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**MINUTES OF MEETING**

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| **BUREAU OF INDIAN STANDARDS**  **(METALLURGICAL ENGINEERING DEPARTMENT)** | |
| **Powder Metallurgical Materials and Products Sectional Committee, MTD 25** | |
| **Meeting Date**  **& Time** | 21 Nov 2023, (Monday)  10:30 AM |
| **No. of Meeting** | 19th Meeting |
| **Venue** | Hybrid Meeting (New Delhi) |

**Chairman:** Dr Anish Upadhyaya **Member Secretary:** Shri G. Ram Sai Kumar

**Members Present:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Sl. No.** | **Organization Name** | **Member Name** | **Email ID** |
|  | Indian Institute of Technology, Kanpur | Dr. Anish Upadhyaya (Chairman) | anishu@iitk.ac.in |
|  | Bhabha Atomic Research Centre, Mumbai | Dr. Amit Sinha | asinha@barc.gov.in |
|  | Bharat Heavy Electricals Ltd (Hyderabad, Telangana) | Dr. Vivek Arya | vivek.arya@bhel.in |
|  | CSIR-Central Electrochemical Research Institute, Karaikudi | Dr. Deepak Kumar Pattanayak | deepak@cecri.res.in |
|  | CSIR-Institute of Minerals & Materials  Technology, Bhubaneswar | Dr. Pradyut Sengupta | pradyut@immt.res.in |
|  | CSIR-Institute of Minerals & Materials  Technology, Bhubaneswar | Dr. Mayadhar Debata | mdebata@immt.res.in |
|  | CQA (Met) Ministry of Defence (DGQA) (Ichapur, WB-743144) | Shri A Mitra | cqametichapur-dgqa@nic.in |
|  | Defence Metallurgical Research  Laboratory (DMRL) (Kanchanbag, Hyderabad) | Dr. Mithun Palit | mithun.dmrl@gov.in |
|  | Defence Metallurgical Research  Laboratory (DMRL) (Kanchanbag, Hyderabad) | Dr. G Prabhu | gprabhu.dmrl@gov.in |
|  | DIQA Ministry of Defence (DGQA) (Bangalore -560046) | Dr. N. Krishna Murthy | diqa-dgqa@nic.in |
|  | Electronica Tungsten Limited (Nasik, MS) | Shri BhalChandra V Pathak | bpathak@toughcarb.com |
|  | Innomet Advanced Materials Pvt Ltd, Hyderabad | Shri Uday Bendre | uday@innomet.net |
|  | International Advanced Research Centre for Powder Metallurgy & New Materials (ARCI), Hyderabad | Dr. Gururaj Telasang | gururajst@arci.res.in |
|  | Kennametal India Ltd (Bangalore, Karnataka) | Shri K. Chandrashekar Shenoy | chandrashekar.shenoy@kennametal.com |
|  | National Metallurgical Lab (Jamshedpur) | Dr. V C Srivastava | vcsrivas@nmlindia.org |
|  | Society of Indian Automobile  Manufacturers (SIAM) | Shri Prashant K Bnaerjee | anushka@siam.in |
|  | Society of Indian Automobile  Manufacturers (SIAM) | Shri Lokesh Mittal | lokeshmittal@siam.in |
|  | The Metal Powder Company Limited, Madhurai | Shri P. Sundarapandian | sundar@mepco.co.in |
|  | The Metal Powder Company Limited, Madhurai | Shri R. Krishna Moorthy | mepcoqa@mepco.co.in |
|  | The Metal Powder Company Limited, Madhurai | Shri N. Chandrasekaran | mepcoqa@mepco.co.in |

**Item 0 GENERAL**

* 1. **Welcome remarks by Member Secretary of MTD 25**

Shri G Ram Sai Kumar (member secretary) welcomed Chairman Dr. Anish Upadhyaya and all the members to the 19th meeting of Powder Metallurgical and material Sectional Committee MTD 25 and appraised the committee about the latest process reforms of the Bureau such as holding quarterly meetings of the committee, addressing sustainability in the standards, review of pre 2000 standards etc. conducting seminars/webinars, visiting manufacturing/labs during the review of Indian Standards. He also mentioned that we should have to participate actively in committee/panel meeting as well as participating actively in ISO committees and give comments on the ISO standards received for India’s view point. He also informed members about the need for review of Pre 2000 published Indian standards and requested the committee members to volunteer for review of these standards. He also informed members that, BIS is given awards to TC members based on their contribution. Lastly, he requested members to identify new areas of standard formulation.

