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# भारतीय मानक ब्यूरो

## BUREAU OF INDIAN STANDARDS

### AGENDA

Meeting	Date and Day	Time
29 <sup>th</sup> Meeting of Renewable Energy Sources Sectional Committee, MED 04	17 December 2024 (Tuesday)	11:00 hrs
<b>Chairperson/Convener:</b> Dr. A. K. Tripathi, Scientist 'G', Ministry of New and Renewable Energy, New Delhi		
<b>Member Secretary:</b> Ms Ankita Vidhyarthi, Scientist 'D'/Joint Director, Bureau of Indian Standards, New Delhi		
<b>Meeting Link:</b> <a href="https://bismanak.webex.com/bismanak/j.php?MTID=md6bf75dd26953ff8c0269876a61f1281">https://bismanak.webex.com/bismanak/j.php?MTID=md6bf75dd26953ff8c0269876a61f1281</a>		
<b>Meeting number:</b> 2518 151 4688		
<b>Password:</b> <b>MED@123</b>		

#### ITEM 0 WELCOME AND OPENING REMARKS

0.1 Welcome & Opening remarks by Head (Mechanical Engineering Department)

0.2 Welcome & Opening remarks by Chairperson, MED 04

#### ITEM 1 CONFIRMATION OF THE MINUTES OF THE LAST MEETING

The Minutes of the 28th Meeting of Renewable Energy Sources Sectional Committee held on 24 September 2024 were circulated to all the members vide email dated 04 December 2024.

No comments have been received.

*The Committee may CONFIRM the Minutes.*

#### ITEM 2 SCOPE AND COMPOSITION OF THE SECTIONAL COMMITTEE

##### 2.1 Scope

Formulation of standards in the field of Renewable energy sources such as solar energy, bio-gas energy, bio-mass energy etc.

*The Committee may PROPOSE any addition/deletion required in the scope.*

## 2.2 Composition of the Committee

**2.2.1** The following directions have been received from the Competent Authority of the Bureau for reviewing the composition of the Sectional Committee:

- a) Associations of Micro and Small Industries are to be co-opted.
- b) New members are to be co-opted who are expected to contribute to emerging new technology.
- c) Efforts should be made to include representatives of different product segments as per the scope of the Committee.
- d) Major Government purchasing organisations like DGS&D, RDSO, CPWD, Defence etc. are to be given representation in the Committees wherever applicable.
- e) Members who have not attended two consecutive meetings may be considered for removal.
- f) Examine the justification and need for the continuation of a member in an individual capacity who is continuing for more than six years in a sectional committee.



*The committee may NOTE.*

**2.2.2** As per directive of the Ministry of Consumer Affairs, Food & Public Distribution, Govt. of India, which is the Controlling Ministry of the Bureau the composition of Sectional Committees be reviewed to replace the persons who are continuing for longer periods, to co-opt the members/organisations which are capable of contributing in emerging new technologies and new areas of work and strength of the manufacturers should be restricted to **1/3** of the total strength of the Technical Committees.

**2.2.3** The present composition of the Renewable Energy Sources Sectional Committee, MED 04 is given in **Annex A**. The list also shows the attendance of the members in the last three consecutive meetings. As directed by CA, members who have not attended **02** consecutive meetings of MED 04 are to be terminated from the committee

*The committee may NOTE.*

## 2.3 Co-options & the Revised Nominations

Sl No.	Name of Organisation	Members details	Remarks
1)	Indian Institute of Technology Jodhpur, Jodhpur	Dr Shobhana Singh (Principal Member)	Email received for Co-option in MED 04 Committee on 25 Nov 2024.   Email_MED 04, Nomi...  Nomination_MED04_...

The committee may *DELIBERATE* and *DECIDE*.

## 2.4 Programme of Work

The present programme of work of the Renewable Energy Sources Sectional Committee, MED 04 is attached below. (No.of Published Standards is **30**)

 MED 04\_POW\_DEC 2024.pdf

The committee may *NOTE*.

### 2.4.1 Standards Under Certification

As of date, the following standards prepared by MED 04 are under certification:

SI No.	IS Number	IS Title	No. of Licences
1)	IS 12933 (Part 1) : 2003	Solar flat plate collector - Specification: Part 1 requirements (Second Revision)	22
2)	IS 16544 : 2016	All glass evacuated tubes solar water heating system	15
3)	IS 13152 (Part 1): 2013	Portable solid bio - Mass cookstove (Chulha) - Specification (First Revision)	01
<b>Total</b>			<b>38</b>

The committee may *NOTE*.

## ITEM 3 ROLLING ANNUAL ACTION PLAN FOR THE YEAR 2024-25

3.1 Proposed meeting Calendar for FY 2024-25 is as follows:

Committee	Q1 2024-25	Q2 2024-25	Q3 2024-25	Q4 2024-25
	27th Meeting	28th Meeting	29th Meeting	30th Meeting
	June	September	December	February
<b>MED 04</b>	26 June Wednesday	25 September Wednesday	17 December Tuesday	7 February Friday

The Committee may *NOTE*.

**3.2 Standards National Action Plan (SNAP) 2022-2027**

[SNAP BOOK 2022-2027](#)

The Committee may note and identify/suggest the subject areas relevant to the scope of this Committee and decide.



