MINUTES OF MEETING

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| **BUREAU OF INDIAN STANDARDS**  **(METALLURGICAL ENGINEERING DEPARTMENT)** | |
| **Non Destructive Testing Sectional Committee, MTD21** | |
| **Meeting**  **Date&Time** | 19th July 2024,  Friday, 11:00 AM |
| **No.of Meeting** | 31st |
| **Venue** | Hybrid Mode (Physical + Virtual), Venue- Copper Meeting room 409, Manakalya, BIS, New Delhi |

**Chairperson:** Shri B. Venkatraman **MemberSecretary:** Shri Kunal Kumar

**MembersPresent:**

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| --- | --- | --- | --- | --- |
| Sl No. | Name of Member | Name of Organization | Mode of Joining | E-mail |
|  | Shri Paritosh Nanekar | Bhabha Atomic Research Centre, Mumbai | Informed | paritoshhn@yahoo.com |
|  | Shri Bharat S. Biradar | Technofour Electronics Private Limited, Pune | Virtually | bharatbiradar@gmail.com |
|  | Mrs. Navita Gupta | Satyakiran Engineers Private limited, New Delhi | Virtually | navita.gupta@satyakiran.com |
|  | Shri Dinesh Gupta | Satyakiran Engineers Private limited, New Delhi | Virtually | dinesh.gupta@satyakiran.com |
|  | Shri M.Arumugam | Department of Space, Bengaluru | Informed | m\_arumugam@lpsc.gov.in  arumugamm@rocketmail.com |
|  | Shri R. Arul Prabhu | Bharat Heavy Electrical Limited, New Delhi | Virtually | arul@bhel.in |
|  | Shri S. Balamurugan | Tata Steel Limited, Kolkata | Virtually | s.balamurugan@tatasteel.com |
|  | Dr. Vivek Nagesh Yelgaonkar | BVG Nuclear Private limited, Pune | Virtually | yelgaonkar@gmail.com |
|  | Mr.Kalesh Nerurkar | Pradeep Metal Treatment Chemicals Private Limited, Thane | Virtually | kanerurkar@gmail.com |
|  | Shri Amrish Kumar | Research Designs And Standards Organization (Rdso), Lucknow | Virtually | aromtd.rdso@gmail.com |
|  | Shri Rakesh Kumar Munda | Bharat Heavy Electrical Limited, New Delhi | Virtually | rakeshkumar.munda@bhel.in |
|  | Dr.Shwetang N. Pandya | Institute for Plasma Research, Gandhinagar, Ahmedabad | Virtually | shwetang.ipr@gmail.com |
|  | Dr.Premshankar K. Dubey | CSIR - National Physical Laboratory, New Delhi | Virtually | dubeypk@nplindia.org |
|  | Shri Jai Kumar Jain | Nuclear Power Corporation of India Limited, Mumbai | Virtually | jkjain08oct17@gmail.com |
|  | Dr. M. Phani Surya Kiran | Defence Metallurgical Research Laboratory, Ministry of Defence, Hyderabad | Informed | phanimylavarapu@dmral.drdo.in |
|  | Shri Macwan Robert | Electrical Research and Development Association, Vadodara | Virtually | robert.macwan@erda.org |

**Item0 GENERAL**

## Welcome remarks by BIS

## Shri Sanjiv Mainy, Head, Metallurgical Engineering Department welcomed chairperson Shri B. Venkatraman and all the members on behalf of the Bureau to the 31st meeting of Non-Destructive Testing Sectional Committee, MTD21. He appraised the Committee about the latest initiatives taken by the management. He informed that we are meeting more frequently almost every quarter. The management said that even if there is no much of agenda point, the purpose of sectional committee is not only for approval of documents but to prepare roadmap like what more standardization can be done in the field, for that we can meet every quarter and discuss how can we move forward. Other than that he emphasized on the attendance of the sectional committee members, he informed that it is mandatory for all the members to attend all the committee meetings. In case, any member is not able to attend the meeting due to some reason, he/she should inform to the MS through email in advance but in no case a member should be absent from two consecutive meetings. If any member is not attending two consecutive meetings, the membership of that organization shall be withdrawn. He further informed that it is necessary for all members to comment on each p-draft circulated by MS, if any member have no expertise in the subject, he may comment like he has no expertise on the subject so he has no comment at the moment.

He further informed that management is very much focused on our participation at international level. So it has been decided that for any new work item proposal move forward by ISO committee, we should indicate our level of interest. If we don’t have any level of interest in the NWIP, then it’s ok, India have no interest in it and we can avoid it. But if we have interest in the work, it is mandatory that we can nominate an expert in the committee. This expert will participate in new work item development. So, he will be voice and face of BIS till the proposal taken to the final stage.

He further informed that whenever a new committee member join, a one day workshop/training is organized for the new members. Also BIS has signed MoU with educational institutions like IITs & NITs and at present around 90 Institutes have MoUs listed on BIS website. Management has decided to hold one meeting in a year in these partner institutes with half day meeting and half day seminar.

He further informed that Sectional committee is not a standard drafting committee, it is a high power committee with a role to plan what we are going to do in a year, to decide the best way to do the standard progress and able to take holistic view. The sectional committee is more a body of planning and approving. All the work which is done on the subject that will be done by dedicated working groups, so we can have more and more working groups, a group of 3-4 members having a good knowledge of subject and we can assign a standard to the group. The sectional committee will see the document that the document is as per rules and take the holistic view but the work of forming the document is the work of working group. So we need to have more active working groups, so that for each standard/ new work item, we have a working group of 3-4 members.

He also informed that a new IRD portal has been developed and now all the ISO ballots shall be circulated through IRD portal and requested all the members to give their comment through portals only. He again welcome chairperson and all the members in the meeting for fruitful discussion.

## 0.2 Opening remarks by the Chairperson

Shri B. Venkatraman, Chairperson, MTD-21 welcomed the members of the Committee to the 31st TC Meeting of Non-Destructive Testing Sectional Committee, MTD 21. During his address he informed that he has been associated with this committee for over two decades, this had been one of the most active committees where we have contributed nationally and professionally and this entity pays a very crucial role. As has been emphasized by HMTD, All the points were very much valid. He emphasized on greater participation of members in terms of time devoted to complete the documents on time. He highlighted that this field of non-destructive testing plays a catalytic role in practically all industrial and societal sectors. With a rapid growth in practically all industrial and infrastructural projects such as oil and gas, aerospace, energy, etc within the country, the role of NDE to ensure the safety, reliability and fitness for purpose is bound to increase exponentially. He pointed out that our standard will have a greater say and if we internationally harmonize, the acceptability also become larger, so in all these cases delivery of the standards within the time frame is very much important. He requested all the committee members / panel members to put their best effort to ensure that we do not have much back logs, give adequate opinion at the same time so that the standards can be taken forward. He appreciated that it is a very good initiative on the part of BIS to link up with important educational institutions in the country. He emphasized that apart from IITs and NITs, there are other good private institutions in the country and he requested to link up with such institutions as well because the amount of time that they devote is also very important. Also we need members who are passionate and who can also devote time, so it is a very welcome move. With the help of inputs from these members, he felt that the Standards can be rolled out faster. With these words he requested member secretary to proceed further with agenda points.

