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| | भारतीय मानक ब्यूरो BUREAU OF INDIAN STANDARDS |
| | (PETROLEUM, COAL & RELATED PRODUCTS DEPARTMENT) |
| MINUTES | |
| 5 July 2023, Wednesday, 1000 - 1430 h | |
| Lubricants And their Related Products Sectional Committee | 14th Meeting |
| Chairperson: Dr. Y P Rao, In Personal Capacity | Member Secretary: Ms. Kreeti Das |

ITEM 0 WELCOME AND INTRODUCTORY REMARKS

0.1 Welcome by BIS

Smt. Meenal Passi, Head, PCD, welcomed all members to the 14th meeting of PCD 25. She informed all members about new initiatives taken by BIS such as reviewing composition of committee and participation of members and curtailing committee size to maximum 30. Other initiatives include mapping of standards against government policies, spreading awareness about standards among general public by means of standard clubs and quality connect programs, revision of standards through R&D projects. She informed the Committee that BIS is organizing training workshops for Chairs and members of technical committees, Dr. Rao has already attended workshop for Chairs of TCs. She requested members to attend these workshops as and when they receive invites from BIS.

0.2 Opening Remarks by the Chairperson

Dr. Y P Rao, Chairperson, PCD 25 welcomed all members to the meeting. He mentioned that PCD 25 meeting is being conducted after a long time and there are several documents and subjects that have been pending since long. He requested all members to contribute actively by deliberating the items and taking decisions keeping in view the global trends and end consumer interest in view. He expressed pleasure over the fact that meeting calendar is finalized and meetings will be held every quarter. It will ensure continuity in working of the committee and expediting the standards formulation activity.

0.3 The attendance of the meeting is given in Annex I.

ITEM 1 CONFIRMATION OF THE MINUTES OF THE 13TH MEETING OF PCD 25

The Committee **CONFIRMED** the minutes, as circulated, since there were no comments on the minutes.

ITEM 2 TITLE, SCOPE AND COMPOSITION OF PCD 25

2.1 The Committee **NOTED** the title of PCD 25

2.2 The Committee **REVIEWED** the scope of PCD 25 and **DECIDED** to revise the scope as follows:

SCOPE – To formulate Indian Standards for terminology; lubricants, bio- lubricants, lubricating oils & greases and their related products like *coolants*, hydraulic fluids, corrosion preventives, quenching and cutting oils, lubricants produced through synthesis routes and codes of practice for storage, handling, transport and application.



Bureau of Indian Standards

14th Meeting of PCD 25

2.3 The Committee **NOTED** the ISO liaisons for PCD 25.

2.4 The Committee **NOTED** the present composition of PCD 25 and that PCRA has been dissolved and taken over by CHT.

Regarding insufficient participation in the past, the Committee **NOTED** that Ashok Leyland, Lubrizol, and SIAM are present in this meeting. The Committee **RECOMMENDED** BIS to send communication to all non-participating organizations seeking interest and latest nominations. Since meeting is being conducted after a long time, nominated members may no longer be associated with the member organization.

If no reply or updated nominations are received from the non-participating organizations, Committee will consider withdrawal in next meeting.

2.5 The Committee **NOTED** item 2.5 of the agenda.

ITEM 3 ACTIVITIES OF PCD 25

3.1 The Committee **NOTED** the program of work and list of standards published under PCD 25 as given in Annex II of the agenda.