**ITEM 4 ACTION TAKEN ON MINUTES OF THE LAST MEETING**

**4.1** The Actions taken on decision of last meeting of Renewable Energy Sources Sectional Committee, MED 04:

Sl No.	Decision of 28 <sup>th</sup> Meeting	Action Status since the last meeting	Remarks
1)	<p>Panel meeting for discussion on resolving comments received on IS 16544 was to be held. . As recommended by MS, the present panel members decided to hold the panel meeting on 01.10.2024. The committee agreed on it.</p>	<p>The Panel meeting was held on 01.10.2024.</p> <ul style="list-style-type: none"> <li>■ Fwd_ [MED 04] Regarding revis...</li> </ul> <p>The recommendations of the Panel on IS 16544 Amdt 2 are as -</p> <ul style="list-style-type: none"> <li>■ <a href="#">IS 16544 comment.docx</a></li> <li>■ Recommendations_IS 16544.pdf</li> </ul>	<p>The Committee may deliberate and decide.</p>
<p><b>Background</b></p> <p>Comments were received regarding Amd 2 to IS 16544 from CMD 1 and Manak Manthan held by Bangalore Branch Office.</p> <p><a href="#">Email_20_sep_2023.pdf</a>  <a href="#">Report on Manak Manthan .xlsx</a>  <a href="#">Email for panel meeting IS 16544_04 OCT 2023.pdf</a>  <a href="#">Email_AMD_IS_16544_19_DEC_2023.pdf</a>  <a href="#">Email_AMD_IS_16544_20_FEB_2024.pdf</a>                      ■ <a href="#">email_Proposal for concurrent running of IS 16544_2016 with and without Amendment ...</a></p> <p>Discussion of the panel during the meeting held on 10 October 2023 could not be done as majority of the members were not present during the meeting.</p> <p>Panel Meeting reminder was sent to the members by MS vide email dated 08.08.2024.</p> <p><a href="#">EMAIL_08-08-2024_PANEL_MEETING_MED04_REMINDER.pdf</a></p>			


	<p>The Panel meeting was organised by Shri Vikrant Yadav, NISE on 14.08.2024.</p> <p><a href="#">EMAIL_VIKRANT_YADAV_PANEL_MEETING_16-08-2024.pdf</a></p> <p>However, no actions could be taken in the meeting due to absence of the other members.</p> <p>Subsequently, comments from the members were invited by Shri Vikrant Yadav. Comments were received from Shri Asim Joshi via email dated 22.08.2024.</p> <p><a href="#">Email_Asim_Joshi_22-08-2024.pdf</a></p> <p>The constitution of the panel is as-</p> <ul style="list-style-type: none"> <li>a) Dr. Avadhesh Yadav, DDG NISE (<i>Convenor</i>)</li> <li>b) Prof. Santanu Bandopadhyay of IIT Mumbai</li> <li>c) Prof Anagha Pathak of RTC Pune</li> <li>d) Shri Vikrant Yadav from NISE.</li> <li>e) Shri Asim Kumar Joshi, SPRERI</li> <li>f) Shri Vikram Dhaka, MNRE</li> <li>g) Prof K. Srinivas Reddy, IIT Chennai.</li> </ul>	
2)	<p>Panel meeting regarding the revision draft of IS 12933 (Part - 1, 2 &amp; 5) ‘solar flat plate collectors’ was to be held. . As recommended by MS, the present panel members decided to hold the panel meeting on 01.10.2024. The committee agreed on it.</p>	<p><i>The Panel meeting was held on 01.10.2024.</i></p> <p><i>■ Fwd_ [MED 04] Regarding revis...</i></p> <p><i>The drafts provided by the Panel regarding revision of IS 12933 (Part - 1, 2 &amp; 5) ‘solar flat plate collectors’ are as-</i></p> <ul style="list-style-type: none"> <li><a href="#">IS 12933-1_wc.docx</a></li> <li><a href="#">IS 12933-2_wc.docx</a></li> <li><a href="#">IS 12933-5_wc.docx</a></li> </ul> <p><i>The Committee may deliberate and decide.</i></p>
<p><b>Background</b></p> <p>Suggestions/Comments of Panel regarding revision draft of IS 12933 (Part - 1, 2 &amp; 5) ‘solar flat plate collectors’ were incorporated by MS and circulated to the committee. However, no comments have been received from the committee.</p> <p><a href="#">IS 12933 (Part 1) changes identified.docx</a></p> <p><a href="#">IS 12933 (Part 2) changes identified (1).docx</a></p> <p><a href="#">IS 12933 (Part 5) changes identified.docx</a></p> <p>Comments by Member Secretary sent to members vide email dt.- 09-05-2023(enclosed here for reference).</p> <p><a href="#">Email_IS_12933_9_5_2023.pdf</a></p> <p>Terminologies pending in the ISS were to be incorporated. Comparison between withdrawn IS 12934: 1990 and IS/ISO 9488: 2023 done by MS and missing definitions were identified.</p>		

	<p><a href="#">Solar_MissingDefinition_20022024.xlsx</a></p> <p>During 27th meeting Prof. Pathak informed the committee that they will hold Panel meetings and submit the final working draft on all the IS within one month.</p> <p>The committee agreed to it and decided that the panel will also incorporate the terminologies pending in all the three IS due to withdrawal of IS 12934.</p> <p>Comments were received from Shri Manjunath Ullur of M/s Emmvee Photovoltaic Power Private Limited.  <a href="#">IS 12933 (Part 2) changes identified (002).docx</a>.  <a href="#">Email IS 12933.pdf</a></p> <p>Reminder email for conducting the panel meeting was sent on 08<sup>th</sup> August 2024.  <a href="#">EMAIL IS 12933-08-08-2024.pdf</a></p> <p>The constitution of the panel is as-</p> <ul style="list-style-type: none"> <li>a) Dr. Avadhesh Yadav, DDG NISE (<i>Convenor</i>)</li> <li>b) Prof. Santanu Bandopadhyay of IIT Mumbai</li> <li>c) Prof Anagha Pathak of RTC Pune</li> <li>d) Shri Vikrant Yadav from NISE.</li> <li>e) Shri Asim Kumar Joshi, SPRERI</li> <li>f) Shri Vikram Dhaka, MNRE</li> <li>g) Prof K. Srinivas Reddy, IIT Chennai.</li> </ul>		
<p>3)</p>	<p>The Committee decided to formulate the following panel on Solar Cookers.</p> <ul style="list-style-type: none"> <li>a) Prof S. K. Samdarshi, Central University of Jharkhand, Ranchi.</li> <li>b) Shri Vikrant Yadav, NISE</li> <li>c) Prof. Anish Modi, IIT Mumbai</li> <li>d) Prof. S.K Shukla, IIT-BHU</li> <li>e) Shri Asim Joshi, SPRERI.</li> </ul> <p>Convenor of the panel Prof. S.K Samdarshi decided to hold the panel meeting on 16th October at 11 am. The committee agreed to it.</p>	<p><i>The meeting reminder was sent to the Panel on 15.10.2024. However , the panel meeting could not be carried out due to absence of the members.</i></p> <p>■ <i>Panel meeting reminder Solar co...</i></p> <p><i>Subsequently the panel meeting was held on 02.12.2024.</i></p> <p>■ <i>Panel meeting reminder -2 solar ...</i></p> <p><i>The recommendations of the panel are as -</i></p> <p>📄 <i>Draft Minutes of Solar cookers p...</i></p>	<p><i>The Committee may deliberate and decide.</i></p>
<p><b>Background</b></p> <p>Shri Asim Kumar Joshi, SPRERI informed that comparative study between test methods</p>			