**0.2 Opening Remarks by the Chairman**

Prof. Anish Upadhyaya, the Chairman of the Committee, MTD-25 had welcomed the members of the Committee to the 19th meeting of Powder Metallurgical Materials and Products Sectional Committee, MTD 25. He thanked all the members for taking time out of their busy schedule and attending the meeting. During his address he requested all the members of the Committee to take active participation in the activities of the Committee to ensure that the Indian Standards as well as International Standards.

**Item 1. CONFIRMATION OF MINUTES OF LAST MEETING**

Since, there were no comments on the minutes of 19th meeting of Powder Metallurgical Materials and Products Sectional Committee, MTD 25 held on 11 November 2023 via Virtual Platform (Webex), the Committee confirmed the minutes as circulated vide BIS letter No. MTD-25/A-2.18 dated 27.07.2023.

**Item 2. ACTION TAKEN REPORT**

The Committee considered the summary of Actions taken as given in Annexure-I of the agenda of the Meeting and decided as follows:

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| **Sl. No.** | **Subject** | **Decision of the committee in the Previous Meetings** | **Action taken on the decision of the Committee** | **Decision Taken** |
|  | Review of IS 5461: 1984 in line with ISO 4497: 2020 Method for sieve analysis of metal powders | committee requested Dr. Mayadhar Debata and Dr. Pradyut Sengupta from M/s CSIR-IMMT to review IS 5461: 1984 in line with ISO 4497: 2020 and to give their recommendations to the committee within 3 months.  Recommendations were received from Dr. Mayadhar Debata of M/s CSIR-IMMT vide email and the recommendations were given in **[APPENDIX 2](#appendix2)**.  In 17th Meeting, the committee after deliberation decided to adopt ISO 4497: 2020 and to send the document for Wide circulation for one month. The committee further decided, if no comments were received, it can be sent for printing.  In 18th TC meeting, The committee after deliberation decided to send the document for printing. | The document is sent to publication department for **printing** on 20/09/2023. | **The committee noted the information.** |
|  | New Indian standard on Tungsten based heavy alloys used in Defence sector. | The committee after deliberation decided to formulate standards on heavy alloys and constituted the following **panel 4** for the same:  1. Dr Anish Upadhyaya – IIT – Convener 2. M/s Kenna metals 3. M/s Midhani 4. M/s Innomet Powders 5. M/s DMRL 6. M/s CQA Metals 7. M/s NML 8. M/s CSIR-IMMT   In the 16th meeting, M/s CSIR-IMMT to be included into the **Panel-4** prepared in the previous meeting and will propose a new draft standard on Tungsten heavy alloys powders before the next committee meeting.  In the 17th Meeting, the committee after detailed deliberation proposed to co-opt following members into Panel-4 and requested member secretary to seek their interest:   1. Dr Mayadhar Debata of CSIR-IMMT   Committee requested the panel to submit their recommendations in next three months Also, as Dr Lokesh Pathak of M/s NML is superannuated, Dr V C Srivastava will replace him.  In 18th TC Meeting, The committee after detailed deliberation requested **panel-4** to conduct a panel meeting within one month and requested M/s CSIR-IMMT to provide a working draft before the next meeting/ within three month whichever is earlier.  Further, Dr Anish Upadhyaya – IITK and M/s CSIR-IMMT had requested for funding to conduct the R&D work. | A special meeting is planned 10-11-2023. A TOR is prepared based on which a project has to be completed and final draft shall be submitted. | The committee wants to include strain rate in deliverables and finalized the TOR.  Committee after detailed deliberation requested **Panel 4** to prepare the basic Draft Document before the end of current financial year 2023 and circulate to committee members for their comments and modify based on the comments during the panel meeting. |
|  | New Indian Standard on Powder additive manufacturing (3D Printing) | Powder additives the committee after deliberation constituted the following **panel 5** to decide on the topic on which the standards need to be formulated on additives. Further the ISO standard on additive manufacturing like **ISO 52907, ISO 52904** also needs to be studied by the panel and recommendation may be provided for adoption. The panel was also requested to give their recommendation whether India needs to apply for P or O membership in ISO committee ISO /TC 261 Additive manufacturing.   1. Shri Badri Vishal Pandey – Convenor. 2. Dr. Gururaj (ARCI), Hyderabad 3. Represtative from GE additive, Bangalore 4. Shri Vinay Chilakapati - Innomet Powders   An Indian standard on Powder additive manufacturing (3D Printing) can be prepared. Committee requested the Panel prepared in the previous meeting and proposed to take assistance from M/s Wipro, M/s CSIR-CECRI and M/s NML during formulation of this standard.  In 17th Meeting, the committee after detailed deliberation proposed to co-opt following members into **Panel-5** and requested member secretary to seek their interest:   1. Shri T Sasi kumar of Indo MIM 2. T Shiv Shankar of Indo MIM   Committee requested the **panel-5** to submit the Working Draft before the next committee meeting.  In 18th TC Meeting, The committee after detailed deliberation requested **panel-5** to conduct a panel meeting after receiving the Working draft and Pre-standardization documents from the BIS-Intern who is sent to M/s CMTI and other allied organizations. | Email was sent to panel members and requesting them for a working draft vide email dated 05-10-2023. However, the still wait for reply.  On discussion with Dr. Deepak Kumar Pattanayak of CSIR-CECRI is interested in joining the panel.  Please find the report submitted by BIS-Intern: | Committee after detailed deliberation and decided to conduct the panel meeting within one month.  The committee wants to prepare a series of standards under 2 categories:   1. Ferrous Powders (super alloys, steels & etc.) 2. Non-Ferrous Powders (Aluminium, titanium, etc.)   Also, Committee proposed to formulate the new Indian Standard based on Copper beryllium alloy powder which is used nuclear applications. |
