpels		
G	scalpels, chisels and gouges, shears		
H	scissors, bone rongeurs, conchotomes, chisels and gouges, bone curettes		
I	scissors, bone rongeurs, bone cutting forceps, conchotomes, scalpels, knives, chisels and gouges, bone curettes		
K	chisels and gouges, bone curettes		
L			handles, solid guide pins, screws, nuts
M		retractors	hollow handles, guide pins, rivets, screws
N	chisels and gouges, bone curettes	probes	handles, solid guide pins, screws, nuts, rivets
O			springs, screws, rivets
P			screws, rivets