	<p>specified in Literature (new) and test methods specified by MNRE (old) is in progress. However, Shri Joshi was not available in the last two meetings. As directed by the committee, reminder emails were sent on 16.10.2023, 20.02.2024 &amp; 25.04.2024. <a href="#">Email Dish Solar Cooker 16 OCT 2023.pdf</a> <a href="#">Email Dish Solar Cooker 20 FEB 2024.pdf</a> <a href="#">Email Dish Solar Cooker 25 APR 2024.pdf</a> Also, a proposal regarding COR of solar cookers was received for a NWIP from Dr S. K. Samdarshi, Professor and Head, Department of Energy Engineering, Central University of Jharkhand, Ranchi. The proposal was circulated to the committee in the 09th meeting and also vide email dated 05.02.2024. <a href="#">Email cor of solar cooker 05 feb 2024.pdf</a> A meeting was also organized on 28.05.2024 by MS between Shri Asim Joshi and Dr Samdarshi for discussion regarding the applicability of COR in the draft to be prepared by Shri Joshi. The issue was discussed and Information was exchanged during the meeting, however, no definite conclusion was reached.</p> <p>Reminder email for submission of the draft was sent to Shri Joshi on 07.08.2024. <a href="#">EMAIL SOLAR COOKER 07-08-2024.pdf</a> Also, Shri Joshi was provided the indigenous template for Standards via the same email. Draft is awaited.</p>		
4)	<p>The committee decided to reconstitute the panel on ‘Performance Guidance for Solar Air Heating for Industrial Process Heat Applications/Solar Dryer’ as follows - a) Prof Anish Modi, IIT Mumbai (Convenor) b) Prof Anagha Pathak of RTC Pune c) Dr Avadhesh Yadav, DDG NISE d) Shri Vikrant Yadav from NISE. e) Shri Vikram Dhaka, MNRE f) Shri Asim Kumar Joshi, SPRERI.</p> <p>Shri Vikrant Yadav informed that the initial draft will be provided by him around the middle of October and the panel meeting will be organized after that.</p>	<p>The draft was provided by Shri Vikrant Yadav vide email dated 28.10.2024,</p> <p> Re_ [MED 04] Regarding draft...  Draft Solar Air Heatert Testing ...</p>	<p><i>The committee may deliberate and decide.</i></p>

<p>Re_ [MED 04] Regarding ... Draft Solar Air Heatert Tes...</p>		
<p><b>Background</b></p> <p>During its 24th Meeting, The Committee decided that a Panel may go through the draft on ‘Performance Guidance for Solar Air Heating for Industrial Process Heat Applications/Solar Dryer’ and provide their comment or suggestions within 01 month:  <a href="#">draft standard provided by Shri Palaniappan.pdf</a>                  The committee reconstituted the panel as follows in the last meeting-</p> <ul style="list-style-type: none"> <li>a) Prof Anagha Pathak of RTC Pune (<i>Convener</i>)</li> <li>b) Dr Avadhesh Yadav, DDG NISE</li> <li>c) Shri Vikrant Yadav from NISE.</li> <li>d) Shri Vikram Dhaka, MNRE</li> <li>e) Shri Anish Modi, IIT Mumbai</li> <li>f) Shri Asim Kumar Joshi, SPRERI.</li> </ul> <p>Shri Vikrant Yadav and Dr. Avadhesh Yadav, MNRE were nominated as core members of the Panel. Shri Vikrant Yadav informed the committee that they will submit the draft within one month.</p> <p>Reminder for Panel meeting send vide email dated- 24.05.2023, 19.12.2023 20.02.2024, and 08.08.2024.</p> <p><a href="#">EMAIL DRAFT SOLAR DRYER 08-08-2024.pdf</a>  <a href="#">Email Reminder 1 24 may 2023.pdf</a>  <a href="#">Email reminder 2 amd 19 dec 2023.pdf</a>  <a href="#">Email reminder 2 16544 amd 19 dec 2023.pdf</a>  <a href="#">Email reminder 3 IS 16544 20 FEB 2024.pdf</a></p>		
<p>5) The Committee decided that Panel as per Sl. No. 1 may provide their recommendation on it.</p>	<p><i>The ISS was Published in October 2024 due to non-receipt of comments.</i></p>	<p><i>The committee may deliberate and decide.</i></p>
<p><b>Background</b></p> <p>The Committee decided to send Draft MED 04 (21276) for Manifold Type Storage Water Tank for All Glass Evacuated Tubes Solar Collector Systems for printing.  <a href="#">doc. 21276.pdf</a></p> <p>The Committee decided that detailed discussion needs to be done related to material and hence the same may be sent for comments by email and will be discussed during the next committee meeting.</p> <p>One comment had been received. pl see Item 5.                  The committee decided to accept the comments, however, the grades/varieties of "aluminum/stainless steel/FRP are to be provided by the committee.                  An email reminder dated 08.08.2024 was sent to the committee for the same</p>		