|  | IS 11959 : 1987 Method for metallographic determination of microstructure in hardmetals. | As a part of Action Research Project, BIS officer Shri Ram Sai kumar has reviewed and Prepared a Draft as given below:  In 17th Meeting, the committee after deliberation decided to send the document for Wide circulation for one month. The committee further decided, if no comments were received, it can be sent for printing.  In 18th TC Meeting, The committee after deliberation decided to send the document for printing. | The document is sent to publication department for printing on 25/08/2023. | **The committee noted the information.** |
|  | IS 11520 : 1985 Method for metallographic sample preparation of hardmetals. | As a part of Action Research Project, BIS officer Shri Ram Sai kumar has reviewed and Prepared a Draft as given below:  In 18th TC Meeting, The committee after deliberation decided to send the document for printing. | The document is sent to publication department for printing on 25/08/2023. | **The committee noted the information.** |
|  | IS 11960 : 1987 Method for metallographic determination of apparent porosity and uncombined carbon in hard metals | As a part of Action Research Project, BIS officer Shri Ram Sai kumar has reviewed and Prepared a Draft as given below:    In 18th TC Meeting, The committee after deliberation decided to send the document for printing. | The document is sent to publication department for printing on 25/08/2023. | **The committee noted the information.** |
|  | IS 8367 : 1993 Tin powder - Specification (First Revision) | As a part of Action Research Project, BIS officer Shri Ram Sai kumar has reviewed and Prepared a Draft as given below:    In 18th TC Meeting, The committee after deliberation decided to send the document for printing. | The document is sent to publication department for printing on 25/08/2023. | **The committee noted the information.** |
|  | IS 8392 : 1985 Specification for tungsten powder for hardmetals (First Revision) | As a part of Action Research Project, BIS officer Shri Ram Sai kumar has reviewed and Prepared a Draft as given below:    In 18th TC Meeting, The committee after deliberation decided to send the document for printing. | The document is sent to publication department for printing on 25/08/2023. | **The committee noted the information.** |
|  | IS 11627 : 1986 Method for determination of apparent density of metallic powders by scott volumeter | As a part of Action Research Project, BIS officer Shri Ram Sai kumar has reviewed and Prepared a Draft as given below:    In 18th TC Meeting, The committee after deliberation decided to send the document for printing. | The document is sent to publication department for printing on 25/08/2023. | **The committee noted the information.** |
|  | IS 7506 : 1987 Specification for nickel powder (First Revision) | As a part of Action Research Project, BIS officer Shri Ram Sai kumar has reviewed and Prepared a Draft as given below:    The committee after deliberation decided to formulate a **panel-6** to review/recommendation. List of the panel members are given below:   1. Dr. Anish upaydyaye of M/s IIT Kanpur 2. Shri Vinay Chilakapati of M/s Innomet Hyderabad 3. Shri Alok Bhaskar of M/s Kennametal Bangalore, 4. Shri A.N.Chaskar of M/s Electronica Tungsten 5. Dr. Mayadhar Debata of M/s CSIR – IMMT | Email was sent to panel members and requesting them for a working draft vide email dated 04-10-2023. However, the replies are still awaited. | The Committee after detailed deliberation and decided to Conduct a panel meeting within two month. Also requested member secretary to visit M/s Innomet Hyderabad during review of Indian standard. |
|  | IS 7505 : 1985 Specification for cobalt powder for hardmetals (First Revision) | As a part of Action Research Project, BIS officer Shri Ram Sai kumar has reviewed and Prepared a Draft as given below:    In 18th TC Meting, The committee after deliberation decided to send the document for Wide circulation for one month. The committee further decided, if no comments were received, it can be sent for printing. | Draft is under Wide circulation stage. Members are kindly requested to provide their views on the same. | The Committee after detailed deliberation and decided to send the Draft Document for printing. |
|  | IS 12286 : 1988 Method for determination of abrasive wear resistance of hardmetals | As a part of Action Research Project, BIS officer Shri Ram Sai kumar has reviewed and Prepared a Draft as given below:    In 18th TC Meting, The committee after deliberation requested M/s Kenna metals to review the standard and give their recommendation on adoption of ISO 28080 : 2021 Hardmetals — Abrasion tests for hardmetals. The committee decided to recirculate among members. | Email was sent to committee members requesting for views on the standard whether it should be adopted or not, dated 04-10-2023. However, the replies are still awaited. | The Committee after detailed deliberation and decided to adoption of ISO 28080: 2021 and circulate the standard as WC. If no comments were received within one month/30 days during WC, it can be send for printing. |
|  | IS 7970 : 1987 Specification for tantalum powder for capacitors (First Revision) | As a part of Action Research Project, Member secretary has reviewed and Prepared a Draft as given below:    The committee after deliberation decided to send the document for Wide circulation for one month. The committee further decided, if no comments were received, it can be sent for printing. | Draft is under Wide circulation stage. Members are kindly requested to provide their views on the same. | The Committee after detailed deliberation and decided to circulate the draft document as WC to LITD and ETD for their views. If No comments were received then the document can be send to printing. |
|  | New standard on Spark plasma sintering. | During the special meeting held on 10 Nov 2023, Dr. Gururaj Telasang of ARCI had suggested to formulate a new standard. | Dr. Gururaj Telasang is requested to inform the importance to formulate an Indian standard. Basic information on the Code of practice standard is not provided. | The Committee after detailed deliberation and decided to drop document from formulation as Indian Standard till the committee finds an expert. |
|  | A new Indian Standard based on Copper beryllium alloy powder which is used nuclear applications. | NA | NA | The Committee during the 19th TC meeting decided to formulate a new Indian Standard on Copper beryllium alloy powder and TOR has to be prepared and circulated via BIS website.  The product is informed by Dr Amit Sinha of M/s BARC. |

