भारतीय मानक ब्यूरो
BUREAU OF INDIAN STANDARDS

(PETROLEUM, COAL & RELATED PRODUCTS DEPARTMENT)

RECOMMENDATIONS

28 July 2022, Thursday, 1000-1400h

Physico-chemical Test Methods for Petroleum and related products of synthetic or biological origin (excluding bitumen, lubricants, greases and gaseous fuels) Subcommittee, PCD 1:3	**5th Meeting**

WebEx Meeting

Convener: Shri Shanmuganathan C, BPCL **MEMBER SECRETARY**: Aridaman

(Attendance of the meeting is given in Annex I)

Item 0 OPENING OF THE MEETING

0.1 Welcome by Bureau of Indian Standards

Smt. Meenal Passi, Head (PCD), welcomed the members to the 5th meeting of the Physico-chemical test methods for Petroleum and related products of synthetic or biological origin (excluding bitumen, lubricants, greases and gaseous fuels) Subcommittee, PCD 1:3. She expressed her happiness for the active participation of members and hoped to meet physically with the members in the next meeting.

0.2 Opening remarks by the Convener

Shri Shanmuganathan C, BPCL, Convener PCD 1:3, welcomed the members to the meeting. He thanked the members for supporting his nomination for the Convenership of the Subcommittee. He expressed that members have been working actively in this Subcommittee and hope that members will continue to work in the same spirit.

Item 1 TITLE, SCOPE AND COMPOSITION OF PCD 1:3 SUBCOMMITTEE

1.1 The subcommittee NOTED Item 1 of the Agenda change in the title of the PCD 01 Committee. The Subcommittee RECOMMENDED that no change is required in the title and scope of the Subcommittee.

1.2 The Subcommittee NOTED Item 1 of the Agenda and the composition of the Subcommittee.

Item 2 ACTIVITIES OF THE SUBCOMMITTEE

2.1 The subcommittee NOTED the Item 2 of the Agenda and the list of Indian Standards published under this Subcommittee.

2.2 The subcommittee NOTED the Item 2.2 of the Agenda and the list of documents issued in wide circulation after the 20th meeting held on 17 July 2021. The subcommittee recommended as follows:

Sl.No	*IS No & Title*	*Decision taken during the last meeting/ Status*	Recommendations of the subcommittee
1	PCD 01 (19643)/IS 1448 (Part 66) Methods of test for petroleum and its products Part 66 Flash point (open) and fire point by Pensky-Martens apparatus.	The Committee requested BIS Sectt. to issue the draft into Wide Circulation for a period of two months by September 2021.	*Please see Item 4.1*
2	PCD 01 (20056)/IS 1448 (Part 110) Methods of test for petroleum and its products Part 110 Cold filter plugging point of distillate fuels	The Committee requested BIS Sectt. to issue the draft into Wide Circulation after the revised draft was received from Shri Pramod Mall, RIL The draft has been issued into Wide Circulation on 13 July 2022 for a period of two months.	*The Subcommittee NOTED that the draft has been issued into Wide Circulation on 13 July 2022 for a period of two months.* *The subcommittee also recommended to send the draft for publication in consultation with convener of subcommittee and approval of Chairman of PCD 1, If no comments received during the wide circulation period.*

3	PCD 01 (20093)/IS 1448 (Part 115) Methods of test for petroleum and its products: Part 115 Determination of salt content in crude petroleum and its products	The Committee requested BIS Sectt. to issue the draft into Wide Circulation by August 2021. The draft has been issued into Wide Circulation for a period of two months on 15 July 2022.	*The subcommittee NOTED that the draft has been issued into Wide Circulation on 15 July 2022 for a period of two months.* *The subcommittee also recommended to send the draft for publication in consultation with convener of subcommittee and approval of Chairman of PCD 1, If no comments received during the wide circulation period.*
4	PCD 01 (20191) Methods of test for petroleum and its products Sulphur mercaptans	The draft has been issued into Wide Circulation for a period of two months on 26 July 2022.	*The subcommittee NOTED that the draft has been issued into Wide Circulation on 26 July 2022 for a period of two months.* *The subcommittee also recommended to send the draft for publication in consultation with convener of subcommittee and approval of Chairman of PCD 1, If no comments received during the wide circulation period.*
5	PCD 01 (20132) Determination of resistivity content in petroleum coke	The draft has been issued into Wide Circulation for a period of two months on 19 July 2022.	*The subcommittee NOTED that the draft has been issued into Wide Circulation on 19 July 2022 for a period of two months.* *The subcommittee also recommended to send the draft for publication in consultation with convener*