	<a href="#">EMAIL_REMINDER_21276_08-08-2024.pdf</a>		
6)	<p>Dr A. R. Shukla, Biogas forum recommended adding Dr S. K. Khuntia (In personal capacity) to be added in the panel. The Committee agreed to it.</p> <p>As recommended by MS, the present panel members decided to hold the panel meeting on 17 Oct 2024 at 11 am. The committee agreed on it</p>	<p><i>The meeting link was sent to the panel members for the meeting on 1t October, 2024.</i></p> <p> [MED 04, Panel 06-Meeting] ...</p> <p><i>However , the meeting could not be carried out due to the absence of members.</i></p>	<p>The committee may deliberate and decide.</p>
	<p><b>Background</b></p> <p>Reminders for the panel meeting were sent via e-mail dated 14.09.2023 and 21.02.2024 and 08.08.2024.</p> <p><a href="#">EMAIL IS 13152_08-08-2024.pdf</a>  <a href="#">Email_is_13152_14-09-2023.pdf</a>  <a href="#">Email_is_13152_21-02-2024.pdf</a></p> <p>Dr Shanmugam to provide the contact details for nomination of member from IMMT  Draft is awaited from the panel.</p> <p>Panel was constituted for providing draft revision of IS 13152 (Part 1): 2013 as follows:</p> <ol style="list-style-type: none"> <li>Dr A.R Shukla of Biogas Forum (<i>Convener</i>)</li> <li>Dr S.K Tyagi of IIT Delhi</li> <li>Ms Svati Bhogale of M/s TIDE</li> <li>Asim Kumar Joshi SPRERI</li> <li>A representative of CSIR-IMMT</li> <li>Shri Ankit Gupta CSIR - NEERI, Nagpur</li> <li>Ms. Poonam Prasad CSIR - NEERI, Nagpur</li> </ol> <p>Convenor of the Panel Dr. A.R. Shukla informed that the Panel will submit the draft within 1 month.</p>		
7)	<p>The Committee decided to reconstitute the panel as follows</p> <p>—</p> <ol style="list-style-type: none"> <li>Prof SK Shukla, IIT BHU (<i>Convenor</i>)</li> <li>Shri Vikram Dhaka, MNRE</li> <li>Dr Adinath Funde, RTC, Pune</li> <li>Shri Hiren Chandra Bohra, MNRE</li> <li>Prof Santanu Bandopadhyay of IIT Mumbai</li> <li>Shri K. Ravi Kumar from IIT</li> </ol>	<p><i>The draft is awaited from the panel</i></p>	<p><i>The committee may deliberate and decide.</i></p>

<p>Delhi</p> <p>g) Dr Chandan Bannerjee from NISE</p> <p>h) Smt Poonam Prasad from CSIR-NEERI</p> <p>i) Shri Asim Kumar Joshi of SPERI</p> <p>j) Representative from IIT Roorkee</p> <p>k) Representative from SIBE</p> <p>As recommended by MS, the present panel members decided to hold the panel meeting on 18 Oct 2024 at 11 am.</p> <p><i>The Committee agreed on it.</i></p>		
<p><b>Background</b></p> <p>Chairman suggested for formulation of standard on ‘Terminologies for Renewable Energies’. Committee also suggested including Calculations in the draft standard. Pre standardization document to be provided by MNRE.</p> <p>The Committee constituted the Panel as follows-</p> <p>a) Shri Hiren Chandra Bohra, MNRE</p> <p>b) Shri Vikram Dhaka, MNRE</p> <p>c) Dr Adinath Funde, RTC, Pune</p> <p>d) Dr SK Shukla from IIT BHU</p> <p>e) Shri Santanu Bandopadhyay of IIT Mumbai (New nomination received in place of Prof Kedare)</p> <p>f) Shri K. Ravi Kumar from IIT Delhi</p> <p>g) Dr Chandan Bannerjee from NISE</p> <p>h) Smt Poonam Prasad from CSIR-NEERI</p> <p>i) Shri Asim Kumar Joshi of SPERI</p> <p>j) Representative from IIT Roorkee</p> <p>k) Representative from SIBE</p> <p>Shri Hiren Chandra Bohra (<b>Convenor</b>) informed that he will contact NIWE for the nomination and the panel will submit their report within one month.</p> <p>Reminder for the panel meeting was sent on 08.08.2024.</p> <p><a href="#">EMAIL Terminologies for Renewable 08-08-2024.pdf</a></p> <p>Draft awaited from the panel.</p>		

**4.2 Standards Under Development**

SI No.	IS No.	Title	Status	Remarks
1)	MED/04/25025 [IS 16648 (Part 5): 2017]	Concentrated solar thermal - Specification Part 5 Test methods Amendment No.- 2	In Wide Circulation stage	<p>Pending for approval for WC stage .</p> <p>Approval request sent to chairperson via mail.</p> <p><a href="#">Email_reminder_Regarding_Amd. 2 of IS 16648-5.pdf</a>  <a href="#">EMAIL_IS 16648-5_07-08-2024-REMINDER.pdf</a></p> <p>Again approval mail sent to the chairperson.</p> <p>EMAIL_MED04_Reminder#7_R...</p>

The committee may NOTE.

### 4.3 Standards Under Publication

SI No.	IS No.	Title	Status	Remarks
1)	MED/04/21276	Manifold Type Storage Water Tank For All Glass Evacuated Tubes Solar Collector Systems Specification	Published	<p>Published in October 2024.</p> <p>IS 18727_2024_Oct...</p> <p>The committee may NOTE.</p>
2)	MED/04/21413 (IS 16544 : 2016)	All glass evacuated tubes solar water heating system Amendment - 2	In Printing.	<p>Comment from CMD-III received. pl see SI No.1 of Item 4.</p> <p>The Committee may decide or comment on it.</p>
3)	MED/04/21160 IS 13129 (Part 3): 1991	Solar Heating Domestic Water Heating Systems Part 3 Procedures For System Component Characterization And Prediction For Yearly Performance Using Component Performance Data	Published	<p>Published in November 2024.</p> <p>IS 13129 (Part 3)_2...</p> <p>The Committee may NOTE.</p>

The committee may NOTE.