3.2 Decision of Committee on recommendations of PCD 25:SC 1 is given in **Annex II**.

3.3 Decision of Committee on recommendations of PCD 25:SC 2 is given in **Annex III**.

3.4 Decision of Committee on recommendations of PCD 25:SC 3 is given in **Annex IV**.



3.5 Drafts under Preparation

| Sl. No. | Indian Standard/New Subject | Decision in Previous Meetings | Committee Decision |
|---------|---|---|--|
| i. | Transmission and e-Axle fluids for Electric Vehicles | <ul style="list-style-type: none"> Panel 6 created under the Convenorship of Shri Anand Kumar, Afton Chemicals Pvt Ltd for development of standard on this subject. | <ul style="list-style-type: none"> The Committee RECOMMENDED BIS to follow up with Convenor, Shri Anand Kumar, for more frequent meetings and to include Tata Motors and Ashok Leyland in the panel The Committee DECIDED to transfer the panel to PCD 25:SC 1 and REQUESTED SC Convenor to ensure that panel meetings are conducted before SC and main committee meetings |
| ii. | Greases for Electric Vehicles | <ul style="list-style-type: none"> Panel 7 created under the Convenorship of Dr. Arnab Chattopadhyay, Balmer Lawrie, for development of standard on this subject. Panel had conducted one meeting wherein the Panel had decided to do literature survey about existing EV grade greases. In last meeting, Convener of the Panel stated that they can inform the timelines for providing the draft by | <ul style="list-style-type: none"> The Committee RECOMMENDED BIS to write to Balmer Lawrie for nomination of new Convenor of the panel The Committee DECIDED to transfer the panel to PCD 25:SC 3 and REQUESTED SC Convenor to ensure that panel meetings are conducted before SC and main committee meetings Lubrizol informed the Committee that draft specification was prepared in |



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| | | end of January 2022, for which the Committee agreed to. | the panel and Committee REQUESTED Lubrizol to share the draft specification with BIS |
| iii. | Food Grade and Biodegradable Lubricants | <ul style="list-style-type: none"> Panel 1 created under the Convenorship of Dr Kavita Rai for food grade and biodegradable lubricants. Meeting of panel conducted on 6 February 2023, in which the panel members decided to adopt ISO 15380 "Lubricants, industrial oils and related products (class L) — Family H (Hydraulic systems) — Specifications for hydraulic fluids in categories HETG, HEPG, HEES and HEPR" for the formulation of biodegradable lubricant standard. | <ul style="list-style-type: none"> Dr. Kavita Rai informed that two meetings of the panel have been conducted on 6 Feb 2023 and 21 Feb 2023 The panel was of the opinion that requirement for food grade and biodegradable lubricant may be incorporated in existing standards for application-wise lubricants She informed that ISO 15380 "Lubricants, industrial oils and related products (class L) — Family H (Hydraulic systems) — Specifications for hydraulic fluids in categories HETG, HEPG, HEES and HEPR" covers food grade and biodegradable base oil for hydraulic system and recommended Committee to adopt it She further informed that ISO 6521-1 for air compressor lubricants may be modified to include food grade and biodegradable requirement Hence, the Committee DECIDED to issue ISO 15380 into WC for 2 months for identical adoption and issue ISO 6521-1 into WC for 2 months with technical modification (including food grade and biodegradable requirement) The Committee REQUESTED Dr. Kavita Rai to provide the modified content for ISO 6521-1 by July end 2023. |
| iv. | Food Grade and Biodegradable Greases | <ul style="list-style-type: none"> Panel (Panel 5) created under the Convenorship of Dr. T Singh for food grade and biodegradable greases Meeting of panel conducted on 15 March 2022 Dr, Singh has provided working drafts for food grade lubricating greases and biodegradable lubricating greases | <ul style="list-style-type: none"> The Committee DECIDED to issue the draft provided by Dr. T Singh into P draft circulation for 1 month. |



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| | |  Draft - Bio Degradability Specif  Draft - Food Grade Specification - T Sin | |
| v. | Greases for Solar Panels/Dielectric Grease | <ul style="list-style-type: none"> In the 8th meeting, the Committee noted the need for Indian Standard on greases for solar panels/ dielectric grease and requested Dr T. Singh, Convener, PCD 25:3, to look into the subject and present a white paper. In the 11th meeting, Dr T. Singh agreed to contact global companies and collect the necessary details and submit a white paper in the next meeting. | <ul style="list-style-type: none"> The Committee NOTED the stagnation of the project and REQUESTED Lubrizol to assist Dr. T Singh in preparing a white paper on the subject. |