# Item1 CONFIRMATION OFTHE MINUTES OF THE LAST MEETING

Since, there were no comments on the minutes of 30th meeting of Non-Destructive Testing Sectional Committee, MTD 21 held on 20th December 2023, the Committee confirmed the minutes as circulated on portal dated 01-02-2024 as well as vide email dated 01-02-2024.

**Item 2 R&D Guidelines and TOR for R&D Project**

**2.1** The Committee noted the information given at 2.1 and 2.2 of the Agenda.

**Item 3 ROLLING ANNUAL ACTION PLAN FOR THE YEAR 2024-25**

**3.1** Documents at printing stage –

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| Sl No. | IS No. | Doc No. | IS Title | Current status | Decision of the committee |
|  | New | MTD/21/19953 | Non-destructive testing Eddy Current Testing. Determination of Electrical Conductivity of Non-magnetic Metals- | Validation documents are required before sending the finalized draft for printing.  The committee may please deliberate and decide. | Eddy current panel (Panel 4) to provide validation document within 30 days. The committee requested Ms Navita Gupta to coordinate with Panel 4 members. |
|  | New | MTD/21/21512 | Micro-focal radiography for industrial components recommended practices | Under print  The committee may please note. | The committee noted the information. |

**3.2** Following documents are pending for PD/WC:

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| Sl No. | IS No. | IS Year | IS Title | **Decision taken by the Committee in last Meeting** | **Current status** | Committee decision |
|  | New | MTD/21/17491 | Non-Destructive Testing of Steel Wires Automated Eddy Current Testing of Steel Wires for Detection of Surface Imperfections. | **Online panel**  **Meeting with the concerned members- Shri BhararBiradar, Dr. S T Arasu and Dr. Arvindkumarwithin 1 month. MS will coordinate. Document to be finalized during the meeting.**  **The document received shall be sent for WC for 2 months.** | **Panel meeting held on 16/03/2024. During the meeting, various parameters like scope, size and shape of notch were discussed and were modified. Panel were of the opinion that even after several modifications, still there are lot of modifications required in the draft. Panel requested Shri Bharat S Biradar to prepare a fresh draft. Modified draft is attached**  **The committee may please deliberate and decide.** | **The committee decided to circulate the draft document as P-draft for 21 days.** |
|  | New | MTD/21/17538 | Non-Destructive Testing of Bolts Studs And Fasteners | **The committee in the 29th meeting requested the following members to go through Appendix 4 and add their inputs w.r.to inclusion of the size of bolts in the scope of the standard and comments of Dr. Arumugam and submit final draft to BIS within 1 month for WC –**  **a.Dr. Arumugam**  **b. A shunmugavel ---(deputy head QC materials division, vssc, isro) as convener**  **c. Dr. Saratchandaran**  **d. Dr. S T Arasu**  **e. Dr P PNanekar**  **f. Dr. Arbinda Kumar.**  **During the last meeting committee requested the concerned members and MS to conduct a panel meeting and finalize the draft during that meeting.** | **No panel meeting done so far. Panel meeting to be done.**  **The committee may please note.** | **To conduct a panel meeting in next 30 days.** |

# 3.3 The Committee noted the information given at 3.3 of the Agenda.

**3.4 Following reaffirmed Standards on which further action is required**:

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| Sl No. | IS No. | IS Title | **Decision taken by the Committee in last Meeting** | **Action taken on last decision** | Decision taken by the committee |
| 1 | IS 12666 : 2018 | Performance assessment of ultrasonic flaw detection equipment (First Revision) | We have received comments on parts of IS 12666 which is placed below-    The committee after deliberation requested UST Panel -3 to go through the comment, review the standard and submit their comment/recommendations/ revised draft within 1 month time.  **Committee requested member secretary to provide copy of IS 12666 to the panel 3 and to do an online panel meeting within 1 month.** | **Minutes of meeting circulated to the members through portal as well as email dated 01/02/2024.**  **Copy of IS 12666 was provided to the panel. Panel meeting not held so far.**  **The committee may please deliberate and decide.** | **The committee requested Panel 3 to conduct a meeting within 1 month and discuss on the comments received and submit their recommendation.** |
| 2 | IS 12889 : 2018 | Performance evaluation of materials used for liquid penetrant test (First Revision) | **Comment received from Mr. Nerukar vide email dated 18.12.2023. Comment is enclosed.**    Committee requested panel 2 to conduct a panel meeting to discuss the above comment and submit report within 1 month. | **Minutes of meeting circulated to the members through portal as well as email dated 01/02/2024.**  **Panel meeting not held so far.**  **The committee may please deliberate and decide.** | **Committee requested panel 2 to conduct meeting and submit report within 1 month.** |
| 3 | IS 3657 : 2018 | Specification for radiographic image quality indicators (Second Revision) | In 29th meeting, The committee after deliberation alloted this standard for review to Dr. Menaka M from panel 5. Committee also requested Dr. Menaka to submit her comment/ recommendations/ revised draft within 1 month time.  During 30th meeting, **Dr. Menaka informed that she has reviewed will submit shortly.** | **No review report received.**  **Committee may please deliberate and decide.** | **The committee requested Smt. Menaka to submit the report within 1 month.** |
| 4 | IS 16241 : 2018 | Real-time radioscopic examination of weldments | **Committee decided to conduct a Panel meeting within 1 month co-ordinated by MS.** | **A panel meeting was conducted on 19.02.2024. Minutes of panel meeting is attached.**    **Dr. Menaka informed that ShriArumugam has made some corrections in figure 1. Shri Arumugam informed that he will submit the corrected document.**  **Panel decided to circulate the corrected document among committee members for comment.**  **Corrected documents not received so far. The committee may please deliberate and decide.** | **The committee decided to issue an amendment with modified figure 1.** |
| 5 | IS 17069 (Part 1) : 2019  ISO 14096-1:2005 | Non - Destructive testing - Qualification of radiographic film digitization systems: Part 1 definitions, quantitative measurements of image quality parameters, standard reference film and qualitative control | **Committee decided to conduct a Panel meeting within 1 month co-ordinated by MS** | **A panel meeting was conducted on 19.02.2024. Minutes of panel meeting is attached.**    **Dr. Menaka informed that there are no technical changes in the standard but there is change in format. Printed format is same as in ISO document. Format should be in line with the Indian standard.**  **As per IS 12, Any error or deviation shall be noted in the National forward.**  **The committee may please deliberate and decide.** | **The committee decided that no change is required in the document as the deviation is already reported in National forward clause.** |
| 6 | IS 17069 (Part 2): 2019  ISO 14096-2 : 2005 | Non - Destructive testing - Qualification of radiographic film digitization systems: Part 2 minimum requirements | **Committee decided to conduct a Panel meeting within 1 month co-ordinated by MS** | **-do-** | **-do-** |
| 7 | IS/ISO 3057 : 1998 | Non - Destructive testing - Metallographic replica techniques of surface examination | **Committee requested Shri KaleshNerukar to examine and conduct a meeting of panel 2 consist of Dr. Menaka as well. Within 1 month.** | **Panel meeting not held so far. Panel meeting to be done.**  **The committee may please note and decide.** | **Chairperson informed that Mr. MV Kupuswamy has good working knowledge on the subject.**  **The committee requested Mr. Nerukar to co-ordinate and review.** |