**ITEM 5 COMMENTS ON PUBLISHED/DRAFT INDIAN STANDARD**

**1) MED 04 (21276)- MANIFOLD TYPE STORAGE WATER TANK FOR ALL GLASS EVACUATED TUBES SOLAR COLLECTOR SYSTEMS SPECIFICATION**

<i>Sl No.</i>	<i>Clause / Sub Clause No.</i>	<i>Paragraph No./Figure No./Table No.</i>	<i>Type of Comment</i>	<i>Attachment</i>
1	Cl. 5.2	1	Editorial	N/A
<b>Comments/Suggestions along with Justification for the Proposed Change</b>			<p><i>1. When It is mentioned that "The material of outer cladding shall be pre-painted galvanized steel conforming to IS 14246", Then the clause should not provide an Alternative arrangement in the second line.</i></p> <p><i>2. If we are providing alternative arrangements with Either-Or requirement (Either both Shall or Both May), we should also fix the grades/varieties of "aluminum/stainless steel/FRP" otherwise it would be an open ended non-verifiable clause.</i></p>	
<b>Proposed Change /Modified Wordings</b>			<i>Wordings may be suitably modified if the comments are accepted.</i>	

*The committee decided to accept the comments, however, the grades/varieties of aluminium/stainless steel/FRP are yet to be finalized. The committee decided that Panel as per Sl. No.1 of Item 4.1 of Agenda may provide their recommendation on it.*

*Published in October 2024.*

*The committee may NOTE.*

**ITEM 6 REVIEW OF PUBLISHED INDIAN STANDARD**

**6.1 Status of review/re-affirmation of standards in 2024-25.**

<b>Sl No.</b>	<b>IS No.</b>	<b>IS Title</b>	<b>Remarks</b>	<b>Decision taken</b>
1)	IS 12933 (Part 1) : 2003	Solar flat plate collector — Specification: Part 1 Requirements ( <i>second revision</i> )	Committee finalised the revision draft for WC	Pl see Sl. No 2 of Item 4 .

2)	IS 12933 (Part 2) : 2003	Solar flat plate collector — Specification: Part 2 Components ( <i>second revision</i> )	Committee finalised the revision draft for WC	Pl see Sl. No 2 of Item 4 .
3)	IS 12933 (Part 3) : 2003	Solar flat plate collector — Specification: Part 3 Measuring instruments ( <i>first revision</i> )	Reviewed In : 2019  <a href="#">ToR</a>	Dr. SK Shukla from IIT BHU has provided a modified ToR vide email.  <a href="#">IS 12933-3 ToR.docx</a>  Committee agreed to the same and agreed that the project may be awarded to Dr. SK Shukla from IIT BHU.  ToR approval in process.  <a href="#">Email approved tor 01 dec 2023.pdf</a>
4)	IS 13429 (Part 2) : 2018	Solar cooker — Box type — Specification: Part 2 Components ( <i>second revision</i> )	<a href="#">ToR</a>	The committee agreed and finalised the modified ToR. <a href="#">IS 13429-2 ToR .docx</a> <a href="#">IS 13429-3 ToR .docx</a>
5)	IS 13429 (Part 3) : 2018	Solar cooker — Box type — Specification: Part 3 Test method ( <i>second revision</i> )	<a href="#">ToR</a>	Committee agreed that the project may be awarded to Dr. S K Samdarshi, Central University of Jharkhand, Ranchi. ToR approval in process. <a href="#">Email approved tor 01 dec 2023.pdf</a>
6)	IS 12986(part1):1990	Biogas plants - Glass fibre reinforced polyester resin gas holders Specification: Part 1 with steel frame	ARP for the review of the ISS was carried out by BIS -officer. The ARP documents are attached -  <a href="#">W 68_4477_230...</a> <a href="#">W 68_4477_230...</a>	The committee may deliberate and decide.

*The Committee may DELIBERATE and DECIDE.*

**ITEM 7 INTERNATIONAL ACTIVITIES**

7.1 India has membership on ISO committees as listed below, related to **MED 04**. Being a **P-member**, it is obligatory for India to vote on all the documents. The documents received from time to time are being sent to committee members for comments and voting is done accordingly.

**7.2 Standards Published by ISO Committee- ISO/TC 180 Solar Energy**

<b>Published ISO Standards</b>	<b>22</b>
<b>ISO standards Under Development</b>	<b>12</b>
<b>Participating Members</b>	<b>25</b>
<b>Observing Members</b>	<b>48</b>

**7.3 Standards Published by ISO Committee ISO/TC 180 Solar Energy**

<b>10</b> Total ISO Standards	<b>2</b> Latest version of ISO adopted	<b>0</b> Older version of ISO adopted
<b>8</b> ISO standards not adopted	<b>0</b> Indigenously developed Standards	<b>0</b> Amendment issued by ISO, not adopted

7.4 The list of active various working group working under ISO/TC 180 in liaison with MED 04 Sectional Committee is as under:

<b>Reference</b>	<b>Title</b>	<b>Type</b>
ISO/TC 180	Solar energy (P-Member)	Committee
ISO/TC 180/SC 1	Climate - Measurement and data (P-Member)	Subcommittee
ISO/TC 180/SC 4	Systems - Thermal performance, reliability and durability (P-Member)	Subcommittee
ISO/TC 180/AHG 1	Measurement of CO2	Working group

ISO/TC 180/WG 3	Collector components and materials	Working group
ISO/TC 180/WG 4	Solar collectors	Working group

<https://www.iso.org/committee/54018.html>

*The Committee may NOTE.*

### 7.5 Working Groups under ISO/TC 180 and members nominated from India

The Committee had decided to formulate internal Working Groups under MED 04 corresponding to ISO Working Groups with the objective to have a discussion group for deliberating on ISO draft standards and ballots. The members mentioned below expressed their interest to be part of the Working Groups. Nominations of the Working Groups are open and as decided in the committee, internal Working Groups structure are being circulated to all committee members to suggest more names for inclusion in the Working Groups.

SI No	WG	Project Number	Project Title	Participation by	Internal Working Group
1)					

Presently **No** Working Groups made in MED 04.