3.6 Revision/Reaffirmation of Standards Due for Review

| Sl. No. | Indian Standard | Due Date | Committee Decision |
|---------|--|---------------|---|
| 1. | IS 16852 : 2018 Petroleum and related products - Guidance for in - Servicing of lubricating oils for steam, gas and combined - Cycle turbines | November 2023 | <ul style="list-style-type: none"> The Committee REAFFIRMED the standard as no comments were received on it. |
| 2. | IS 16909 : 2018 Girth gear lubricants - Specification | November 2023 | <ul style="list-style-type: none"> The Committee NOTED that this standard is under consideration in PCD 25:SC 2. Dr. T Singh, Shri Umesh Dwivedi, and Shri Siva Kasturi have been requested to check whether ISO 12925-2 can replace IS 16909 In the meantime, the Committee DECIDED to re-affirm the standard as no comments were received on it |



3.7 Revision of Pre-2000 Standard

| Sl. No. | Indian Standard | Current Status |
|---------|--|--|
| 1. | 3098:1983 Specification for oil, hydraulic, mineral oil type (second revision) | <ul style="list-style-type: none"> The Committee REQUESTED Shri Umesh Dwivedi, Gulf Oil, to prepare revised draft of hydraulic oil for 3 categories, i.e., R&O, AW, and high viscosity index. While preparing AW oil specification, it is suggested to merge IS 10522 and IS 11656. For preparing high viscosity index specification, it is recommended to take assistance from PCD 25 (14904). The Committee REQUESTED him to provide the draft by end of August 2023 |
| 2. | IS 4578 : 1997 Lubricants - Lubricating oil for refrigeration machinery - Specification (Second Revision) | <ul style="list-style-type: none"> The Committee REQUESTED Shri Abhijit Sarkar, HPCL, to prepare and provide revised draft by end of August 2023 and DECIDED to issue the draft into WC for 2 months |
| 3. | IS 11186 : 1985 Specification for synthetic grinding fluid | <ul style="list-style-type: none"> The Committee REQUESTED Shri Shakti Mishra, HPCL, to prepare and provide revised draft by end of August 2023 and DECIDED to issue the draft into WC for 2 months |
| 4. | IS 12790 : 1999 Non - Soap grease - Specification (First Revision) | <ul style="list-style-type: none"> The Committee REQUESTED Dr. T Singh, BPCL, to prepare and provide revised draft by end of August 2023 and DECIDED to issue the draft into WC for 2 months |
| 5. | IS 14383 : 1996 Silicone greases - Specification | <ul style="list-style-type: none"> The Committee DECIDED to archive this standard as this grease is mostly imported by global specialty product companies in small volumes based on their own in-house specifications |
| 6. | IS 14384 : 1996 Colloidal graphite dispersion in oil - Specification | <ul style="list-style-type: none"> The Committee REQUESTED Dr. T Singh, BPCL, to prepare and provide revised draft by end of August 2023 and DECIDED to issue the draft into WC for 2 months |
| 7. | IS 14745 : 1999 Thermic fluids - Specification | <ul style="list-style-type: none"> The Committee REQUESTED Shri Shakti Mishra, HPCL, to prepare and provide revised draft by end of August 2023 and DECIDED to issue the draft into WC for 2 months |

3.6 New Proposals Received

| Sl. No. | New Subject | Details |
|---------|----------------------------|--|
| 1. | Naphthenic Base Oil | <ul style="list-style-type: none"> Committee CONSIDERED the request received from CRCL and observed that the specification of base oil mentioned by CRCL falls under naphthenic oil for transformers |



