INTERNATIONAL STANDARD 723

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

Rock drilling — Forged collared shanks and chuck bushings for hollow hexagonal drill-steels

Forage des roches — Emmanchements à collerette forgée et douilles porte-outils pour profilé hexagonal creux en acier

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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.

Prior to 1972, the results of the work of the Technical Committees were published as ISO Recommendations; these documents are now in the process of being transformed into International Standards. As part of this process, Technical Committee ISO/TC 82 has reviewed ISO Recommendation R 723 and found it suitable for transformation. International Standard ISO 723 therefore replaces ISO Recommendation R 723-1968.

ISO Recommendation R 723 was approved by the Member Bodies of the following countries :

Australia	Hungary	South Africa, Rep. of
Belgium	India	Spain
Brazil	Japan	Sweden
Chile	Korea, Rep. of	Turkey
Czechoslovakia	Netherlands	United Kingdom
Egypt, Arab Rep. of	New Zealand	Yugoslavia
France	Poland	
Germany	Portugal	

The Member Body of the following country expressed disapproval of the Recommendation on technical grounds :

U.S.S.R.

The Member Body of the following country disapproved the transformation of ISO/R 723 into an International Standard :

Canada

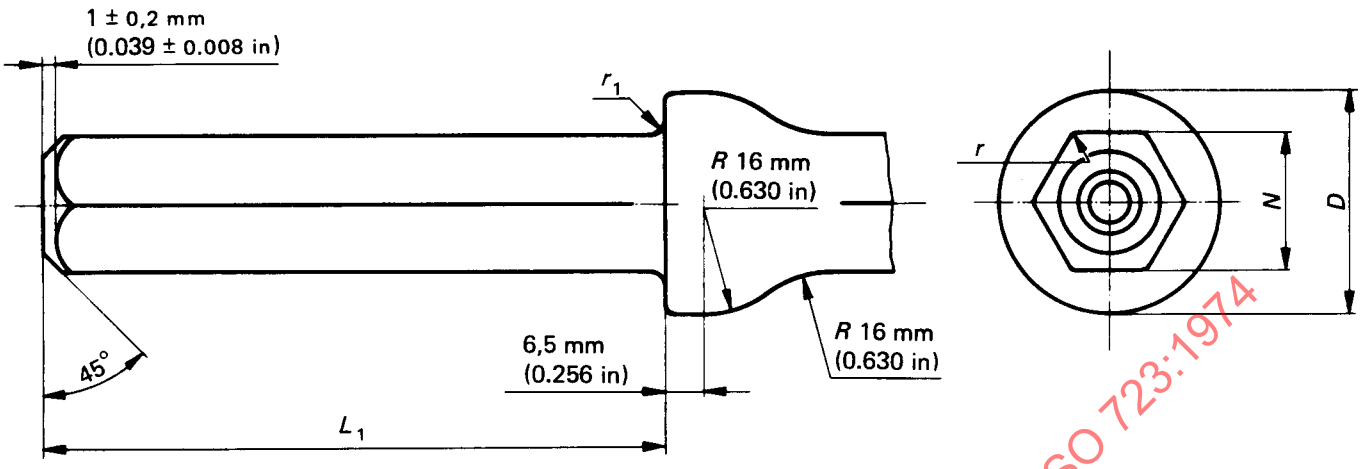
Printed in Switzerland

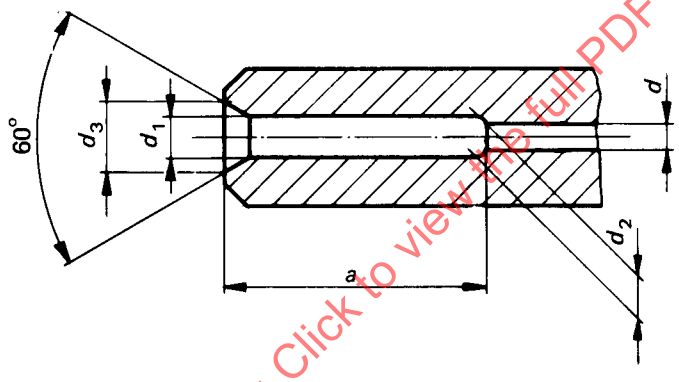
Rock drilling — Forged collared shanks and chuck bushings for hollow hexagonal drill-steels

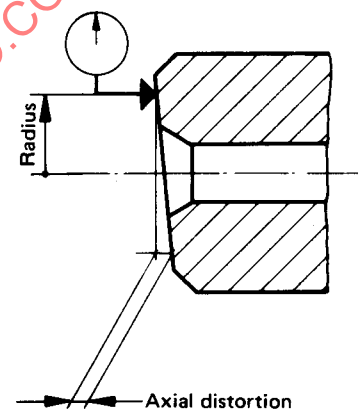
1 SCOPE AND FIELD OF APPLICATION

This International Standard fixes the dimensions of forged collared shanks and chuck bushings for hollow hexagonal drill-steels used for rock drilling.