**Item 4 ANNUAL CALENDAR OF TECHNICAL COMMITTEE MEETINGS-**

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| **Meetings planned for FY 2024-25** | **Date & Time** | **Venue** |
| First Meeting | 19 July 2024, 11:00 AM | BIS HQ (ManakBhavan), New Delhi |
| Second Meeting | 22-10-2024, 10.30 AM | Chennai (Professional body) |
| Third Meeting | 24-03-2025, 11.00 AM | BIS HQ (ManakBhavan), New Delhi |

**The Committee noted the dates mentioned in annual calendar for technical committee meetings in 2024-25 and after deliberation decided to keep the next meeting in Chennai.**

## Item 5 ACTION TAKEN REPORT

## 5.1 Action taken on the pending documents continued from previous meetings -

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| **SlNo.** | **Subject** | **Decision taken by the Committee in last Meeting** | **Actions taken on the decisions of the last meeting** | **Decision taken** |
| **1** | MTD 21(05171) (**Revision of IS 11655:1986 by adoption of ISO 10893-3)**  ISO 10893-3 :2011 Non-destructive testing of steel tubes —Part 3:Automated full peripheral flux leakage testing of seamless and welded (except submerged arc-welded) ferromagnetic steel tubes for the detection of longitudinal and transverse imperfections.    Amendment 1: Published in 2019 is about "Change of dimensions of the reference notch"  Amendment 2: Published in 2020 is about "Change in acceptance criteria” | **During 29th meeting, the committee requested Panel 2 members - Mr.KaleshNerukar and Mr. Dinesh Gupta to review and submit their views/comments/ recommendation positively within 1 month.**  **If the members agreed to adopt ISO 10893-3, the document shall be sent for WC for 2 months.**  **Comment received from Mr.Nerukar vide email dated 18.12.2023. Mr.Nerukar has suggested for adoption of ISO 10893-3:2011 with comparison report. Copy of email is attached.**    **In the 30th meeting, Committee after deliberation decided to adopt ISO 10893- 3: 2011.** | **Draft is under preparation for WC.** | The committee noted the information. |
| **2** | **Adoption of ISO 9712: 2021**Non-Destructive Testing - Qualification and Certification of NDT Personnel in single Numbering and **Revision of IS 13805 : 2004**  General standard for qualification and certification of Non-Destructive testing Personnel – Specification | The Committee in 27th meeting decided to put hold on the adoption of IS 9712 as IS/ISO 9712 (single numbering)till the revised version of IS 13805 gets published as it was opined by Dr. P Nanekar that both ISO and Indian standard are different. Hence the committee decided to revise the Indian standard with modified scope, title and content.  **Comments received from Shri P Nanekar vide email dated 09.08.2023 is attached**    **The committee after deliberation requested Shri P Nanekar to submit the draft to BIS for wide circulation within 1 months.**  **On receipt of draft document, the same shall be sent for WC for 2 months.**  During 30th meeting, Shri Nanekar informed that he will submit final draft within 2 months.  **Committee requested MS to circulate the draft received for WC for 2 months.** | **Email dated 01.02.2024 was sent to Shri Nanekar to submit the final draft.**  **Final draft awaited.**  **The committee may deliberate and decide.** | **Dr. P. Nanekar will submit final draft within 2 months.**  **Committee requested MS to circulate the draft received for WC for 2 months.** |
| **3** | **Revision of IS 12148:1987** `Guidelines for requirements for non-destructive testing agencies’  **APPENDIX 2** | **The committee after deliberation requested Shri P. Nanekar to review the standard with existing ISO if any and submit his Input/ Comment/recommendation within 1 month.**  **Shri Nanekar confirmed to submit revised draft in 1month.**  **Committee requested MS to circulate the draft for WC for 1 month.** | **Minutes of meeting circulated to the members through portal as well as email dated 01/02/2024.**  **Draft awaited from Shri Nanekar.**  **The committee may deliberate and decide.** | **Dr. Nanekar confirmed to submit revised draft in 1month.**  **Committee requested MS to circulate the draft for WC for 2 month.** |
| **4** | **Revision of**  **IS 15404:2003 `Recommended practice for measuring ultrasonic velocity in materials’ and**  **IS 15435:2003 `Recommended practice for measuring thickness using ultrasonic method** | In the 29th meeting, Shri P. Nanekar suggested to  1)Adopt **ISO 16809 : 2017 (corresponding IS 15435 exist)**  **2)Adopt ISO 16831: 2012 (corresponding IS 15468 exist)**  **3) For** IS 15404:2003  Recommended to change the title to :  Recommended practice for measuring ultrasonic velocity in materials using conventional ultrasonic flaw detector.  **The committee after deliberation decided to** 1)Adopt**ISO 16809 : 2017 (corresponding IS 15435 exist) and send it for WC for 2months.**  **2)Adopt ISO 16831: 2012 (corresponding IS 15468 exist) and send it for WC for 2months.**  **3) Circulate the document with modified title to IS 15404: 2003 to committee members for 21 days. In case no comments received, the same shall be sent for WC for 30 days.**  **In the 30th meeting, MS informed that Comparison report is required before adopting the ISO standards.**  **Committee requested ShriNanekar to submit the comparison report.**  Dr.Nanekar informed that he will submit the review/comparison report within 1month.  Committee requested MS to process for adoption on receipt of review report. | **Email dated 01.02.2024 was sent to Shri Nanekarto submit the comparison report.**  **Report awaited.**  **The committee may deliberate and decide.** | **Dr. Nanekar informed that he will submit the review/comparison report within 1month.**  **Committee requested MS to process for adoption on receipt of review report** |
| **5** | **Revision of IS 15468:2004**`Performance evaluation of ultrasonic thickness gauge |
| **6** | **Revision of IS11626:2005**`Recommended practice for ultrasonic testing and acceptance for forging quality steel blooms (first revision) | The following comment received from Shri P. Nanekar vide email dated 09.08.2023 - Couldn’t locate IS 8791: 1978, IS 11626 : 2005 and BS EN 10228 in the standards shared for review and hence cannot offer any comments  **The committee after deliberation requested Member secretary to provide the mentioned standards IS 8791: 1978, IS 11626: 2005 and BS EN 10228 to Shri P. Nanekar and further requested Shri Nanekar to provide input/comment within 1 month.** | **Email dated 01.02.2024 was sent to Shri Nanekarto provide input/comment.**  **input/comment awaited.**  **The committee may deliberate and decide.** | **Member secretary informed that BS EN 10228 is not available in Library. Once it is available, it will be forwarded to Dr. Nanekar.**  **Committee noted the information.** |
