भारतीय मानक IS 5841 : 2023

Indian Standard

ढलाई में उपयोग के लिए फ्लूटेड कोर क्लीनर्स — विशिष्टि

(पहला पुनरीक्षण)

Fluted Core Cleaners for Use in Foundries — Specification

(First Revision)

ICS 77.180

भारतीय मानक ब्यूरो
BUREAU OF INDIAN STANDARDS
मानक भवन, 9 बहादुर शाह ज़फर मार्ग, नई दिल्ली - 110002
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September 2023 **Price Group 4**

Foundry Steel Casting Sectional Committee, MTD 14

FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Foundry and Steel Castings Sectional Committee had been approved by the Metallurgical Engineering Division Council.

This standard was first published in 1970. This revision has been brought out to bring the standard in the latest style and format of the Indian Standards.

In addition, the following changes have been made:

a) Reference clause has been included;
b) In **4.1**, fluting material is substituted with C80U of IS 3748 for 80T3 of IS 3748;
c) In **4.2**, Handle material is substituted with E 350 of IS 2062 for St 32-O of IS 1977;
d) In **6**, hardness testing standard IS 1586/ISO 6508-1 is included;
e) In **7**, tolerance class 6H and 6G of IS 14962 (Part 3) : 2022/ISO 965-3 is referred; and
f) Marking clause has been modified.

The composition of the Committee responsible for the formulation of this standard is given in Annex B.

For the purpose of deciding whether 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 the same as that of the specified value in this standard.

Indian Standard

FLUTED CORE CLEANERSFOR USE IN FOUNDRIES — SPECIFICATION

(First Revision)

1 SCOPE

This standard specifies the requirements for fluted core cleaners for use in foundries.

2 REFERENCES

The standards listed in Annex A contain provisions, which through references 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.

3 DIMENTIONS

3.1 The dimensions of fluted core cleaners are specified in the Fig. 1.

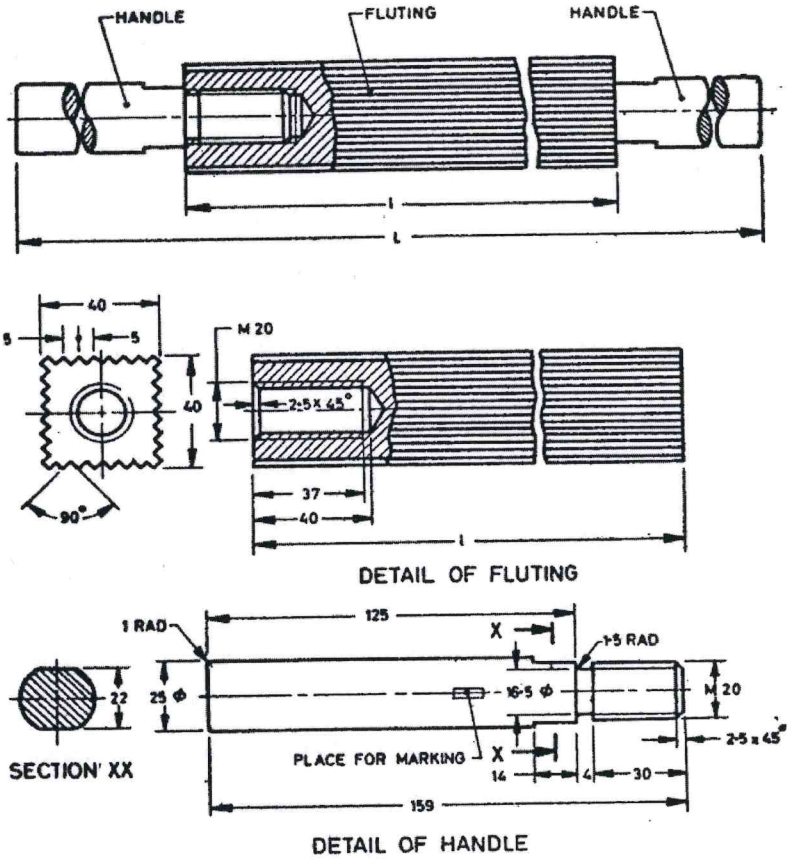

FIG. 1 DETAIL OF FLUTING AND HANDLE

Sl No.	*Total Length, L* (mm)	*Fluting Length, I* (mm)
(1)	(2)	(3)
i)	650	400
ii)	750	500
iii)	880	630

3.2 Designation

Fluted roller with overall length of 650 mm and fluting length of 400 mm shall be designated as: Fluted roller — 650 (IS 5841).