*The Committee may NOTE.*

### 7.6 Published Standards by ISO/TC 180 Solar Energy

Standards and/or projects under the direct responsibility of ISO/TC 180 Secretariat. Below the list of Published Standards by ISO/TC 180 Solar Energy Committee:

SI No.	Standard No.	Standard Title	Status of Adoption as Indian Standard
1)	ISO 9488:2022	Solar energy — Vocabulary	Adopted as IS/ISO 9488 : 2022
2)	ISO 9553:1997	Solar energy — Methods of testing preformed rubber seals and sealing compounds used in collectors	Not Adopted
3)	ISO 9806:2017	Solar energy — Solar thermal collectors — Test methods	Not Identical to IS 12933 (Part 1) : 2003

4)	ISO 9808:1990	Solar water heaters — Elastomeric materials for absorbers, connecting pipes and fittings — Method of assessment	Not Adopted
5)	ISO/TR 10217:1989	Solar energy — Water heating systems — Guide to material selection with regard to internal corrosion	Adopted as IS/ISO/TR 10217 : 1989
6)	ISO 22975-1:2016	Solar energy — Collector components and materials — Part 1: Evacuated tubes — Durability and performance	Not Adopted
7)	ISO 22975-2:2016	Solar energy — Collector components and materials — Part 2: Heat-pipes for solar thermal application — Durability and performance	Not Adopted
8)	ISO 22975-3:2014	Solar energy — Collector components and materials — Part 3: Absorber surface durability	Not Adopted
9)	ISO 22975-4:2023	Solar energy — Collector components and materials — Part 4: Glazing material durability and performance	Not Adopted
10)	ISO 22975-5:2019	Solar energy — Collector components and materials — Part 5: Insulation material durability and performance	Not Adopted

The Committee may NOTE.

### 7.7 Under Development Standards of ISO/TC 180

SI No.	Standard No. & Title	Remarks
1)	ISO/DIS 9806 Solar energy — Solar thermal collectors — Test methods	

### 7.8 Open (Active) ISO Ballots As On Date

#### 7.8.1 Open ballots in ISO/TC 180 Committee till now:

SI No.	Type	Committee / Working Group	Reference	Vote	Result	Status	Start date	End date	Role
1)	DIS	ISO/TC 180	ISO/DIS 9806 (Ed 3)	Voted	-	Open	2024-09-23	2024-12-16	Obligated voter
2)	SR	ISO/TC 180	ISO 22975-3:2014 (vers 2)	Voted	-	Open	2024-10-15	2025-03-04	Obligated voter

#### 7.8.2 Open ballots in ISO/TC 180/SC 1 Committee till now:



There are **No** open ballots for ISO/TC 180/WG 1.

*The Committee may NOTE.*

**7.8.3 Open ballots in ISO/TC 180/SC 4 Committee till now:**

Sl No.	Type	Committee / Working Group	Reference	Vote	Result	Status	Start date	End date	Role
1)	CD	ISO/TC 180/SC 4	ISO/CD 24194	Voted		Open	2024-11-19	2025-01-14	Obligated voter

*The Committee may NOTE.*

India has membership on ISO committees as listed below, related to **MED 04**. Being a **P-member**, it is obligatory for India to vote on all the documents. The documents received from time to time are being sent to committee members for comments and voting is done accordingly.

**7.9 Standards Published by ISO Committee- ISO/TC 285 Clean cookstoves and clean cooking solutions**

<b>Published ISO Standards</b>	<b>7</b>
<b>ISO standards Under Development</b>	<b>1</b>
<b>Participating Members</b>	<b>21</b>
<b>Observing Members</b>	<b>26</b>

**7.10 Standards Published by ISO Committee ISO/TC 285 Clean cookstoves and clean cooking solutions**

<b>7</b> Total ISO Standards	<b>0</b> Latest version of ISO adopted	<b>0</b> Older version of ISO adopted
<b>7</b> ISO standards not adopted	<b>0</b> Indigenously developed Standards	<b>0</b> Amendment issued by ISO, not adopted

7.11 The list of active various working group working under ISO/TC 285 in liaison with MED 04 Sectional Committee is as under:

Reference	Title	Type
ISO/TC 285	Clean cookstoves and clean cooking solutions (P-Member)	Committee
ISO/TC 285/WG 1	Conceptual framework	Working group
ISO/TC 285/WG 2	Laboratory testing methods	Working group
ISO/TC 285/TG 1	Communications Task Group	Group
ISO/TC 285/TG 2	Review of existing Standards on Fuels	Group

<https://www.iso.org/committee/4857971.html>

*The Committee may NOTE.*

#### 7.12 Working Groups under ISO/TC 285 and members nominated from India

The Committee had decided to formulate internal Working Groups under MED 04 corresponding to ISO Working Groups with the objective to have a discussion group for deliberating on ISO draft standards and ballots. The members mentioned below expressed their interest to be part of the Working Groups. Nominations of the Working Groups are open and as decided in the committee, internal Working Groups structure are being circulated to all committee members to suggest more names for inclusion in the Working Groups.

Sl No	WG	Project Numbe	Project Title	Participation by	Internal Working Grou
1)					

Presently **No** Working Groups made in MED 04.

*The Committee may NOTE*

#### 7.13 Published Standards by ISO/TC 285 Clean cookstoves and clean cooking solutions

Standards and/or projects under the direct responsibility of ISO/TC 285 Secretariat. Below the list of Published Standards by ISO/TC 285 Clean cookstoves and clean cooking solutions Committee:

Sl No.	Standard No.	Standard Title	Status of Adoption as
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			Indian Standard
1)	ISO 5714:2023	Clean cookstoves and clean cooking solutions — Test protocols for institutional cookstoves	Not Adopted
2)	ISO/PAS 16617:2024	Clean cookstoves and clean cooking solutions — Guidance for evaluation	Not Adopted
3)	ISO 19867-1:2018	Clean cookstoves and clean cooking solutions — Harmonized laboratory test protocols — Part 1: Standard test sequence for emissions and performance, safety and durability	Not Adopted
4)	ISO/TR 19867-3:2018	Clean cookstoves and clean cooking solutions — Harmonized laboratory test protocols — Part 3: Voluntary performance targets for cookstoves based on laboratory testing	Not Adopted
5)	ISO 19869:2019	Clean cookstoves and clean cooking solutions — Field testing methods for cookstoves	Not Adopted
6)	ISO/TR 19915:2023	Clean cookstoves and clean cooking solutions — Guidelines for social impact assessment	Not Adopted
7)	ISO/TR 21276:2018	Clean cookstoves and clean cooking solutions — Vocabulary	Not Adopted

The Committee may NOTE.