			of subcommittee and approval of Chairman of PCD 1, If no comments received during the wide circulation period.
6	PCD 01 (20185)/ (Part 55/ sec 1)Methods of Test for Petroleum and Its Products – Part 55 Section 1 Determination of Saponification Value of Petroleum Products	The draft has been issued into Wide Circulation for a period of two months on 26 July 2022.	*The subcommittee NOTED that the draft has been issued into Wide Circulation on 26 July 2022 for a period of two months.* *The subcommittee also recommended to send the draft for publication in consultation with convener of subcommittee and approval of Chairman of PCD 1, If no comments received during the wide circulation period.*
7	PCD 01 (20184)/ 1448 (Part 131) Methods of test for petroleum and its products Part 131 Determination of silicon in petroleum coke	The draft has been issued into Wide Circulation for a period of two months on 25 July 2022.	*The subcommittee NOTED that the draft has been issued into Wide Circulation on 25 July 2022 for a period of two months.* *The subcommittee also recommended to send the draft for publication in consultation with convener of subcommittee and approval of Chairman of PCD 1, If no comments received during the wide circulation period.*
8	PCD 01 (20055)/IS 1448 (Part 127) Methods of test for petroleum and its products Part 127	The Committee requested BIS Sectt. to issue the draft into Wide	*The subcommittee NOTED that the draft has been issued into Wide Circulation on 12*

	Determination of iron in petroleum coke	Circulation for a period of two months, by October 2021.	*July 2022 for a period of two months.* *The subcommittee also recommended to send the draft for publication in consultation with convener of subcommittee and approval of Chairman of PCD 1, If no comments received during the wide circulation period.*
9	PCD 01 (20100)/ IS 1448 (Part 13) Methods of test for petroleum and its products Part 13 Colour by Lovibond tintometer first revision	The Subcommittee requested BIS Sectt. to circulate the draft to the members for a period of one month, by August 2021.	*The subcommittee NOTED that the draft has been issued into Wide Circulation on 18 July 2022 for a period of one month.* *The subcommittee also recommended to send the draft for publication in consultation with convener of subcommittee and approval of Chairman of PCD 1, If no comments received during the wide circulation period.*
10	PCD 01 (20132)/ISO 10143 : 2019 Methods of test for petroleum and its products Part Determination of resistivity of petroleum coke	The Committee requested BIS Sectt. to issue the draft into Wide Circulation for a period of two months, by October 2021.	*The subcommittee NOTED that the draft has been issued into Wide Circulation on 19 July 2022 for a period of two months.* *The subcommittee also recommended to send the draft for publication in consultation with convener of subcommittee and approval of Chairman of PCD 1, If no comments*

			received during the wide circulation period.
11	ISO 6618:1997 Petroleum products and lubricants — Determination of acid or base number — Colour-indicator titration method	The Committee decided to send the draft for printing.	Published
12	ISO 15167 : 1999 Petroleum products Determination of particulate content of middle distillate fuels laboratory filtration method	The committee decided to send the draft for printing	Published
13	PCD 01 (15769) F Methods of test for petroleum and its products Part 126 Determination of ash content in raw and calcined petroleum coke [First revision of IS 1448 (Part 126)]	The Committee requested BIS Sectt. to circulate the documents to members for one week, for editorial comments and decided to finalise the document with editorial corrections.	Under print

Item 3 ISSUES ARISING OUT OF PREVIOUS MEEETINGS

3.1 Revision of Standards

3.1.1 The Subcommittee NOTED the Item 3.1.1 of the Agenda and the list of standards to be revised in 2018-19. The Subcommittee RECOMMENDED as follows:

Sl.No	*IS No & Title*	*Decision taken during the last meeting/ status*	*Recommendations of the Subcommittee*

(i)	IS 1448 : Part 5 : 1970 Methods of test for petroleum and its products Part 5: Burning quality (first revision)	In the previous meetings, the Committee NOTED that Shri Salina Kumar, MRPL has provided the draft and BIS Sectt. has observed that the draft has significant similarity to IP 10 and requested Shri Salina Kumar to rewrite the draft. He agreed to provide the draft by the end of August 2019. In the 19th meeting, the Committee again requested Shri Salina Kumar, MRPL to provide the draft by the end of August 2020. In the 20th meeting, Shri Yogeesha, MRPL agreed to check and provide the status of the draft. The following draft/ update has been received from Shri Yogeesha , MRPL  IS 1448 P-5 - Burning Quality with	The Subcommittee REQUESTED Shri Yogeesha, MRPL to verify the precision statement with respect to IP 10 and provide the revised draft. The Subcommittee REQUESTED BIS Sectt. to issue the draft into wide circulation for a period of two months by September 2022. *The subcommittee also recommended to send the draft for publication in consultation with convener of subcommittee and approval of Chairman of PCD 1, If no comments received during the wide circulation period.*
(ii)	IS 1448 : Part 79 : 1992 Methods of test for petroleum and its products: Part 79 Determination of trace elements in petroleum products -- Vanadium (first revision)	In the previous meetings, the Committee NOTED the observation of BIS Sectt. that the draft provided by Shri Salina Kumar, MRPL has significant similarity to IP 285 and requested Shri Salina Kumar to rewrite the draft. He agreed to send the draft by the end of August 2019. In the 20th meeting, Shri Yogeesha, MRPL agreed to check and provide the status of the draft. The following draft has been received from Shri Yogeeesha , MRPL  IS 1448 P-79 (1).doc	The Subcommittee REQUESTED BIS Sectt. to issue the draft into wide circulation for a period of two months by August 2022. *The subcommittee also recommended to send the draft for publication in consultation with convener of subcommittee and approval of Chairman of PCD 1, If no comments received during the wide circulation period.*