4 MATERIAL

4.1 *Fluting*

The material shall be in accordance with tool steel C80U of IS 3748.

4.2 *Handle*

Handle shall be made of material with grade designation E 350 of IS 2062.

5 COATING ON HANDLE

Handle shall be electroplated in accordance with IS 1337.

6 HARDNESS OF FLUTING

The hardness of fluting, when tested in accordance to IS 1586/ISO 6508-1 shall be HRC 50 to HRC 55.

7 TOLERANCES

Italics

7.1 Threads

ing — Tolerance class 6H, IS 14962 (Part 3)/ISO 965-3

Handle — Tolerance class 6G, IS 14962 (Part 3)/ISO 965-3

Italics

2 Tolerance on flatness of fluting along the length and flatness of roller along the width shall be ± 0.05 mm.

7.3 Other Tolerances

Standard tolerance grade as **IT14** of IS 919 (Part 1)/ISO 2861 and IS 919 (Part 2)/ISO 2862.

IT14 → OK

8 GENERAL

Surfaces of fluting shall be free from cracks, burrs, sharp edges, scales, etc after heat treatment.

9 SUPPLY

General requirements relating to supply of the materials to this specification shall be as laid down in IS 1387.

10 PACKING

The unprotected surfaces shall be coated with a thin film of protective oil. The fluting shall be wrapped in moisture proof paper. The tools shall be packed in wooden boxes weighing not more than 50 kg overall.

11 MARKING

11.1 The material shall be marked with the following:

a) Trade-mark or name of the manufacturer;
b) Grade designation;
c) Quantity; and
d) Date of manufacture.

11.2 BIS Certification Marking

The products(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provision of the *Bureau of Indian Standards Act*, 2016 and the Rules and Regulations framed thereunder, and the product may be marked with the Standard Mark.

ANNEX A

(*Clause* 2)

LIST OF REFFERED STANDARD

IS No.	*Title*
IS 919	Geometrical product specifications (GPS) — ISO code system for tolerances on linear sizes:
(Part 1) : 2014/ ISO 286-1 : 2010	Basis of tolerance, deviation and fits (*third revision*)
(Part 2) : 2010/ ISO 286-2 : 2010	Tables of standard tolerance classes and limit deviation for holes and shafts (*second revision*)
IS 1337 : 1993	Electroplated coatings of hard chromium for engineering purposes — Specification (*third revision*)
IS 1387 : 1993	General requirements for the supply of metallurgical materials (*second revision*)
IS 1586 (Part 1) : 2018/ISO 6508-1 : 2016	Metallic materials — Rockwell hardness test: Part 1 Test method (*fifth revision*)
IS 2062 : 2011	Hot rolled medium and high tensile structural steel — Specification (*seventh revision*)
IS 3748 : 2022/ ISO 4957 : 2018	Tool steels — Specification (*third revision*)
IS 14962 (Part 3) : 2022/ISO 965-3 : 2021	ISO general purpose metric screw threads — Tolerances: Part 3 Deviations for constructional screw threads

ANNEX B

(*Foreword*)