#### 7.14 Under Development Standards of ISO/TC 285

SI No.	Standard No. & Title	Remarks
1)	ISO/AWI 19867-1 Clean cookstoves and clean cooking solutions — Harmonized laboratory test protocols — Part 1: Standard test sequence for emissions and performance, safety and durability	

The Committee may NOTE.

#### 7.15 Open (Active) ISO Ballots As On Date

##### 7.15.1 Open ballots in ISO/TC 285 Committee till now:

SI No.	Type	Committee / Working Group	Reference	Vote	Result	Status	Start date	End date	Role
1)									

There are **No** open ballots for ISO/TC 285.

*The Committee may NOTE.*

## ITEM 8 SELECTIONS OF SUBJECTS

**8.1** As per the policy and guidelines, before any new subject is taken up for formulation of National Standard the following issues are to be examined by BIS.

- i) Whether the subject is financed by the proposer;
- ii) Sale ability of the standard;
- iii) Standards shall be user friendly;and
- iv) Social needs with regards to safety, health and environment.

Only after assessing the above aspects will it be possible for BIS to consider the formulation of the Indian standard. The proposal should essentially be taken in the prescribed Performa, as a preliminary work item as given in **Annex B**. When members propose in the Technical Committee (TC) Meeting, they have to fill-in the Performa beforehand which is then considered by the TC.

 ANNEX-B.docx

*The Committee may NOTE.*

## ITEM 9 RECOMMENDATION OF THE PLANNING AND DEVELOPMENT ADVISORY COMMITTEE (PDAC) OF BUREAU OF INDIAN STANDARDS

The Planning and Development Advisory Committee (PDAC) of Bureau of Indian Standards has decided as follows:

- a) Technical Committee should be sensitized for Eco requirements and standards should be formulated considering the environmental aspects.
- b) The committee felt that BIS should be proactively involved so as to have greater impact in International Standardization. For this purpose, the key areas are to be identified for formulating standards for new products.

*The Committee may NOTE.*

## ITEM 10 TRANSLATION OF INDIAN STANDARDS FROM ENGLISH TO HINDI

As per directive issued by ‘Raj Bhasha Vibhag’ to the Bureau “henceforth all new standards (or standards to be revised) are to be published both in Hindi and English simultaneously.”

Whereas a panel for Hindi translation has been identified by Hindi Deptt. of the Bureau however, the **members of the technical committees of BIS may undertake translation of Indian standards from English to Hindi**. Remuneration of Rs.250/- per A-4 size page (approximately 300 words) is provided for the translation. The members who are interested to do this work of translation can register their name with BIS, details available at: <http://www.bis.org.in/other/EOIHT.htm>

*The Committee may NOTE.*

#### **ITEM 11 E-SALE OF INDIAN STANDARDS**

The Bureau has recently started online sales of Indian Standards. This will help the customer to procure Indian Standards through the internet without facing the hassles of going to the sales office of BIS to purchase Indian Standard or to get the standard by post. Please visit our website [www.bis.org.in](http://www.bis.org.in) for details.

*The Committee may NOTE.*

#### **ITEM 12 IDENTIFICATION AND INVOLVEMENT OF TALENT AVAILABLE IN THE COUNTRY RELATED TO THE SUBJECT DEALT BY THE COMMITTEE AND METHODOLOGY TO INVOLVE THEM IN THE PROCEEDINGS OF THE COMMITTEE**

Creation of a pool of experts.

*The Committee may NOTE.*

#### **ITEM 13 FUTURE PLANS AND STRATEGIES TO BE ADOPTED BY THE COMMITTEE DURING THE NEXT 3 YEARS AIMING AT THE CONTRIBUTION IN RELATED STANDARDIZATION ACTIVITY AT NATIONAL AND INTERNATIONAL LEVEL.**

*The Committee may DISCUSS and DECIDE.*

#### **ITEM 14 GENDER RESPONSIVE STANDARDS INITIATIVE**

Bureau of Indian Standards is a signatory to the UNECE Gender Responsive Standards Declaration. The UNECE Gender Responsive Standards Initiative aims to provide a practical framework for standards bodies seeking to make the standards they develop, and the standards development process they follow, gender-responsive. Established in 2016, the Initiative has the objectives of:

- a) Strengthening the use of standards and technical regulations as powerful tools to attain SDG 5 (Achieve Gender Equality and Empower all Women and Girls);
- b) Integrating a gender lens in the development of both standards and technical regulations; and
- c) Elaborating gender indicators and criteria that could be used in standards development.

In line with these objectives, BIS aims to work towards:

- a) Gender-responsive standards;
- b) Gender balance at all levels in all Committees including leadership positions; and
- c) Enhanced expertise to create and deliver gender inclusivity.

*The Committee members **ARE REQUESTED** to work in tandem with these aims to create a gender balanced environment in all walks of life through standards.*

## ITEM 15 ACCESSIBILITY

A Request was received from the Department of Empowerment of Persons with Disabilities, Government of India to include additional requirements in the relevant Indian standards that will help/assist the specially-abled person under the Accessible India Campaign (AIC).

*The Committee may NOTE.*

## ITEM 16 DATE AND PLACE FOR THE NEXT MEETING

Please see the SI No. 3.1.