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| | <ul style="list-style-type: none"> Shri Abhijit Sarkar, HPCL, informed that ETD 3 “Fluids for Electrotechnical Applications” and this subject should fall under ETD 3. He also informed that ETD 3 is currently revising IS 335 and naphthenic oil for transformers may be covered in this standard. Hence, the Committee DECIDED to refer this proposal from CRCL to ETD 3. |
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ITEM 4 INTERNATIONAL ACTIVITY

4.1 P Membership and Participation

The Committee **REVIEWED** item 4.1 of the agenda and **DECIDED** as given in the table below:

| Sl. No. | ISO Technical Committee/Subcommittee/WG | Registered Committee Member/Expert | Committee Decision |
|---------|--|------------------------------------|---|
| 1. | ISO/TC 28 Petroleum and related products, fuels and lubricants from natural or synthetic sources | Dr. A K Sinha, CSIR-IIP | Check with CSIR-IIP whether nomination needs to be updated |
| | | Shri Deepak Saxena, IOCL R&D | Seek interest from Shri Mukul Maheshwari for participation in the ISO committee |
| | | Dr. T Singh, BPCL | Retain |
| | | Head, PCD | Retain |
| | | Ms. Kreeti Das, Member Secretary | Retain |
| 2. | ISO/TC 28/SC 4 Classifications and specifications | Dr. Kavita Rai, IOCL R&D | Retain |
| | | Shri Deepak Saxena, IOCL R&D | Seek interest from Shri Mukul Maheshwari for participation in the ISO committee |
| | | Head, PCD | Retain |
| | | Ms. Kreeti Das, Member Secretary | Retain |

ITEM 5 ANY OTHER BUSINESS

5.1 It was observed that Convenors of some panels did not receive meeting notifications and agenda for SC and main committee meetings. The Committee **RECOMMENDED** BIS to ensure that all Panel Convenors receive notification and agenda for SC and main committee meetings for all future meetings.

5.2 The Committee observed that some panels have not held meetings since the last meeting of PCD 25. The Committee **REQUESTED** Subcommittee Convenors to ensure that panels under their Subcommittees meet



before SC and main committee meetings and regular progress is updated to SC and main committee through BIS.

ITEM 6 DATE AND PLACE OF NEXT MEETING

The Committee *DECIDED* to convene the meetings either during 26 – 27 October 2023 or 30 – 31 October 2023.

ITEM 7 VOTE OF THANKS

The meeting ended with a vote of thanks from BIS to Chairperson and all members for their participation and contribution.



ANNEX I
Meeting Attendance
(Clause 0.3)

Committee Members:

1. Dr. Y P Rao, In Personal Capacity, Chairperson
2. Shri Abhijit A Sarkar, HPCL, Mumbai
3. Shri Ashish Khanna, HPCL, Mumbai
4. Shri Dhanesh Rathod, The Western India Genuine Ghee Company Private Limited, Mumbai
5. Shri Mukul Maheshwari, IOCL (R&D), Faridabad
6. Dr. Pankaj Bhatnagar, IOCL R&D, Faridabad
7. Dr. Sarita Seth, IOCL R&D, Faridabad
8. Dr. Kavita Rai, IOCL R&D, Faridabad
9. Dr. Sandeep Garg, SIAM, New Delhi
10. Dr. Tarunendr Singh, BPCL, Mumbai
11. Dr. O P Singh, DGQA, Kanpur
12. Shri Fredrick A., Bosch Ltd., Bengaluru
13. Shri Raghuvveer Rao, Bosch Ltd., Bengaluru
14. Dr. G D Thakre, CSIR-IIP, Dehradun
15. Shri Harsh Vardhan Jain, Vinni Chemicals Pvt Ltd, New Delhi
16. Shri Manish Gopal, Tata Motors Ltd., Pune
17. Shri Pallipalayam Gowrishankar, Tata Motors Ltd., Pune
18. Shri H Ramakrishnan, Chennai Petroleum Corporation Limited, Chennai
19. Shri R Ramaprabhu, Mahindra & Mahindra, Mumbai
20. Shri Siva Kasturi, Shell India Markets Pvt Ltd., Mumbai
21. Shri Vijabaskar V, Balmer Lawrie and Company Limited, Kolkata
22. Shri Yogesh Mahajan, Bajaj Auto Ltd., Pune
23. Shri Bhupendra Rathod, Swastik Oil Products Manufacturing Company Private Limited, Mumbai