| **7** | **Revision of IS 11630:2005** `Method for ultrasonic testing of steel plates for pressure vessels and special applications (first revision) | The following comments received from Shri P. Nanekar vide email dated 09.08.2023 –  IS 11630:2005 specifies backwall echo amplitude for setting the scanning sensitivity, while ISO 17577 specifies flat bottom hole as reference reflector. Hence these two standards are different.  The title of Indian standard may be changed to: ‘Method for ultrasonic testing of steel plates by backwall echo method’. In the scope, section 1.2, [‘pressure vessel application and special application] may be omitted.    **Proposal received for Revision of IS 11630: 2005 (METHOD FOR ULTRASONIC TESTING OF STEEL PLATES FOR PRESSURE VESSELS AND SPECIAL APPLICATIONS) in line with ASTM A 578 that covers on line UT.**  **The committee after deliberation requested Shri P. Nanekar to submit Draft document for Wide Circulation within 1 month.** | **Email dated 01.02.2024 was sent to Shri Nanekarto submit the draft.**  **Draft awaited.**  **The committee may deliberate and decide.** | **The Committee requested shri Nanekar to submit draft document within 1 month.** |
| **8** | **Formulation of new standard on Oxide layer thickness measurement with ultrasonic technique for boiler tube life assessment** | Comments received from Shri PNanekar vide email dated 09.08.2023 is attached.    **The committee after deliberation requested panel-3 for ultrasonic testing to discuss the comments received from Shri P. Nanekar in a panel meeting and submit a modified draft within 2 months.**  **The draft received shall be sent for WC for 2 months. In case no comments received, the same shall be sent for printing.**    In the 30th meeting, **Committee requested panel 3 to do a meeting within 1 month and complete the review. Committee requested MS to form a whatsapp group for all the panels and co-ordinate in conducting panel meetings.** | **Whats app group formed for the panels. Panel meeting not held so far. Panel meeting to be done.**  **The committee may note.** | **Committee requested panel 3 to do a meeting within 1 month and complete the review.** |
| **9** | **Revision of IS 12782:1989** `Guidelines for using thermography for monitoring of industrial components’ | **The committee after deliberation decided to assign this review to Panel 8 on thermographic testing who will submit their Input with draft document within 30 days for circulating the same to the committee members for 21 days.**  **The committee further requested panel 8 to submit their recommendations on what all ISO Standards on thermography can be adopted.**  ISO has published 5 standards , one on vocabulary o, general principles, characteristics of system ,General principles for thermoelastic stress measuring method  [ISO 10878:2013](https://www.iso.org/standard/46265.html?browse=tc)  Non-destructive testing — Infrared thermography — Vocabulary  [ISO 10880:2017](https://www.iso.org/standard/61881.html?browse=tc)  Non-destructive testing — Infrared thermographic testing — General principles  [ISO 18251-1:2017](https://www.iso.org/standard/61882.html?browse=tc)  Non-destructive testing — Infrared thermography — Part 1: Characteristics of system and equipment  [ISO 18251-2](https://www.iso.org/standard/75543.html?browse=tc)  Non-destructive testing — Infrared thermography — Part 2: Test method for integrated performance of system and equipment  [ISO 22290:2020](https://www.iso.org/standard/73038.html?browse=tc)  Non-destructive testing — Infrared thermographic testing — General principles for thermoelastic stress measuring method  **During 30th meeting, Dr.Menaka recommended to adopt.**  **Committee requested Dr.Menaka to specify the ISO standard need to be adopted and submit review/comparison report within 1 month.** | **Email dated 01.02.2024 was sent to submit the comparison report.**  **Report awaited.**  **The committee may deliberate and decide.** | **First 4 standards may be adopted. The committee requested Dr. Shwetang N Pandya and Ms Navita Gupta to review and submit report.** |
| **10** | **Revision of IS 7343:1986** `Code of practice for ultrasonic testing of ferrous welded pipes and tubular products (first revision) | An email dated 09.08.2023 received from Shri P. Nanekar with following recommendation -  **Recommended to adopt ISO 10893-8,9,11,12**  **The committee after deliberation requested panel 3 to do comparative study and submit their recommendation within 2 months.**  MS observation- There exists two separate standards for welded and seamless ultrasonic testing IS 6394 and IS 7343. Both of them having similar technical content in the standard. Is it not feasible to have one standard under a common tile and scope covering both?  During 30th meeting, Dr.Nanekar recommended to adopt the ISO standard.  Committee requested Dr.Nanekar to submit review/ comparison report within 1 month. | **Email dated 01.02.2024 was sent to Shri Nanekar to submit the comparison report.**  **Report awaited.**  **The committee may deliberate and decide.** | **The Committee requested Dr. Nanekar to submit review/ comparison report within 1 month.** |
| **11** | **Revision of IS 6394:2006** Code of practice for ultrasonic testing of seamless metallic tubular products by contact and immersion methods (*second revision*) | -do- |
| **12** | **MTD 21 (5046)**  Formulation of new standard on Code of practice for radiometric techniques  **APPENDIX 5** | **BIS proposed NWIP on "Gammatopographyof shielding structures" in ISO/TC 135/ SC5 mirror committee.**  **During the 16th plenary meeting of ISO/ TC 135/ SC 5 held on 2023-07-08 in Hybrid mode in Lisbon, Portugal , Dr.Menaka M, IGCAR - Expert and Shri Kunal Kumar, Member secretary of the mirror committee , paricipated virtually and made presentation on the NWIP.**  **The following were outcome of the meeting-**  **ISO/TC 135/SC 5 agrees to establish ISO/PWI “Gamma topography of shielding Integrity”.**  **Attendees agree to establish a new preliminary work item.**  **PWI is allocated to the new study group “Gamma topography of shielding Integrity” with convenor MsMenaka (BIS).**  **The PWI is supported by BIS, ANSI, JISC, SAC and DIN.**  **asks CM to initiate a call for experts.**  **The resolution was approved unanimously.**  **A ballot for call of experts was initiated by the committee manager of ISO/TC 135/SC 5, The experts were nominated by the NSBs.**  **A meeting was scheduled by the committee manager of ISO/TC 135/SC 5 with all the experts. However, meeting could not be held due to some technical issue. An email was circulated to all the experts to submit their input/comments on Draft toDr.Menaka.**  **Inputs received on the draft were communicated to Dr.Menaka.** | **17th planery meeting of ISO/TC 135/SC 5 committee held in Korea on 2/06/2024 in Hybrid mode.**  **The delegation, as approved by the Chairman MTD 21, consisting of Mrs Menaka M. of IGCAR as project leader, Dr.Alok Pandey of AERB, Member MTD 21 and ShriKunal Kumar, Member Secretary, MTD 21 attended the meeting.**  **The comments received from Japan and Germany. The manuscriptwill be updated asap and sent back to SC 5.**  **Minutes of meeting attached.**    **The committee may please note.**  **by August 15** | **The committee requested Smt. Menaka to submit updated manuscript by 15th August 2024.** |