(iii)	IS 1448 : Part 110 : 1981 Methods of test for petroleum and its products: Part 110 Cold filter plugging point of distillate fuels	In the earlier meetings, the Committee noted the observation of BIS Sectt. that the draft provided by Shri Pramod Kumar Mall, RIL has significant similarity to D6371 and requested Shri Pramod Kumar Mall to rewrite the draft and provide by the end of October 2019. In the 19th meeting the Committee requested Shri Pramod Kumar Mall, RIL to provide the drafts after rewording. It was observed that similarity index should be less than 20% and requested all the members to check their drafts before sending to BIS. Chairman, PCD 01 informed that in case, if they do not have authenticated software, IIP will help in checking the same. In the 20th meeting, the Committee requested Shri Pramod Kumar Mall to include Bio-diesel Blends in the scope of the draft standard and requested BIS Sectt. to issue the draft into Wide Circulation for a period of one month by September 2021 and if no comments are received then draft is to be sent for printing.  IS 1448 P 110_ Cold Filter Plugging Point c The revised draft has been received from Shri Pramod Mall and has been issued into Wide Circulation on 13 July 2022 for a period of two months.	*The subcommittee NOTED that the draft has been issued into Wide Circulation on 13 July 2022 for a period of two months.* *The subcommittee also recommended to send the draft for publication in consultation with convener of subcommittee and approval of Chairman of PCD 1, If no comments received during the wide circulation period.*
(iv)	IS 1448 : Part 115 : 1984 Methods of test for petroleum and its products: Part 115	In the previous meetings, the Committee in observed that IP 77 is obsolete and both ion chromatographic method and potentiometric method are used by the industry and requested Dr Jhala, IOCL to	*The subcommittee NOTED that the draft has been issued into Wide Circulation on 15 July 2022 for a period of two months.*

	Determination of salt content in crude petroleum and its products	incorporate these two methods in the draft revision and provide the draft by 15 August 2019. In the last meeting, the Committee NOTED that draft was still awaited and requested Shri Pramod Kumar Mall, RIL to provide the drafts after rewording. It was observed that similarity index should be less than 20 percent and requested all the members to check their drafts before sending to BIS. Chairman, PCD 01 informed that in case, if they do not have authenticated software, IIP will help in checking the same. In the 20th meeting, the Committee NOTED that draft has been provided and requested BIS Sectt. to issue the draft into Wide Circulation for a period of one month by August 2021 and if no comments are received then to be sent for printing. The draft has been issued into Wide Circulation for a period of two months on 15 July 2022.	*The subcommittee also recommended to send the draft for publication in consultation with convener of subcommittee and approval of Chairman of PCD 1, If no comments received during the wide circulation period.*
(v)	IS 1448 : Part 137 : 1991 Methods of test for petroleum and its products: Part 137 Water separation characteristics of Aviation Turbine Fuels	The Committee in 18th meeting, observed that this standard has been referred in IS 1448 (Part 142) and therefore decided to retain the test method as such; Further requested BIS Sectt. to revise the draft with editorial updation and issue the draft into wide circulation by the end of September 2019. In the 19th meeting, the Committee again requested BIS Sectt. to revise the draft with editorial updation and issue the draft into wide circulation by the end of August 2020. In the 20th meeting, the Committee NOTED the method is long pending and requested BIS Sectt. to issue the draft into Wide	The Subcommittee REQUESTED Shri B Shridhar, BPCL-BR to provide the draft, generalising the equipment details that have been given in the standard, by August 2022. The Subcommittee further REQUESTED BIS Sectt. to issue the draft into wide circulation for a period of two months by September 2022.

		Circulation for a period of two months by August 2021.The draft is pending to be issued into Wide Circulation.	*The subcommittee also recommended to send the draft for publication in consultation with convener of subcommittee and approval of Chairman of PCD 1, If no comments received during the wide circulation period.* The Subcommittee RECOMMENDED to propose this test method at ISO for development of new standard through TC28/WG 28.
(vi)	Methods of test for petroleum and its products Part mercaptan sulphur	The Committee in 18th meeting requested BIS Sectt. to issue the draft into wide circulation for a period of two months by the end of October 2019. In the 19th meeting, the Committee again requested BIS Sectt. to issue the draft into wide circulation by end of August 2020. In the 20th meeting, the Committee NOTED the method is long pending and requested BIS Sectt. to issue the draft into Wide Circulation for a period of two months, by August 2021. The draft has been issued into Wide Circulation for a period of two months on 26 July 2022.	*The subcommittee NOTED that the draft has been issued into Wide Circulation on 26 July 2022 for a period of two months.* *The subcommittee also recommended to send the draft for publication in consultation with convener of subcommittee and approval of Chairman of PCD 1, If no comments received during the wide circulation period.*
(vii)	Determination of resistivity content in petroleum coke	In the 18th meeting, the Committee noted that BIS Sectt. to prepare an indigenous standard based on ISO 10143 by extending its scope to make it general rather than limiting to aluminum and incorporating the correction as given in the Agenda. During	*The subcommittee NOTED that the draft has been issued into Wide Circulation on 19 July 2022 for a period of two months.*