**Item 3 PROCESS REFORMS (A)**

**3.1** The committee had noted the information as given in item **3.1** of the agenda of the meeting.

**3.2** The committee had noted the information as given in item **3.2.1** to item **3.2.3** of the agenda of the meeting.

**3.3** Annual Calendar of Technical Committee meetings

**3.3.1** The committee proposed to plan TC meetings at different venues, which will help in having exposure visit to manufacturing units and labs in that region.

**3.3.2** The committee decided to hold the next 2 TC meetings of MTD 25 as Physical/Hybrid/Virtual meetings are given below:

|  |  |  |  |
| --- | --- | --- | --- |
| Sl No. | Meetings planned for FY 2023-24 | Date & Time | Venue |
|  | First Meeting | 16 June 2023, 11:00 AM | BIS HQ (Manak Bhavan), New Delhi |
|  | Second Meeting | 21 Nov 2023 | BIS HQ, New Delhi(Hybride) |
|  | Third Meeting | 3rd week of Jan, 2024 | M/s CSIR IMMT, Bhusneswar |
|  | Fourth Meeting (if possible ) | 13th March, 2024 | Mumbai, if required |

**Item 4 SCOPE AND COMPOSITION OF SECTIONAL COMMITTEE, MTD 25**

**4.1** The committee had noted the information given in Items **4.1** to **4.3** of the Agenda of the meeting.

**4.4** Attendance of members in the committee:

* + 1. The committee had noted the information given in Items **4.4.1 and 4.4.2** of the Agenda of the meeting and after detailed deliberation decided to withdraw following members from the Committee:

|  |  |  |
| --- | --- | --- |
| Sl No. | Name of the organization | Reason |
|  | Hoganas India Ltd, Ahmednagar | Neither attending nor nominating a new active member to the committee. |
|  | Nuclear Fuel Complex, Hyderabad | Neither attending nor nominating a new active member to the committee. |

**4.5** The committee had noted the information given in Items **4.5** and after deliberation proposed to co-opt following members into committee and requested member secretary to seek their interest:

|  |  |
| --- | --- |
| Sl No. | Name of the organization |
|  | M/s INDO-MIM, bengaluru |
|  | M/s High Energy Projectile Factory (HEPF), Tirchy |
|  | M/s Centre For Materials For Electronics Technology (C-MET), Hyderabad |
|  | M/s Saveer Matrix Nano Private Limited, Greater Noida. |

**4.6** The Committee noted the list of Organisations which are Co-opted in the previous Committee meetings:

|  |  |
| --- | --- |
| Sl No. | Name of the organization |
|  | M/s Speciality Sintered Products Pvt. Ltd., Pune |
|  | M/s Intech Additive Solutions Private Limited, Banglore |
|  | M/s IIT BHU |
|  | M/s CMTI |

The committee had noted the information given in Items **4.6** and **4.7,** after deliberationrequested member secretary to seek their interest once again in participating in the TC Meeting of MTD25.

**Item 5 LIST OF INDIAN STANDARDS**

**5.1** The committee had noted the information as given in item **5.1** of the agenda of the meeting.

**Item 6 COMMENTS ON PRINTED STANDARDS**

**6.1** The Committee had noted the information given in item **6.1** of the agenda of the meeting and after deliberation requested M/s Innomet Metal to provide justification for the inclusion of grades into the standard.