| **13** | **Revision of IS 4853:1982**  `Recommended practice for radiographic inspection of fusion welded butt joints in steel pipes (first revision)’ | **The Committee after deliberation requested Panel 5 on radiographic testing to examine the Indian Standards IS 4853 and IS 1182 with respect to corresponding ISO 17636-1 and ISO 17636-2 and submit their recommendation for adoption/ revision within 1 month period of time.**  **If adoption of ISO recommended by the committee, the same shall be sent in wide circulation for 2 months.**  Committee requested member secretary to provide ISO standards to Dr.Arumugam.  Committee also requested MS to co-ordinate a meeting for panel 5 to discuss all the work allocated to panel 5 within 1 month. | **ISO standards were circulated through email as well as on whatsapp group.**  **A panel meeting was conducted on 19.02.2024. Minutes of panel meeting is attached.**    **Panel requested member secretary to provide draft document to Mr.Deepesh for necessary modification.**  **Draft documents were provided to Mr.Deepesh vide email dated 06.03.2024. Modified draft awaited.**  **The committee may please deliberate and decide.** | **The committee requested Mr. Rakesh and Mr. Deepesh to submit their views within 1 month.** |
| **14** | **Review of IS 1182: 1983**Recommended - Practice for radiographic examination of fusion welded butt joints in steel plates Second Revision | -do- |
| **15** | **Revision of IS 7666:1988** Recommended procedure for ultrasonic examination of ferritic castings of carbon and low alloy steel (first revision)’ | The committee in its previous meeting after detailed deliberation requested Panel-3 on ultrasonic to examine this Indian Standard IS 7666 with respect to corresponding ISO standards –  **ISO 4992-1:2020 Steel castings — Ultrasonic testing — Part 1: Steel castings for general purposes**  **ISO 4992-2:2020Steel castings — Ultrasonic testing — Part 2: Steel castings for highly stressed components**  and submit their recommendation within 2 months period of time.`  Shri P. NAnekar vide email dated 09.08.2023 –  Recommended to adopt **ISO 4992-1:2020 & ISO 4992-2:2020.**  **The committee after deliberation decided to adopt ISO 4992-1:2020 & ISO 4992-2:2020. The committee requested member secretary to circulate the documents in WC for 2 months.**  **During 30th meeting, member secretary informed that Comparison report is required before adopting the ISO standards. Shri Nanekar and Panel 3 may be requested to submit the comparison report.**  **Dr.Nanekar informed that he will submit the review/comparison report within 1month.** | **Email dated 01.02.2024 was sent to Shri Nanekar to submit the comparison report.**  **Report awaited.**  **The committee may deliberate and decide.** | **The Committee requested MS to process for adoption on receipt of review report from Dr. Nanekar.** |
| **16** | **Revision of IS 9902:2004**`  Recommended practice for leak testing (first revision) | **The committee after deliberation requested panel 6 for leak testing to examine IS 9902: 2004 with corresponding ISO standard and submittheir recommendation within 2 months period of time.**  There exist two Indian standards namely:   1. **IS 8973 : 1991**Leak detection techniques glossary First Revision for glossary of terms for leak testing  and the corresponding ISO standard is**ISO 20484 : 2017 .** The Indian standard has to be reviewed, and recomemndations are invited from panel members whether we can adopt ISO 20484:2017 and revise IS 8973:1991. 2. **IS 9902 : 2004**Recommended practice for leak testing First Revision exists for leak testing and the corresponding ISO standard are **ISO 20485: 2017** Non-destructive testing — Leak testing — Tracer gas method; ISO 20486 : 2017 Non-destructive testing — Leak testing — Calibration of reference leaks for gases; **ISO 3530 : 1979  Vacuum technology — Mass-spectrometer-type leak-detector calibration.**   **Committee requested Dr.Vivek Yelgaonkar to conduct a meeting of panel 6 within 1 month and discuss all the works allocated to the panel.** | **Minutes of meeting circulated to the members through portal as well as email dated 01/02/2024.**  **Panel meeting not held so far.**  **The committee may please deliberate and decide.** | **The Committee requested Dr. Vivek Yelgaonkar to conduct a meeting of panel 6 within 1 month and discuss all the works allocated to the panel.** |
| **17** | **Review of IS** 8791 : 1978  Code of practice for ultrasonic flaw detection of ferritic steel forgings | **The committee after deliberation requested Panel 3 on ultrasonic testing to examine IS 8791: 1978 with corresponding BS EN 10228 standard and submittheir Input/recommendation within 1 month period of time.**  There exists 4 parts of BSEN 10228 stated below -  BS EN 10228 - Non-destructive testing of steel forgings   * Part 1 [Non-destructive testing of steel forgings. Magnetic particle inspection](https://doi.org/10.3403/01695284U) * Part 2 [Non-destructive testing of steel forgings. Penetrant testing](https://doi.org/10.3403/01372814U) * Part 3 [Non-destructive testing of steel forgings. Ultrasonic testing of ferritic or martensitic steel forgings](https://doi.org/10.3403/01411331U) * Part 4 [Non-destructive testing of steel forgings. Ultrasonic testing of austenitic and austenitic-ferritic stainless steel forgings](https://doi.org/10.3403/02333711U)   During 30th meeting, Committee requested panel 3 to conduct a panel meeting within 1 month and discuss all the works allocated to the panel. | **Minutes of meeting circulated to the members through portal as well as email dated 01/02/2024.**  **Panel meeting not held so far.**  **The committee may please deliberate and decide.** | **The Committee requested panel 3 to conduct a panel meeting within 1 month and discuss all the works allocated to the panel.** |
| **18** | **Review of** IS 2478 : 1991  Glossary of terms relating to industrial radiology (Second Revision) | **Committee after deliberation requested Dr.Arumugam to conduct a panel meeting within 1 month and discuss the work allocated. MS will coordinate.** | **A panel meeting was conducted on 19.02.2024. Minutes of panel meeting is attached.**    **There is an ISO Standard, ISO 5576: 1997 for Industrial X-ray and gamma ray radiology – vocabulary.**  **Panel requested Mr.Deepesh to review the standard. Review report awaited from Mr.Deepesh.**  **The committee may please deliberate and decide.** | **The committee requested Mr. Rakesh to co-ordinate with Mr. Deepesh and review the standard within 30 days.** |