		the last meeting the Committee observed after deliberations, that the scope of the standard can be extended to all coke using industries and requested BIS Sectt. to include a statement in the foreword about it, in the WC draft. In the 19th meeting, the Committee again requested BIS Sectt. to issue the draft into wide circulation by end of August 2020. In the 20th meeting, the Committee noted the method is long pending and requested BIS Sectt. to issue the draft into Wide Circulation for a period of two months, by October 2021. The draft has been issued into Wide Circulation for a period of two months on 19 July 2022.	*The subcommittee also recommended to send the draft for publication in consultation with convener of subcommittee and approval of Chairman of PCD 1, If no comments received during the wide circulation period.*
(viii)	Methods of Test for Petroleum and Its Products – Part 55 Section 1 Determination of Saponification Value of Petroleum Products	The Committee in its earlier meetings noted that the draft and comments received from Shri Sobhan Kumar, Numaligarh Refinery, are long pending and after deliberations decided to drop the draft. Shri Shoban Kanwar, NRL assured to provide the modified draft within one month. During the last meeting, it is observed that the draft is yet to be received and requested Shri Ramakrishnan, CPCL to provide the draft within three months and he agreed. In the 19th meeting, the Committee noted that the draft provided by Shri Ramakrishnan, CPCL has provided the draft and requested BIS sectt. to issue the draft into wide circulation, for a period of two months. In case of no comments, to be sent for printing with the approval of Chairman.	*The subcommittee NOTED that the draft has been issued into Wide Circulation on 26 July 2022 for a period of two months.* *The subcommittee also recommended to send the draft for publication in consultation with convener of subcommittee and approval of Chairman of PCD 1, If no comments received during the wide circulation period.*

		n the 20th meeting, the Committee NOTED the method is long pending and requested BIS Sectt. to issue the draft into Wide Circulation for a period of two months, by October 2021. The draft has been issued into Wide Circulation for a period of two months on 26 July 2022.	
(ix)	Methods of test for petroleum and its products Part 131 Determination of silicon in petroleum coke	In the 15th meeting held on 12 Jan 2016, the committee decided that a study is required for data regarding ashing to know the 'Time Sensitivity' at 950° C. For the above purpose committee advised to check 'Time Sensitivity' at 950° C in four different laboratories on three samples. Initially, i) IOC (R&D), (ii) MRPL, (iii) RIL and (iv) Numaligarh Refinery were requested and later in the 16th meeting requested IOC(R&D), MRPL and Nayara energy to provide the data. During the last meeting, the Committee observed that Nayara energy has provided the following data and requested MRPL and IOC(R&D) also to provide the data. In the 18th meeting, the Committee observed that data is awaited. Dr. Christopher, IOC(R&D) and Shri Salina Kumar, MRPL informed that the testing is in process and agreed to provide by the end of August 2019. After deliberations, Shri Dhiraj Gondalia Nayara Energy agreed to provide the consolidated data in consultation with IOC(R&D) and MRPL by the end of November 2019. In the 19th meeting, the Committee NOTED the revised draft provided by Shri Salina Kumar, MRPL and requested BIS Sectt. to circulate the draft as preliminary draft (p-	*The subcommittee NOTED that the draft has been issued into Wide Circulation on 25 July 2022 for a period of two months.* *The subcommittee also recommended to send the draft for publication in consultation with convener of subcommittee and approval of Chairman of PCD 1, If no comments received during the wide circulation period.*

		draft), for a period of one month. In case of no comments, the document is to be issued into wide circulation for a period of 2 months. In the 20th meeting, the Committee NOTED the method is long pending and requested BIS Sectt. to issue the draft into Wide Circulation for period of two months, by October 2021. The draft has been issued into Wide Circulation for a period of two months on 25 July 2022.	

3.1.2 The Subcommittee NOTED the Item 3.1.2 of the Agenda and the list of standards to be revised in 2019-20. The Subcommittee RECOMMENDED as follows:

Sl.No	*IS No & Title*	*Decision taken during the last meeting/status*	*Recommendations of the Subcommittee*
(i)	IS 1448: Part 1: Sec 2: 2002 Methods of Test for Petroleum and its Products: Part 1: Sec 2: Determination of Base Number of Petroleum Products by Potentiometric Titration (second revision)	In earlier meetings, Shri Salina Kumar, MRPL agreed to verify the need for revision and provide the draft, if required, by the end of September 2019. In the 19th meeting, Shri Salina Kumar, MRPL agreed to provide the draft revision by the end of August 2020. In the 20th meeting, Shri Yogeesha, MRPL agreed to check and update the status within one week. No update has been received from Shri Yogeesha, MRPL	The Subcommittee NOTED that draft is awaited from Shri Yogeesha, MRPL Ms. Anitha, MRPL informed that draft will be provided in 15 days. The Subcommittee REQUESTED BIS Sectt. to issue the draft into wide circulation for a period of two months by September 2022, when the draft is received. *The subcommittee also recommended to send the draft for*