2 FORGED COLLARED SHANKS FOR HOLLOW HEXAGONAL DRILL-STEELS







Eccentricity :

Distance between the centre of the hexagon and the centre of the enlarged hole : maximum 0,75 mm (0.030 in).

Axial distortion of end surface :

For 19 mm (3/4 in) shank : maximum 0,15 mm (0.006 in), measured at a radius of 7 mm (0.276 in);

For 22 mm (1/8 in) and 25 mm (1 in) shanks : maximum 0,2 mm (0.008 in), measured at a radius of 9 mm (0.354 in).

Dimensions in millimetres

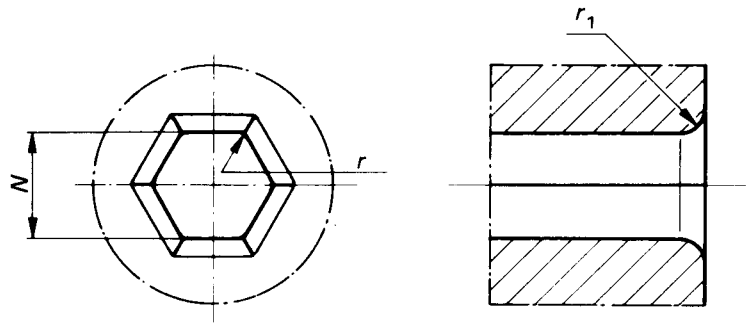
Shank	L_1	N		D	d	d_1	d_2	d_3	a	r	r_1
		Basic size	Tolerance						min.		max.
19	108 ± 1	19,2	$^{0}_{-0,4}$	33 ± 1	6 ± 0,5	8 ± 0,3	$8\ ^{+0,3}_{-0,6}$	9,4 ± 0,4	50	$1,5\ ^{+1}_{0}$	4,5
22	108 ± 1	22,4		35 ± 1	6,7 ± 0,6	9 ± 0,3	$9\ ^{+0,3}_{-0,6}$	10,4 ± 0,4	50	$2\ ^{+1}_{0}$	
25	108 ± 1	25,6	$^{0}_{-0,6}$	38 ± 1	7,6 ± 0,75	9,5 ± 0,3	$9,5\ ^{+0,3}_{-0,6}$	10,9 ± 0,4	50	$2\ ^{+1}_{0}$	
	159 ± 1	25,6		38 ± 1	7,6 ± 0,75	9,5 ± 0,3	$9,5\ ^{+0,3}_{-0,6}$	10,9 ± 0,4	70	$2\ ^{+1}_{0}$	

Dimensions in inches

Shank	L_1	N		D	d	d_1	d_2	d_3	a	r	r_1
		Basic size	Tolerance						min.		max.
3/4	4 1/4 ± 0.039	0.756	$^{0}_{-0.016}$	1.299 ± 0.039	0.236 ± 0.020	0.315 ± 0.012	$0.315\ ^{+0.012}_{-0.024}$	0.370 ± 0.016	1.969	$0.059\ ^{+0.039}_{0}$	0.177
7/8	4 1/4 ± 0.039	0.882		1.378 ± 0.039	0.264 ± 0.024	0.354 ± 0.012	$0.354\ ^{+0.012}_{-0.024}$	0.409 ± 0.016	1.969	$0.079\ ^{+0.039}_{0}$	
1	4 1/4 ± 0.039	1.008	$^{0}_{-0.024}$	1.496 ± 0.039	0.299 ± 0.030	0.374 ± 0.012	$0.374\ ^{+0.012}_{-0.024}$	0.429 ± 0.016	1.969	$0.079\ ^{+0.039}_{0}$	
	6 1/4 ± 0.039	1.008		1.496 ± 0.039	0.299 ± 0.030	0.374 ± 0.012	$0.374\ ^{+0.012}_{-0.024}$	0.429 ± 0.016	2.756	$0.079\ ^{+0.039}_{0}$	

The basic sizes and tolerances of N as well as other relevant dimensions are also valid for 22 mm (7/8 in) and 25 mm (1 in) plain shanks.

3 CHUCK BUSHINGS FOR HOLLOW HEXAGONAL DRILL-STEELS-CONNECTING DIMENSIONS



Dimensions in millimetres

Chuck bushing	Length of forged collared shank	N		r	r_1
		Basic size	Tolerance	max.	
19	108	19,2	+ 0,25 + 0,05	1,2	$4,5\ ^{+1}_{0}$
22	108	22,4			
25	108	25,6			
	159	25,6	+ 0,35 + 0,05		

Dimensions in inches

Chuck bushing	Length of forged collared shank	N		r	r_1
		Basic size	Tolerance	max.	
3/4	4 1/4	0,756	+ 0.010 + 0.002	0.047	$0.177\ ^{+0.039}_{0}$
7/8	4 1/4	0.882			
1	4 1/4	1.008			
	6 1/4	1.008	+ 0.014 + 0.002		

These tables are valid for forged collared shanks in the sizes of 19 mm (3/4 in), 22 mm (7/8 in), and 25 mm (1 in) and for plain shanks in the sizes of 22 mm (7/8 in) and 25 mm (1 in).