| **19** | **Review of** IS 3415 : 1998  Glossary of terms used in magnetic particle flaw detection (Second Revision) | Committee after deliberation requested Shri Kalesh Nerukar to conduct a panel 2 meeting within 1 month and discuss the work allocated and submit report. | **Minutes of meeting circulated to the members through portal as well as email dated 01/02/2024.**  **Panel meeting not held so far.**  **The committee may please deliberate and decide.** | **The committee requested Mr. Nerukar to conduct panel meeting and submit report by end of August 2024.** |
| **20** | **Review of**  IS 3658 : 1999  Code of practice for liquid penetrant flaw detection (Second Revision) | Committee after deliberation requested Shri Kalesh Nerukar to conduct a panel 2 meeting within 1 month and discuss the work allocated and submit report. | **Minutes of meeting circulated to the members through portal as well as email dated 01/02/2024.**  **Panel meeting not held so far.**  **The committee may please deliberate and decide.** | **The committee requested Mr. Nerukar to conduct panel meeting and submit report by end of August 2024.** |
| **21** | **Review of** IS 7810 : 1999  Code of practice for radiographic examination of resistance spot welds on aluminium and its alloys (First Revision) | Committee after deliberation requested Panel 5 members to conduct a meeting within 1 month to discuss the work allocated and submit report. | **A panel meeting was conducted on 19.02.2024. Minutes of panel meeting is attached.**    **Mr. Arumugam informed that the standard is very old and needs to be revised to be in line with the current practices. There is no ISO Standard on the subject. Panel will review the Standard.**  **The inputs received from all the three members shall be discussed in the next panel meeting.**  **Inputs not yet received from panel members.**  **The committee may please deliberate and decide.** | **The committee requested panel 5 to complete the review and submit report by end of August 2024.** |
| **22** | **Review of** IS 8973 : 1991  Leak detection techniques glossary (First Revision) | **Committee after deliberation requested Dr Vivek Yelgaonkar to conduct a Panel 6 meeting to discuss the work allocated and submit report.** | **Minutes of meeting circulated to the members through portal as well as email dated 01/02/2024.**  **Panel meeting not held so far.**  **The committee may please deliberate and decide.** | **The Committee requested Dr. Vivek Yelgaonkar to conduct a meeting of panel 6 within 1 month and discuss all the works allocated to the panel.** |
| **23** | **Review of** IS 12710 : 1989  Acoustic emission testing - Glossary of terms | Pending- to find expert to include in panel 9. | **-** | **Chairperson informed in the meeting that he will provide few names within a week.** |
| **24** | **Review of** IS 12860 : 1989  Metallic coating thickness by X-ray fluorescence technique method - Determination | **Committee after deliberation requested Dr. Arumugam to conduct a panel meeting within 1 month to discuss the work allocated and submit report. MS will coordinate.** | **Panel meeting was held on 19.02.2024. During meeting, Mr Arumugam informed that the standard is very old and needs to be revised to be in line with the current practices.**  **It was informed that there is an ISO Standard, ISO 3497: 2000.**  **Panel will review the Indian and ISO Standard.**  **No inputs received from the panel.**  **The committee may please deliberate and decide.** | **The committee requested panel 5 to conduct another panel meeting and complete the review work by end of August 2024.** |
| **25** | **Review of** IS 12965 : 1990  Glossary of terms used in electro magnetic (Eddy Current) testing | **Committee after deliberation requested Shri Bharat S Biradar to conduct a panel meeting within 1 month to discuss the work allocated and submit report. MS will coordinate.** | **Panel meeting held on 16/03/2024. Minutes of panel meeting is attached.**    However, IS 12965 could not be discussed in that meeting.  Panel decided to discuss this standard in next panel meeting.  The committee may please deliberate and decide. | **The committee requested Shri Bharat to conduct another panel meeting to complete the review work by end of August 2024.** |
| **26** | **Review of** IS 13190 : 1991  Recommended practice for eddy current examination by rotating probe method of round steel bars | **Committee after deliberation requested Shri Bharat S Biradar to conduct a panel meeting within 1 month to discuss the work allocated and submit report. MS will coordinate.** | **Panel meeting held on 16/03/2024. Minutes of panel meeting is attached.**    However, IS 13190 could not be discussed in that meeting.  Panel decided to discuss this standard in next panel meeting.  The committee may please deliberate and decide. | **The committee requested Shri Bharat to conduct another panel meeting to complete the review work by end of August 2024.** |
| **27** | **Review of** IS 14669 : 1999  Thermal neutron radiography - Recommended practices | **Committee after deliberation requested Panel 5 members to conduct a meeting within 1 month to discuss the work allocated and submit report.**  **MS will coordinate.** | **A panel meeting was conducted on 19.02.2024. Minutes of panel meeting is attached above.**  **It was informed that there is an ISO standard, ISO 12721: 2000 for NDT- Thermal neutron radiographic testing.**  **Dr Menaka will review the Indian standard and corresponding ISO Standard.**  **The inputs received from Dr Menaka shall be discussed in the next panel meeting.**  **No inputs received.**  **The committee may please deliberate and decide.** | **The committee requested Smt. Menaka to conduct a panel meeting and complete the review work by end of August 2024.** |
| **28** | **Review of** IS 14670 : 1999  Recommended practice for acoustic emission inspection during hydrostatic pressure testing of system | **Committee after deliberation requested Dr Menaka to conduct a meeting with panel 9 to discuss the work allocated and submit report.** | **Pending- to find expert to include in panel 9.** | **Chairperson informed in the meeting that he will provide few names within a week.** |
| **29** | **Review of** IS 2953 :1985  Glossary of terms used for interpretation of welds and castings radiographs First Revision | **Committee after deliberation requested Dr. Arumugam to conduct a panel meeting within 1 month to discuss the work allocated and submit report. MS will coordinate.** | **A panel meeting was conducted on 19.02.2024. Minutes of panel meeting is attached above.**  **It was informed that there is no ISO standard on the subject. Mr.Arumugam informed that he and Mr.Deepesh will review the standard.**  **The inputs received from Mr.Arumugam and Mr.Deepesh shall be discussed in the next panel meeting.**  **No inputs received.**  **The committee may please deliberate and decide.** | **The committee requested panel 5 to conduct another panel meeting and complete the review work by end of August 2024.** |