			publication in consultation with convener of subcommittee and approval of Chairman of PCD 1, If no comments received during the wide circulation period.
(ii)	IS 1448: Part 6: 1984 Methods of test for petroleum and its products part 6: Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter Method (first revision)	In the 20th meeting, Shri Yogeesha, MRPL agreed to check and update the status within one week. No update has been received from Shri Yogeesha, MRPL	The Subcommittee NOTED that draft is provided by Shri Yogeesha, MRPL The Subcommittee REQUESTED Shri Yogeesha to provide the detailed specifications of thermometers in a separate table and provided the draft within 15 days. The Subcommittee REQUESTED BIS Sectt. to issue the draft into wide circulation for a period of two months by September 2022, when the draft is received. *The subcommittee also recommended to send the draft for publication in consultation with convener of subcommittee and approval of Chairman*

			of PCD 1, If no comments received during the wide circulation period.
(iii)	IS 1448: Part 13: 1960 Method of test for petroleum and its products Part 13: Colour by Lovibond tintometer	In the 20th meeting the Committee NOTED the draft provided by Shri Santosh Bhogale, HPCL and requested BIS Sectt. to circulate the draft to the members for a period of one month, by August 2021. The draft has been issued into Wide Circulation for a period of one month on 18 July 2022.	*The subcommittee NOTED that the draft has been issued into Wide Circulation on 18 July 2022 for a period of two months.* *The subcommittee also recommended to send the draft for publication in consultation with convener of subcommittee and approval of Chairman of PCD 1, If no comments received during the wide circulation period.*
(iv)	IS 1448: Part 34: 1979 Methods of Test for Petroleum and its Products - Part 34: Determination of Sulphur in Petroleum Products (Lamp Method) (second revision)	In the 20th meeting, the Committee noted that the method is long pending and requested BIS Sectt. to issue the draft into Wide Circulation for a period of two months, by November 2021. The draft is pending to be issued into Wide Circulation.	The Subcommittee REQUESTED BIS Sectt. to check if the standard has been referred in LPG specifications and provide the inputs to Convener PCD 1:3 and issue the draft into WC in consultation with Convener PCD 1:3 and Chairman of the Committee for a period of two months by August 2022.

			The subcommittee also recommended to send the draft for publication in consultation with convener of subcommittee and approval of Chairman of PCD 1, If no comments received during the wide circulation period.

3.1.3 The Subcommittee NOTED the Item 3.1.3 of the Agenda and the list of standards to be revised in 2020-21. The Subcommittee RECOMMENDED as follows:

Sl.No	*IS No & Title*	*Decision taken during the last meeting/ status*	*Recommendations of the Subcommittee*
(i)	IS 1448: Part 87: 1979 Methods of test for petroleum and its products: Part 87 Auto ignition temperature of liquid petroleum products	In the 20th meeting, the Committee noted that the standard is not used widely and only needed for statutory requirements, so the Committee requested Shri Ramakrishan, CPCL to modify the draft in latest format provide the draft by October 2021. The draft is awaited from Shri Ramakrishnan, CPCL	The Subcommittee NOTED the draft is provided by Shri Ramakrishnan, CPCL. It was also informed by the Shri Ramakrishnan that the draft is based on ASTM D2155-18. One more ASTM Standard ASTM E659 is also available for Auto ignition temperature. Most of the MSDS refers this standard for Auto ignition temperature. The

			scope of ASTM E659-15 says that "After a round robin study, Test Method D2155 was discontinued, and replaced by Test Method E659 in 1978". The Subcommittee RECOMMENDED to create a panel to provide the revised draft for IS 1448 (Part 87). The composition of the panel is as follows: 1. Experts from PESO 2. Ramakrishnan, CPCL (Convener) 3. Member from IIP 4. Santosh Bhogle, HPCL 5. Dr Ram Janam Singh, IOC The Subcommittee REQUESTED the the panel to review both methods and check current international safety standards and provide the draft in

			consultation with PESO by October 2022. The Subcommittee REQUESTED BIS Sectt. to send mail to ASTM to find the justification for change of scope from D to E.

3.1.4 The Subcommittee NOTED the Item 3.1.4 of the Agenda and the list of standards that were taken up for review in the 19th meeting of the Committee. The Subcommittee RECOMMENDED as follows:

Sl.No	*IS No & Title*	*Decision taken during the last meeting/ status*	*Recommendations of the Subcommittee*
(i)	IS 1448 (Part 86) : 1977 Methods of test for petroleum and its products Part 86 Determination of total base number by potentiometric perchloric acid titration method	In the 20th meeting, the Committee noted the draft provided by Shri Ram Janam Singh and requested BIS Sectt. to issue to the draft into Wide Circulation for a period of two months by October 2021 Draft has been issued into WC 26 July 2022	*The subcommittee NOTED that the draft has been issued into Wide Circulation on 26 July 2022 for a period of two months.* *The subcommittee also recommended to send the draft for publication in consultation with convener of subcommittee and approval of Chairman of PCD 1, If no comments received during*

			the wide circulation period.
(ii)	IS 1448 (Part 138) : 2018 Methods of Test for Petroleum and its Products P 138 Determination of Soap Content (First Revision)	In the 20th meeting, the Committee noted the draft provided by Shri Ram Janam Singh and requested BIS Sectt. to issue to the draft into Wide Circulation for a period of two months by October 2021 Draft has been issued into WC 25 July 2022.	*The subcommittee NOTED that the draft has been issued into Wide Circulation on 25 July 2022 for a period of two months.* *The subcommittee also recommended to send the draft for publication in consultation with convener of subcommittee and approval of Chairman of PCD 1, If no comments received during the wide circulation period.*