**Item 7 REVIEW OF INDIAN STANDARDS**

**7.1** The Committee had noted the information as given in item **7.1 and 7.2** of the agenda of the meeting.

**7.3** The Committee had noted the information as given in item **7.3** and **7.3.1** of the agenda of the meeting.

**7.3.2** The Committee had noted the information as given in item **7.2.3** and after deliberation decided as follows:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl. No.** | **Indian Standard** | **ARP report** | **Action Taken** | **Decision taken** |
|  | IS 12483 : 1988 Determination of titanium in hardmetals by spectrophotometric method | As a part of Action Research Project, Committee member Shri Bhal Chandra V Pathak had reviewed and given his recommendations. A panel meeting held on 26/10/2023. Accordingly, a Draft Document is finalized and placed below: | Panel after deliberate, decided to Revise the Standard with editorial changes and latest style and format.  In additional some modification has been made :  In clause 7.3.1, Heat to approximately 800 °C is replaced By Heat to approximately 80 °C. | Committee after detail deliberation and decided to send the draft document for Wide Circulation. If no comments were received within 1 month/ 30 days the document can be send for printing. |
|  | IS 12513 : 1988 Determination of cobalt in hardmetals by potentiometric method | As a part of Action Research Project, Committee member Shri BhalChandra V Pathak had reviewed and given his recommendations. A panel meeting held on 26/10/2023. Accordingly, a Draft Document is finalized and placed below: | Panel after deliberate, decided to Revise the Standard with editorial changes and latest style and format. | Committee after detail deliberation and decided to send the draft document for Wide Circulation. If no comments were received within 1 month/ 30 days the document can be send for printing. |
|  | IS 12571 : 1988 Method for determination of green strength by transverse rupture of rectangular compacts of metallic powder | As a part of Action Research Project, Committee members, Dr Mayadhar Debata & Dr Pradyut Sengupta from M/s CSIR-IMMT had reviewed and given their recommendations. A panel meeting held on 19/10/2023. Accordingly, a Draft Document is finalized and placed below: | Panel after deliberate, decided to adopt ISO 3995 : 2023. | Committee after detail deliberation and decided to adopt ISO 3995: 2023 and send the document for Wide Circulation. If no comments were received within 1 month/ 30 days the document can be send for printing. |
|  | IS 12783 : 1989 Hardmetals - Vickers hardness test | As a part of Action Research Project, Committee members, Dr Mayadhar Debata & Dr Pradyut Sengupta from M/s CSIR-IMMT had reviewed and given their recommendations. A panel meeting held on 19/10/2023. Accordingly, a Draft Document is yet to be finalized and placed below: | Panel after deliberate and decided to Revise the Indian Standard IS 12783.  Following are Changes proposed or need justification by the panel;  1. Refence clause has to be added;  2. In Clause 5.3, indentation diagonals deviation 3 % will give better result.  3. In Clause 6.6, the following mounting materials may be used, example : Bakelite, epoxy resin, thermosetting resin has to be added;  4. In Clause 8, Maximum deviation from the mean has to be limited to a particular value, where we can reject the test or can inform the sample is defective. | Committee after detailed deliberation and decided to send the draft document for Wide Circulation. If no comments were received within 1 month/ 30 days the document can be send for printing. |
|  | IS 12473 (Part 1) : 1988 Chemical analysis of hard metals by flame atomic absorption spectrometry: Part 1 general requirements | As a part of Action Research Project, Committee Chairman of MTD 25, Anish Upadhyaya from M/s IIT Kanpur has reviewed and also prepared a Draft Document Placed below: | Draft is prepared by member secretary and circulated among committee members for their views along with agenda of this meeting. | Committee after detailed deliberation and decided to send the draft document for P – Circulation. If no comments were received within 21 days the document can be send for Wide Circulation. |