**Item 6 COMMENTS ON INDIAN STANDARS**

**6.1 The committee noted the information given at 6.1 of agenda and after deliberation requested UST Panel -3 to go through the comment, review the standard and submit their comment/recommendations by end of August 2024.**

**Item7 NEW PROPOSALS FOR STANDARDIZATION**

**7.1** The committee has noted the information as given in item no.**7.1** to **7.4** of the agenda of the meeting.

# Item 8 INTERNATIONAL ACTIVITIES

**8.1** Thecommittee noted the information given at item no. 8.1 and 8.2 of the agenda.

**8.3 Harmonizing of Indian standards with ISO standards- The committee noted the information given at item 8.3.1 and 8.3.2 of the agenda.**

**8.3.3 In the previous meeting, w**e have identified ISO standards for harmonization and also received harmonization recommendation from MTD 21 for few Indian Standards which are listed below:

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| **Sl. No.** | **ISO Number** | **Title** | **Panel for which the standard(s) is/are allotted for their review and recommendation to the committee** | **Previous actions** | **Decision of the committee** |
|  | ISO10893-1 : 2011 | Non-destructive testing of steel tubes — Part 1: Automated electromagnetic testing of seamless and welded (except submerged arc-welded) steel tubes for the verification of hydraulic leak-tightness | Panel-3   1. Shri ArbindKumar,BARC Mumbai (Convener) 2. Shri S Mahadevan,IGCAR, Kalpakkam; 3. Dr S.T Arasu, IGCAR; | Panel 3 convener was requested vide email dated 01-November-2021 to submit their review recommendation on adoption and reply was received on 24th November 2021. The comments received from Dr. Arbind Kumar are placed below. | To be discussed in the next meeting. |
|  | ISO 10893-4:2011 | Non-destructive testing of steel tubes — Part 4: Liquid penetrant inspection of seamless and welded steel tubes for the detection of surface imperfections | 1. Panel 2 | -------------do------------- | Committee requested Panel 2 to recommend with review report. |
|  | ISO 10893-5:2011 | Non-destructive testing of steel tubes — Part 5: Magnetic particle inspection of seamless and welded ferromagnetic steel tubes for the detection of surface imperfections | 1. Panel 2 | .-------------do--------    It is to inform to the committee that the corresponding Indian standard is IS 6752: 2012 ‘Code of practice for magnetic particle flaw detection of ferrous pipes and tubes” | To be discussed in the next meeting. |
|  | ISO 10893-6:2019 | Non-destructive testing of steel tubes — Part 6: Radiographic testing of the weld seam of welded steel tubes for the detection of imperfections | 1. Panel 5 | Panel convener was requested vide email dated 15th -November-2021 to submit their review and recommendation on adoption of these parts .Several Reminders were sent on 20th Dec 2021, 7th Jan 2022. 06th April 2022 and 3rd June 2022.  However the reply is awaited. | To be discussed in the next meeting. |
|  | ISO 10893-7:201 9 | Non-destructive testing of steel tubes — Part 7: Digital radiographic testing of the weld seam of welded steel tubes for the detection of imperfections | 1. Panel 5 | -------------do------------- | To be discussed in the next meeting. |
|  | ISO 10893-8:2011 | Non-destructive testing of steel tubes — Part 8: Automated ultrasonic testing of seamless and welded steel tubes for the detection of laminar imperfections | 1. Panel 5 | Panel convener Shri P NAnekar vide email dated 09.08.2023 recommended to adopt ISO 10893-8, ISO 10893-9, ISO 10893-11, ISO 10893-12. | The committee after deliberation decided to adopt ISO 10893-8.  Review report on requirement to adopt the ISO Standard is to be submitted by Shri Nanekar. |
|  | ISO 10893-9:2011 | Non-destructive testing of steel tubes — Part 9: Automated ultrasonic testing for the detection of laminar imperfections in strip/plate used for the manufacture of welded steel tubes | Panel-2   1. Shri P PNanekar, BARC, Mumbai (Convener); 2. Dr. M Arumugam, ; 3. Dr G K Sharma, IGCAR 4. Dr. Diwakar Joshi, ISNT 5. Dr Vivek Yelgoankar, BVG Nuclear | Panel convener Shri P NAnekar vide email dated 09.08.2023 recommended to adopt ISO 10893-8, ISO 10893-9, ISO 10893-11, ISO 10893-12. | The committee after deliberation decided to adopt ISO 10893-9  Review report on requirement to adopt the ISO Standard is to be submitted by Shri Nanekar. |
|  | ISO 10893-10 :2011 | Non-destructive testing of steel tubes — Part 10: Automated full peripheral ultrasonic testing of seamless and welded (except submerged arc-welded) steel tubes for the detection of longitudinal and/or transverse imperfections | 1. Panel3 | -------------do---------  IS 7343 & IS 6394 | To be discussed in the next meeting. |
|  | ISO 10893-11:2011 | Non-destructive testing of steel tubes — Part 11: Automated ultrasonic testing of the weld seam of welded steel tubes for the detection of longitudinal and/or transverse imperfections | Panel-2   1. Shri P PNanekar, BARC, Mumbai (Convener); 2. Dr. M Arumugam, ; 3. Dr G K Sharma, IGCAR 4. Dr. Diwakar Joshi, ISNT 5. Dr Vivek Yelgoankar, BVG Nuclear | Panel convener Shri P NAnekar vide email dated 09.08.2023 recommended to adopt ISO 10893-8, ISO 10893-9, ISO 10893-11, ISO 10893-12. | The committee after deliberation decided to adopt ISO 10893-11  Review report on requirement to adopt the ISO Standard is to be submitted by Shri Nanekar. |
|  | ISO 10893-12:2011 | Non-destructive testing of steel tubes — Part 12: Automated full peripheral ultrasonic thickness testing of seamless and welded (except submerged arc-welded) steel tubes | 1. Panel 3 | Panel convener Shri P NAnekar vide email dated 09.08.2023 recommended to adopt ISO 10893-8, ISO 10893-9, ISO 10893-11, ISO 10893-12. | The committee after deliberation decided to adopt ISO 10893-12  Review report on requirement to adopt the ISO Standard is to be submitted by Shri Nanekar. |