3.2 Comments on IS 1448: P 25 SEC 1-2018/ ISO 3104 : 1994 Methods of Test For Petroleum and its Products Part 25 Transparent and Opaque Liquids Section 1 Determination of Kinematic Viscosity and Calculation of Dynamic Viscosity (Second Revision)

The Subcommittee NOTED Item 3.2 of the Agenda that a meeting was held among Shri C Shanmuganathan BPCL, Shri Ramakrishnan, CPCL and Shri Aridaman, BIS. After the meeting the members recommended as follows:

(i) The members NOTED that the latest version of ISO 3104 : 2020, includes precision data for diesel fuel. The members recommended that ISO 3104 : 2020 can be adopted as revision of IS 1448 (Part 25/Sec 1).

(ii) The members also recommended that ISO 3105 : 1994 can be adopted as revision of IS 1448 (Part 25/Sec 2). The members also recommended that this revised standard can also supersede IS 1448 (Part 25) : 1976.

The Subcommittee NOTED and after deliberations, AGREED with the recommendations of the members *as mentioned above at (i) & (ii).*

3.3 New Standards Based on ASTM/IP/EN/DIN Methods

3.3.1 The Subcommittee NOTED the Item 3.3.1 of the Agenda and the drafts provided by members for standards which are used in product standards and used extensively in India and RECOMMENDED as follow:

Sl No.	*Standard Number and Title*	*Decision taken during last meeting/ status*	*Recommendations of the Subcommittee*
(i)	D4176 Standard Test Method for Free Water and Particulate Contamination in Distillate Fuels (Visual Inspection Procedures)	The Committee noted that draft provided by Shri Santosh Bhogle, HPCL and requested BIS Sectt. to circulate the draft as p-draft for comments of members, for a period of one month, by August 2021.  Draft- (Free Water and Particulates) .doc The draft is pending to be issued as p-draft.	The Subcommittee REQUESTED BIS Sectt. to issue the drafts as p-draft by 10 August 2022
(ii)	D3338 Standard Test Method for Estimation of Net Heat of Combustion of Aviation Fuels	The Committee noted that draft provided by Shri Ramakrishnan, CPCL. The Committee also noted that D3338 has been revised in 2020 and Shri Ramakrishnan, CPCL agreed to review the draft according to D3338-20 and provide the modified daft by July 2021. The Committee requested BIS Sectt. to circulate the draft as p-draft for a period of one month, by August 2021. Revised draft is awaited from Shri  Specific Energy.docx Ramakrishnan, CPCL.	The Subcommittee REQUESTED BIS Sectt. to issue the drafts as p-draft by 10 August 2022
(iii)	D5452 Standard Test Method for Particulate Contamination in Aviation Fuels by Laboratory Filtration	The Committee noted the draft provided by Shri Santosh Bhogle and requested BIS Sectt. to circulate the draft as p-draft for comments of members, for a period of one month, by August 2021. The	The Subcommittee REQUESTED BIS Sectt. to issue the drafts as p-

		Committee also noted that the draft is in alignment with D5452-20  Determination of Particulate Contamina The draft is pending to be issued as p-draft.	draft by 10 August 2022

The Subcommittee REQUESTED BIS Sectt. to get the framework for developing drafts based on other country standards from IIP and share it with the members. The Committee may then formulate a process flow for new drafts based on the inputs from members.

3.3.2 The Subcommittee NOTED Item 3.3.2 of the Agenda that Panel PCD 1:3/P-1 to segregate, identify and prioritize the drafts of standards referred in the product specifications has not conducted any meeting. The Subcommittee deliberated on the list and RECOMMENDED as follows:

3.3.2.1 *ASTM/ IP/ EN standards referred in product specifications*

ASTM/ IP/ EN No. and requirement	*Product Specification*	*Recommendations of the Subcommittee*
ASTM D974/IP 139, Inorganic acidity	IS 1460 : 2017 Automotive Diesel Fuel- Specification (*sixth revision*), and IS 1459 : 2018 Kerosene (only ASTM D974), and IS 16861 : 2018 High Flash High-Speed Diesel (only ASTM D974)	The subcommittee NOTED IS 1448 (Part 188) is equivalent to D974 and there is no need to develop new standard.
ASTM D4737/IP 380, Cetane index	IS 1460 : 2017 Automotive Diesel Fuel- Specification (*sixth revision*), IS 16531 : 2022 Biodiesel, diesel fuel blend (B8 to B20) — Specification (*first revision*), and IS 16861 : 2018 High Flash High-Speed Diesel (only ASTM D4737)	The Subcommittee NOTED that ISO 4264 is equivalent to D4737 and REQUESTED BIS Sectt. to issue ISO 4264 in wide circulation for a period of two months by August 2022. *The subcommittee also recommended to send the draft for publication in consultation with convener of subcommittee and*