|  | IS 12473 (Part 2) : 1988 Chemical Analysis of Hard metals by Flame Atomic Absorption Spectrometry - Part 2 : Determination of Calcium, Potassium, Magnesium and Sodium in Contents from 0 | As a part of Action Research Project, Committee Chairman of MTD 25, Anish Upadhyaya from M/s IIT Kanpur has reviewed and also prepared a Draft Document Placed below: | Draft is prepared by member secretary and circulated among committee members for their views along with agenda of this meeting. | Committee after detailed deliberation and decided to send the draft document for P – Circulation. If no comments were received within 21 days the document can be send for Wide Circulation. |
|  | IS 12473 (Part 3) : 1988 Chemical analysis of hardmetals by flame atomic absorption spectrometry: Part 3 determination of cobalt, iron, manganese and nickel in contents from 0.01 to 0.5 percent (M/m) | As a part of Action Research Project, Committee Chairman of MTD 25, Anish Upadhyaya from M/s IIT Kanpur has reviewed and also prepared a Draft Document Placed below: | Draft is prepared by member secretary and circulated among committee members for their views along with agenda of this meeting. | Committee after detailed deliberation and decided to send the draft document for P – Circulation. If no comments were received within 21 days the document can be send for Wide Circulation. |
|  | IS 12473 (Part 4) : 1988 Chemical analysis of hardmetals by flame atomic absorption spectrometry: Part 4 determination of molybdenum, titanium and vanadium in contents from 0.01 to 0.5 percent (M/m) | As a part of Action Research Project, Committee Chairman of MTD 25, Anish Upadhyaya from M/s IIT Kanpur has reviewed and also prepared a Draft Document Placed below: | Draft is prepared by member secretary and circulated among committee members for their views along with agenda of this meeting. | Committee after detailed deliberation and decided to send the draft document for P – Circulation. If no comments were received within 21 days the document can be send for Wide Circulation. |
|  | IS 12473 (Part 5) : 1988 Chemical analysis of hardmetals by flame atomic absorption spectrometry: Part 5 determination of cobalt, iron, manganese, molybdenum, nickel, titanium and vanadium in contents from 0.5 to 2 percent (M/m) | As a part of Action Research Project, Committee Chairman of MTD 25, Anish Upadhyaya from M/s IIT Kanpur has reviewed and also prepared a Draft Document Placed below: | Draft is prepared by member secretary and circulated among committee members for their views along with agenda of this meeting. | Committee after detailed deliberation and decided to send the draft document for P – Circulation. If no comments were received within 21 days the document can be send for Wide Circulation. |
|  | IS 12473 (Part 6) : 1988 Chemical analysis of hardmetals by flame atomic absorption spectrometry: Part 6 determination of chromium in contents from 0.01 to 2 percent (M/m) | As a part of Action Research Project, Committee Chairman of MTD 25, Anish Upadhyaya from M/s IIT Kanpur has reviewed and also prepared a Draft Document Placed below: | Draft is prepared by member secretary and circulated among committee members for their views along with agenda of this meeting. | Committee after detailed deliberation and decided to send the draft document for P – Circulation. If no comments were received within 21 days the document can be send for Wide Circulation. |
|  | IS 8368 : 2010 Tungsten carbide powder for hard metals – Specification (Second Revision) | As a part of Action Research Project, Panel 6 has reviewed the standard, and decided to reaffirm the standard.  Following are the member of the panel 6 :  1. Anish Upadhyaya of M/s IIT Kanpur  2. Shri Vinay Chilakapati of M/s Innomet Adavance Material  3. Alok Bhaskar of M/s Kanna metal  4. Shri BhalChandra V Pathak of M/s Electronica Tungsten  5. Dr Mayadhar Debata of M/s CSIR - IMMT | Email was send to panel on 04-10-2023. However, the decision is yet to be finalized. | Committee after detailed deliberation and requested panel 6 for review of the standard give their recommendations/suggestions within 2 months. |
|  | IS 8369 : 2010 Titanium carbide powder for hardmetals - Specification (Second Revision) | As a part of Action Research Project, Panel 6 has reviewed the standard, and decided to reaffirm the standard.  Following are the member of the panel 6 :  1. Anish Upadhyaya of M/s IIT Kanpur  2. Shri Vinay Chilakapati of M/s Innomet Adavance Material  3. Alok Bhaskar of M/s Kanna metal  4. Shri BhalChandra V Pathak of M/s Electronica Tungsten  5. Dr Mayadhar Debata of M/s CSIR - IMMT | Email was send to panel on 04-10-2023. However, the decision is yet to be finalized. | Committee after detailed deliberation and requested panel 6 for review of the standard give their recommendations/suggestions within 2 months. |