**8.4** The committee noted the information given in item no. 8.4

# Item 9 Composition of the committee

**9.1 to 9.3** The committee noted the information given in item no. 9.1, 9.2, 9.3 and 9.5 of the agenda.

**9.4** The committee noted the composition of MTD 21 Technical committee given at item no. 9.4, Annex-1 of Agenda and after deliberation decided to withdraw the membership of following member organization (Not attended last 2 meetings and no response on email/ phone received) –

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| **Sl. No.** | **Name of the Organization** | **Represented by** |
|  | Centre for Design and  Manufacture BARC, Mumbai | Shri R. K Gupta (Principal Member)  Shri Lalit Mohan (Alternate Member)  Shri Ashutosh Srivastava (Young Professional) |
|  | Ministry of Commerce and Industry, Department for Promotion of Industry and Internal Trade, New Delhi | Shri T.S.G.Narayannen (Principal Member)  Shri S.K.Jain (Alternate Member) |
|  | NTPC , Delhi | Shri D.D.N. Verma (Principal Member) |

**Item 10 Nomination of experts in ISO committees/ sub committees**

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| --- | --- | --- | --- | --- | --- |
| **Sl No.** | **Name of Panel** | **Scope of Panel** | **Composition** | **Corresponding ISO Committee/ Sub committee** | **Nominated Expert** |
| **1** | Panel -2 | Surface Method including Visual testing, Liquid penetrant Testing and Magnetic particle Testing(SC2) | 1. Shri Kalesh A. Nerukar (Convener) of M/s Pradeep Metal Treatment Chemicals Pvt Ltd. Thane.  2. Mr. Rakesh from BHEL, Hyderabad  3. Mr Dinesh Gupta, | ISO/ TC 135/ SC 2 | Shri Kalesh A. Nerukar |
| **2** | Panel-3 | Ultrasonic Testing(SC3) | 1. Dr.P P Nanekar, BARC, Mumbai (Convener); 2. Dr. G K Sharma, IGCAR 3. Dr. Saratchandran of M/s VSSC, ISRO 4. Dr. P. K. Dubey, NPL | ISO/ TC 135/ SC 2 | Dr.P P Nanekar, BARC, Mumbai |
| **3** | Panel-4 | Eddy Current Testing(SC4) | 1. Dr. Arbind Kumar, Mumbai (Convener) 2. Dr S.T Arasu, IGCAR; 3. Shri Bharat Biradar of M/s Technofour , Pune, Maharashtra 4. Mr. R. H. Vagasiya, Retired from NPCIL 5. Mrs. Navita Gupta | ISO/ TC 135/ SC 2 | Dr. Arbind Kumar (subject to his confirmation)    Alternate - Shri Bharat Biradar |
| **4** | Panel-5 | Radiographic Testing (SC5) | 1. Dr. M Arumugam,VSSC, ISRO (Convener) ; 2. Dr. M Menaka, IGCAR 3. Shri M.V.Kuupuswamy, IGCAR 4. Shri Deepesh, BHEL | ISO/ TC 135/ SC 2 | Dr. M Menaka, IGCAR |
| **5** | Panel-6 | Leak Testing (SC6) | * + - 1. Dr. Vivek Nagesh Yelgaonkar (Convener)       2. Shri N.Raghu in personal capacity       3. Mr. Venkatramani, Ex IPR | ISO/ TC 135/ SC 2 | Dr. Vivek Nagesh Yelgaonkar |
| **6** | Panel-7 | Personnel Qualification (SC7) | 1. Dr. P PNanekar , BARC (Convener) 2. Ms Navita Gupta, Satyakiran School of NDT 3. Dr. M T Shyamsundar, VP, ISNT 4. Shri Amit Sen of M/s AERB, Mumbai | ISO/ TC 135/ SC 2 | Dr. P Nanekar (subject to his confirmation).  Alternate- Ms Navita Gupta |
| **7** | Panel -8 | Thermographic testing (SC8) | 1. Dr. M Menaka, IGCAR (Convener) 2. Dr Ravi Babu, IIT Delhi 3. Shwetang N Pandya, IPR 4. Mr. Dinesh Gupta | ISO/ TC 135/ SC 2 | Shwetang N Pandya |
| **8** | Panel-9 | Acoustic emission testing (SC9) | 1. Dr. C K Mukhopadhyay in Personal Capacity, Ex-IGCAR (Convener)- 2. Dr ravibabu – for itmmec CENTRE IIT DELHI - | ISO/ TC 135/ SC 2 | Dr. C K Mukhopadhyay |

**Item 11 ANY OTHER BUSINESS**

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

**REVIEW ANALYSIS OF INDIAN STANDARD**

**(To be submitted to the Sectional Committee)**

1.**Sectional Committee No. & Title: MTD 21**

2.**IS No:**

1. **Title:**
2. **Date of review:**
3. **Review Analysis**
4. **Status of standard(s), if any from which assistance had been drawn in the formulation of this IS.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Standard**  **(No. & Title)** | **Whether the standard has since been revised** | **Major changes** | **Action proposed** |
|  |  |  |  |

1. **Status of standards referred in the IS**

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| --- | --- | --- | --- |
| **Referred standards(No. & Title)** | **IS No. of this standards since revised** | **Changes that are of affecting the standard under review** | **Action proposed** |
|  |  |  |  |

1. **Any other standards available related to the subject & scope of the standard being reviewed (International/regional/other national/association/consortia, etc.**

**or of new or revision of existing Indian Standard)**

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| --- | --- | --- |
| **Standard**  **(No. & Title)** | **Provisions that could be relevant while reviewing the IS** | **Action proposed** |
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1. **Technical comments on the standard received, if any**

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| --- | --- | --- | --- |
| **Source** | **Clause of IS** | **Comment** | **Action proposed** |
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1. **Information available on technical developments that have taken place (on product/processes/practices/use or application/testing/input materials, etc)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Source** | **Development** | **Relevant clause of the IS under review**  **that is likely to be impacted**  **(Clause & IS No.)** | **Action proposed** |
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1. **Issues arising out of changes in any related IS or due to formulation of new**

**Indian Standard**

|  |  |  |  |
| --- | --- | --- | --- |
| **Related IS and its Title**  **(revised or new)** | **Provision in the IS under review that would be impacted & the clause no. or addition of new clause/provision** | **Changes that may be necessary in the Standards under review** | **Action proposed** |
|  |  |  |  |

1. **Any consequential changes to be considered in other IS**

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| --- | --- |
| **Related IS to get impacted** | **Requirements to be impacted** |
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1. **Any other observation:**
2. **Recommendations:**