		approval of Chairman of PCD 1, If no comments received during the wide circulation period. The Subcommittee also RECOMMENDED that PCD 03 Committee may be = REQUESTED to review the need for cetane index in biodiesel as no international method is available to measure the same for biodiesel.
EN 12662/IP 440, Total contamination	IS 1460 : 2017 Automotive Diesel Fuel- Specification (*sixth revision*) IS 15607 : 2022 Biodiesel (B100)-Fatty Acid Methyl Esters (FAME) – Specification (*second revision*) (only EN 12662) IS 16531 : 2022 Biodiesel, diesel fuel blend (B8 to B20) — Specification (*first revision*)	The Subcommittee REQUESTED Shri Mahesh K Totla, HPCL to provide the draft by September 2022.
IP 423/D5452, Total contamination	IS 1571 : 2018 Aviation turbine fuels, kerosine type, Jet-A-1 — Specification (*tenth revision*)	See Item 3.3.1, Sl No. (iii)
IP 227, Silver Strip Corrosion Classification	IS 1571 : 2018 Aviation turbine fuels, kerosine type, Jet-A-1 — Specification (*tenth revision*)	*The Subcommittee NOTED that the test method based on IP 227 is already available as Annex B of IS 1571.* *The Subcommittee RECOMMENDED to keep the test method as annex B of IS 1571 as the test method is not required for any other product.*

Item 4 DRAFT STANDARDS FOR FINALIZATION

4.1 PCD 01 (19643) Methods of test for petroleum and its products Part 66 Flash point (open) and fire point by modified Pensky-Martens apparatus [First Revision of IS 1448 (Part 66)]

The Subcommittee NOTED Item 4.1 of the Agenda that the draft for first revision of IS 1448 (Part 66) was issued into Wide Circulation on 25 May 2022 for a period of two months. No comments have been received on the draft.

The Subcommittee RECOMMENDED to send the draft for finalization.

Item 5 REVIEW OF INDIAN STANDARDS

5.1 The Subcommittee NOTED Item 5.1 of the Agenda and the status of standards which were allocated to members for review:

5.1.1 IS 1448 (Part 113): 1983 Methods of test for petroleum and its products Part 113 Determination of total acidity of ATF aviation turbine fuel

Shri Ramakrishnan, CPCL agreed to provide the revised draft by 1 August 2022. The Subcommittee REQUESTED BIS Sectt. to issue the draft into Wide Circulation for a period of two months by August 2022.

The subcommittee also recommended to send the draft for publication in consultation with convener of subcommittee and approval of Chairman of PCD 1, If no comments received during the wide circulation period.

5.1.2 IS 1448 (Part 7): 2004 Methods of Test for Petroleum and its Products Part 7 Determination of calorific value by calculation

The Subcommittee DELIBERATED on the comments provided by Shri Ramakrishnan, CPCL after reviewing the standard:

Comments of Shri Ramakrishnan on IS

The Subcommittee REQUESTED Shri Ramakrishnan, CPCL and Shri Santosh Bhogle, HPCL to provide the revised draft by September 2022.

The Subcommittee REQUESTED BIS Sectt. to issue the draft into Wide Circulation for a period of two months by October 2022.

The subcommittee also recommended to send the draft for publication in consultation with convener of subcommittee and approval of Chairman of PCD 1, If no comments received during the wide circulation period.

5.2 Review of pre-2000 Standards

The subcommittee NOTED the Item 5.2 of the Agenda and the list of pre-2000 standards which are to be revised. The status of the standards given below:

Sl No.	*Standard No. and Title*	*Status*
1.	IS 1448 (Part 5) : 1970 Methods of test for petroleum and its products Part 5 Burning quality	Item 3.1.1, Sl No. (i)
2.	IS 1448 (Part 6) : 1984 Methods of test for petroleum and its products part 6 Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter Method	Item 3.1.2, Sl No. (ii)
3.	IS 1448 (Part 13) : 1960 Method of test for petroleum and its products Part 13 Colour by Lovibond tintometer	Item 3.1.2, Sl No. (iii)
4.	IS 1448 (Part 34) : 1979 Methods of Test for Petroleum and its Products - Part 34 Determination of Sulphur in Petroleum Products Lamp Method	Item 3.1.2, Sl No. (iv)
5.	IS 1448 (Part 64) : 1998 Methods of test for petroleum and its products Part 64 Non-volatile matter in solvents	The draft has been received from Shri P D Dusane, IOC. The Subcommittee recommended to issue into wide circulation with approval of Chairman of PCD 1.
6.	IS 1448 (Part 66) : 1969 Methods of test for petroleum and its products Part 66 Flash Point open and fire point by pensky-martens apparatus	See Item 4.1
7.	IS 1448 (Part 79) : 1992 Methods of test for petroleum and its products Part 79 Determination of trace elements in petroleum products -- Vanadium	Item 3.1.1, Sl No. (ii)
8.	IS 1448 (Part 86) : 1977 Methods of test for petroleum and its products Part 86 Determination of total base number by potentiometric perchloric acid titration method	Item 3.1.4, Sl No. (i)