*The Committee may NOTE.*

## ITEM 17 ANY OTHER BUSINESS

**17.1** In reference to the 28th meeting of the Renewable Energy Sources technical committee, MED 04, held on 25th September, 2024, The committee decided that as recommended by the Chairperson, a working Panel may be formed to explore the possibilities of formulation of standards related to Bio-CNG, Biohydrogen, Biohythane and for Biogas to Methane. The Following members were nominated to be a part of th

- a) Dr A.R Shukla, In-person Capacity
- b) Dr Shanmugam, CLRI
- c) Dr Asim Joshi, SPRERI
- d) Dr S.K Shukla, IIT-BHU
- e) Dr S. R. Meena , MNRE
- f) Dr Chanchal Loha, CSIR-CMERI, Nagpur

Consequently , the first meeting of the Bio- Energy panel was held on 01.10.2024.

 Fwd\_ [MED 04, Panel] Invitation for the 1st Panel Meeting of Bio CNG related standards.pdf

Professor Sachin from Sardar Sawarn Singh University was also invited as the guest Panel member.

The actions arising out of the meeting were as follows -

 [MED 04, Panel] Actions to be taken as decided in the 1st Panel Meeting of Bio CNG related s...

*The Committee may DELIBERATE and DECIDE.*

**17.2** Any other business with the permission of the chairman.

*The Committee may NOTE.*

**ANNEX A**  
(Clause 2.2.3)

**Composition for Renewable Energy Sources Sectional Committee, MED 04**

Meeting No.	Date	Place
28 <sup>th</sup>	25 Sep 2024	Webex Online (Virtual)
27 <sup>th</sup>	26 June 2024	Webex Online (Virtual)
26 <sup>th</sup>	08 Nov 2023	Webex Online (Virtual)

Sl No	Organisation Represented	Principal Member/ Alternate Member	26 <sup>th</sup>	27 <sup>th</sup>	28 <sup>th</sup>	Total
1)	Ministry of New and Renewable Energy, New Delhi	Dr A. K. Tripathi ( <i>Chairperson</i> )	Y	Y	Y	3/3
2)	Bharat Heavy Electricals, Hyderabad	Shri Amrish Gupta Shri Saumen Kumar Bhaumik (Alt-1) Shri Subhashish Gupta (Alt-2)	Y	Y	Y	3/3
3)	Biogas Forum India, New Delhi	Dr A. R. Shukla	Y	Y	Y	3/3
4)	CSIR - Central Leather Research Institute, Chennai	Dr P. Shanmugam	N	Y	Y	2/3
5)	CSIR-Central Mechanical Engineering Research Institute, Durgapur	Dr Chanchal Loha Shri Subho Samanta (Alt)	N	Y	Y	2/3
6)	CSIR-National Environmental Engineering Research Institute, Nagpur	Er Ankit Gupta Ms Poonam Prasad (Alt)	Y	Y	Y	3/3
7)	Cement Manufacturers Association, New Delhi	Shri Raju Goyal Shri Manmohan Rathi (Alt-1) Shri Shubho Chakravarty (Alt-2)	Y	Y	N	2/3

8)	Central Arid Zone Research Institute, Jodhpur	Dr H. L. Kushwaha Dr Surendra Poonia (Alt)	Y	N	Y	2/3
9)	Central Public Works Department, New Delhi	Shri Vimal Kumar Shri Rajiv Gupta (Alt)	Y	N	N	1/3
10)	Consumer Coordination Council (CCC), Noida	Shri P. Ramarao Ms Neetu Chauhan (Alt)	N	N	N	<b>0/3</b>
11)	Emmvee Photovoltaic Power Private Limited, Bengaluru	Shri Vijay Kumar C. R. Shri Manju Nath Ullur H. (Alt)	Y	N	N	1/3
12)	India Meteorological Department, New Delhi	Shri H. S. Sawhney Dr Anikender Kumar (Alt)	N	N	Y	1/3
13)	Indian Institute of Technology (BHU), Mechanical Engineering Department, Varanasi	Shri Shailendra Kumar Shukla	Y	Y	Y	3/3
14)	Indian Institute of Technology Bombay, Mumbai	Prof Anish Modi (Alt) Shri Santanu Bandyopadhyay	Y	Y	Y	3/3
15)	Indian Renewable Energy Development Agency Ltd, New Delhi	Shri Pradipta Kumar Roy Shri Puran Mal Meena (Alt)	Y	Y	N	2/3
16)	International Copper Association India, Mumbai	Shri Jyotish Pande	Y	Y	Y	3/3
17)	Maharashtra Energy Development Agency, Pune	Shri Manoj A. Pise Shri Hemant Manik Kulkarni (Alt-1) Shri Anand V. Kulkarni (Alt-2) Shri Sameer Ghodake (Alt-3)	N	Y	N	1/3
18)	Ministry of New and Renewable Energy, New Delhi	Dr S. R. Meena Dr Avinash K. Singhal (Alt-1) Shri Vikram Dhaka (Alt-2) Shri Hiren C. Borah (Alt-3) Shri Rajkumar Bhawariya (Representative)	Y	Y	Y	3/3
19)	Ministry of Ports, Shipping and Waterways, New Delhi	Shri Anil Pruthi Shri Ramji Singh (Representative)	Y	Y	N	2/3



20)	National Institute of Solar Energy, Gurugram	Shri Kishore K. Menon Dr Chandan Banerjee (Alt) Shri Vikrant Yadav (Representative) Dr Avadhesh Yadav (Representative)	Y	Y	Y	3/3
21)	Rajagiri School of Engineering Tech. (RSET), Kochi	Dr Varghese Panthalookan Shri Joel George (Alt)	Y	Y	Y	3/3
22)	Regional Test Centre, Pune	Prof (Dr) Sandesh R. Jadkar Dr Anagha M. Pathak (Alt-1) Dr Adinath M. Funde (Alt-2)	Y	Y	N	2/3
23)	Sardar Patel Renewable Energy Research Institute, Vallabh, Vidyanagar	Er Asim Kumar Joshi Dr Shaishav Sharma (Alt)	N	N	Y	1/3
24)	Solar Thermal Federation of India, Pune	Shri Jaideep N. Malaviya	Y	Y	Y	3/3
25)	The Energy and Resources Institute, New Delhi	Shri N. K. Ram	Y	Y	N	2/3
26)	In Personal Capacity, New Delhi	Shri Atam Kumar	N	N	N	0/3
<b>Total Organizations = 26</b>						