COMMITTEE COMPOSITION

Foundry and Steel Castings Sectional Committee, MTD 14

Organization	*Representative(s)*
BHEL (CFFP), Haridwar	SHRI V. K. RAIZADA (***Chairperson***)
Bharat Heavy Electricals Ltd, HPEP, Hyderabad	SHRI ABHINAV AGRAWAL
BHEL, Haridwar	SHRI A. N. SUDHAKAR SHRI RANJITH LAKRA (*Alternate*)
Bhilai Engineering Corporation Limited, Bhilai	SHRI AKHIL DUBEY SHRI SHIV DUTT MISHRA (*Alternate*)
CSIR - Central Mechanical Engineering Research Institute, Durgapur	DR SUDIP SAMANTHA
CSIR - National Institute for Interdisciplinary Science and Technology (NIIST), Thiruvananthapuram	DR TPD RAJAN DR M. RAVI (*Alternate*)
Directorate General of Quality Assurance, Ichhapur	SHRI ASHOK KUMAR SHRI S. ROY CHOWDHURY (*Alternate*)
Disa India Ltd, Bangalore	SHRI SUNIL KUMAR GHOSH SHRI SURESH KUMAR A. (*Alternate*)
Forace Polymers Private Limited, Haridwar	SHRI D. K. GHOSH
Hindustan Aeronautics, Foundry and Forge Division, Bengaluru	SHRI K. SATYENDRA KUMAR
Indian Institute of Technology, Kharagpur	PROF SHIV BRAT SINGH PROF RAHUL MITRA (*Alternate*)
Indian Ordnance Factory Board, Kolkata	SHRI G. JHA SHRI A. K. LALA (*Alternate*)
Indian Ordnance Factory, Grey Iron Foundry, Jabalpur	SHRI M. P. YADAV SHRI ARUNANSHU PRAMANIK (*Alternate*)
Indian Register of Shipping, New Delhi	DR K. K. DHAWAN SHRI S. VELMURUGAN (*Alternate*)
Institute of Technology (BHU), Varanasi	DR INDRAJIT CHAKRABARTY DR JAYANT KUMAR SINGH (*Alternate*)
Leader Valves Ltd, Jalandhar	SHRIMATI PURNIMA BERI SHRI SARABJIT SINGH (*Alternate*)
Ministry of Defence (DGQA), Ichapur	SHRI ASHOK KUMAR SHRI RUPESH BANAIT (*Alternate*)
Ministry of Railway, RDSO, Lucknow	SHRI C. SENGUPTA SHRI RAJ KISHORE PRASAD (*Alternate*)
Ministry of Science & Technology, New Delhi	MS TAMANNA ARORA SHRI K. S. P. RAO (*Alternate*)

Organization	*Representative(s)*
National Institute of Foundry & Forging Technology, Ranchi	DR KAMLESH KUMAR SINGH DR AMITESH KUMAR (*Alternate*)
National Metallurgical Laboratory, Jamshedpur	DR D. N. PASWAN MS MINAL SHAH (*Alternate*)
NIT Manipur, Langol, Imphal	PROF (DR) GOUTAM SUTRADHAR DR ANIL KUMAR BIRRU (*Alternate* I) DR SABINDRA KACHHAP (*Alternate* II)
Steel Cast Ltd, Bhavnagar	SHRI V. K. MODI SHRI B. C. ROUTRAY (*Alternate*)
Tata Motors, Jamshedpur	SHRI S. KUMAR DR D. S. PADAN (*Alternate*)
The Institute of Indian Foundry Men, New Delhi	SHRI DINESH GUPTA SHRI SANJEEV KUMAR (*Alternate*)
The Wesman Engineering Co Pvt Ltd, Kolkata	SHRI RANJAN GUHA SHRI ASHUTOSH MONDAL (*Alternate* I) SHRI PARTHA CHATTERJEE (*Alternate* II)
Versatile Equipments Pvt Ltd, Kolhapur	SHRI PUSHKRAJ JANWADKAR SHRI KIRAN PANDI (*Alternate*)
BIS Directorate General	SHRI SANJIV MAINI, SCIENTIST 'F'/SENIOR DIRECTOR AND HEAD (METALLURGICAL ENGINEERING) [REPRESENTING DIRECTOR GENERAL (*Ex-officio*)]

Member Secretary
SHRI KUNAL KUMAR
SCIENTIST 'D'/JOINT DIRECTOR
(METALLURGICAL ENGINEERING), BIS

Email **MTD MTD**

Re: Request to seek approval for publishing Draft document MTD 14 IS 6482

From : raman sarita <raman.sarita@gmail.com> Thu, Sep 14, 2023 08:46 PM

Subject : Re: Request to seek approval for publishing Draft document MTD 14 IS 6482

To : MTD MTD <mtd@bis.gov.in>

Approved
Raman

On Thu, 14 Sept 2023, 16:52 MTD MTD, <mtd@bis.gov.in> wrote:

भारतीय मानक ब्यूरो
(धातुकर्म अभियांत्रिकी विभाग)

दिनांक: 14.09.2023

हमारा सन्दर्भ: MTD 14/T-43 and T-5

Respected Sir,

You are requested to kindly approve the following draft in accordance with sub-rule (5) of Rule 22 of Bureau of Indian Standards Rules, 2018. The drafts has been finalized by Foundry and Steel Castings Sectional Committee (MTD 14) and Chairman after giving due consideration to the comments received from important Producers, Consumers, Technologists, Members of Metallurgical Engineering Division Council:

1. MTD 14 (20988) - Fluted Core Cleaners for Use in Foundries - Specification
2. MTD 14 (20993)- Specification for chromite sand for use in foundries

Copy of the drafts document has been attached to this mail for kind information please.

Thanking You,

Yours Sincerely,
Sanjiv Maini,
Scientist-`F' & Head (MTD)