9.	IS 1448 (Part 87) : 1979 Methods of test for petroleum and its products Part 87 Autoignition temperature of liquid petroleum products	Item 3.1.3, Sl No. (i)
10.	IS 1448 (Part 110) : 1981 Methods of test for petroleum and its products Part 110 Cold filter plugging point of distillate fuels	Item 3.1.1, Sl No. (iii)
11.	IS 1448 (Part 113) : 1983 Methods of test for petroleum and its products Part 113 Determination of total acidity of ATF Aviation turbine fuel	See Item 5.1.1
12.	IS 1448 (Part 126) : 1988 Methods of test for petroleum and its products Part 126 Determination of ash content in raw and calcined petroleum coke	*Under* publication
13.	IS 1448 (Part 127) : 1988 Methods of test for petroleum and its products Part 127 Determination of iron in petroleum coke	See Item 2.2, Sl No. 4
14.	IS 1448 (Part 131) : 1988 Methods of test for petroleum and its products Part 131 Determination of silicone in petroleum coke	See Item 3.1.1, Sl No. (ix)
15.	IS 1448 (Part 137) : 1991 Methods of test for petroleum and its products Part 137 Water separation characteristics of Aviation Turbine Fuels	See Item 3.1.1, Sl No. (iv)
16.	IS 1448 (Part 139) : 1992 Methods of test for petroleum and its products Part 139 Determination of real density of calcined petroleum coke using butanol or toluene	The Subcommittee REQUESTED the members from Hindalco and calciner industry for reviewing the standard and provide the draft. It needs to be referrerd to respective committee if this standard is not referred in any of the petroleum standards.
17.	IS 1448 (Part 140) : 1992 Methods of test for petroleum and its products Part 140 Determination of apparent density of petroleum coke by mercury pyknometer method	BIS Sectt. has confirmed that it

		is not referred in other standard. The Subcommittee REQUESTED BIS Sectt to contact calciner and aluminium industry for confirming withdrawal of the standard.
18.	IS 1448 (Part 147) : 1998 Methods of test for petroleum and its products Part 147 Determination of potential gum in motor gasoline	The subcommittee NOTED that the method will be reviewed by Shri Santosh Bhogale, HPCL by Sepetember 2022 and align it with ASTM D873 and IP 138. The subcommittee further requested BIS Sectt. to circulate the draft to the members for a period of one month by October 2022.

The Subcommittee also NOTED that in the National Forword of IS 1448 (Part 154), IS 1448 (Part 147) has been mentioned as corresponding Indian Standard for ISO 6246 : 1995.

The Subcommittee RECOMMENDED to mention IS 1448 (Part 29) in place of IS 1448 (Part 147) as corresponding Indian Standard for ISO 6246.

The Subcommittee REQUESTED BIS Sectt to issue an amendment to IS 1448 (Part 154) into Wide Circulation for a period of one month by August 2022.

The subcommittee also recommended to send the draft for publication in consultation with convener of subcommittee and approval of Chairman of PCD 1, If no comments received during the wide circulation period.

5.3 Standards Due for Review in 2022

The Subcommittee NOTED Item 5.3 of the Agenda and the list of Indian Standards due for review in 2022. The Subcommittee RECOMMENDED to reaffirm the standards as the standards are the adoptions of latest version of ISO standards.

Sl No.	*IS No. and Title*	*Status*
(i)	IS 1448 (Part 8) : 2012/ISO 4262 : 1993 Methods of Test for Petroleum and its Products Part 8 Determination of carbon Residue - Ramsbottom method	ISO 4262 : 1993 is the latest version of the standard
(ii)	IS 1448 (Part 39) : 2012/ISO 3007 : 1999 Methods of test for petroleum and its products Part 39 Determination of vapour pressure — Reid method	ISO 3007 : 1999 is the latest version of the standard
(iii)	IS 1448 (Part 154) : 2012/ISO 12205 : 1995 Methods of test for petroleum and its products Part 154 determination of the oxidation stability of middle — Distillate fuels	ISO 12205 : 1995 is the latest version of the standard

Item 8 DATE AND PLACE FOR THE NEXT MEETING

Date and place of the next meeting will be decided in the consultation with Convener PCD 1:3.

Item 9 ANY OTHER BUSINESS

The Subcommittee REQUESTED the panel created for review of IS 1448 (Part 87) to review aviation test methods and propose new standards which can be proposed at ISO for formulation of International Standard.

ANNEX I

Attendance of 5th meeting of Physico-chemical Test Methods for Petroleum and related products of synthetic or biological origin (excluding bitumen, lubricants, greases and gaseous fuels) Subcommittee, PCD 1:3, 28 July 2022

Organization	Name	Email
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