**7.4** The Committee had noted the information as given in item **7.4** of the agenda of the meeting.

**Item 8 NEW SUBJECTS FOR STANDARDIZATION**

**8.1** The Committee had noted the information as given in item **8.1** to **8.4** of the agenda of the meeting.

**Item 9 WTO-TBT Enquiry Point**

**9.1** The Committee had noted the information as given in item **9.1** to **9.6** of the agenda of the meeting.

**Item 10 INTERNATIONAL ACTIVITIES**

**10.**1 The Committee had noted the information as given in item **10.1** to **10.4** of the agenda of the meeting.

**Item 11 IMPLEMENTATION OF INDIAN STANDARDS**

**11.1** The Committee had noted the information as given in item **11.1** of the agenda of the meeting.

**Item 12 BIS Initiatives**

**12.1** The Committee had noted the information as given in item **12.1** to **12.6** of the agenda of the meeting.

**Item 13 R&D PROJECTS FOR ESTABLISHMENT/REVISION OF INDIAN STANDARDS**

**13.1** The Committee had noted the information as given in item **13.1** of the agenda of the meeting.

**Item 14 ANY OTHER BUSINESS**

**14.1** Chairman had informed BIS to take Post graduate students as Interns instead of under graduates who can really contribute towards standards formulation.

**14.2** The meeting ended with a hearty vote of thanks by member secretary to the chair and members of the committee.