BIS Secretariat

1. Smt. Meenal Passi, Sc. F & Head, PCD
2. Ms. Kreeti Das, Sc. C, PCD
3. Shri Hari Mohan Meena, Sc. C, PCD



Annex II

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|  | भारतीय मानक ब्यूरो BUREAU OF INDIAN STANDARDS |
| | (PETROLEUM, COAL & RELATED PRODUCTS DEPARTMENT) |
| MINUTES | |
| 4 July 2023, Tuesday, 1400 - 1530 h | |
| AUTOMOTIVE LUBRICANTS & SPECIALITIES (INCLUDING BRAKE FLUID AND RADIATOR COOLANT) SUBCOMMITTEE | 7th Meeting |
| Convenor: Shri Mukul Maheshwari, IOCL (R&D) | Member Secretary: Ms. Kreeti Das |

Item 0 OPENING OF THE MEETING

0.1 Welcome address

On behalf of BIS, Ms. Kreeti Das, Sc. C, welcomed all members to the 7th meeting of PCD 25:SC 1. She also extended a warm welcome to new Convenor, Shri Mukul Maheshwari.

0.2 Opening remarks by the Convenor

Shri Maheshwari introduced himself and gave a brief background of his working experience. He welcomed everyone to the meeting and sought everyone's cooperation in the proceedings.

COMMITTEE: Chairperson and all members of PCD 25 extended a warm welcome to the new Convenor of PCD 25:SC 1, Shri Mukul Maheshwari, IOCL (R&D) and look forward to a close and fruitful cooperation.

0.3 The attendance of the meeting is given in **Annex I**.

ITEM 1 CONFIRMATION OF THE MINUTES OF THE LAST MEETING

The Subcommittee *CONFIRMED* the minutes of the last meeting, as circulated.

Item 2 TITLE, SCOPE AND COMPOSITION OF PCD 25:SC 1

2.1 The Subcommittee *REQUESTED* BIS to prepare a draft scope and list of standards proposed to be under the scope of SC 1 and send it to convenor and members for checking and confirming. Thereafter, it will be approved by PCD 25.

COMMITTEE DECISION: The Committee *AGREED* with the recommendation of Subcommittee

2.2 The Subcommittee *NOTED* items 2.1, 2.3, and 2.4 of the agenda. Subcommittee *RECOMMENDED* BIS Sectt to write to all member organizations to update their nominations.



2.3 Co-option Requests

The Subcommittee *CONSIDERED* the co-option requests for Panel 4 on virgin and re-refined base oil and also listened to the brief information provided by IFP Petro products, who were invitees to the meeting. Shri Ramaprabhu requested the Subcommittee to consider the company profile and their expertise in re-refined base oil sector for taking decision on the co-option. The Subcommittee also felt that representation of re-refiners is needed in the panel.

After deliberations, the Subcommittee *RECOMMENDED* that BIS will send the company profiles and nominated representative details to Convenor of Panel 4 and Convenor of SC 1. Both convenors to analyze the requests in coordination with each other and come out with decision of co-option.

COMMITTEE DECISION: The Committee after looking at the panel composition, *RECOMMENDED* SC 1 and Panel 4 to include re-refiners in the panel, and *AGREED* with the recommendation of Subcommittee

Item 3 ACTIVITIES OF AUTOMOTIVE LUBRICANTS & SPECIALITIES (INCLUDING BRAKE FLUID AND RADIATOR COOLANT) SUBCOMMITTEE, PCD 25:1

3.1 Draft Standards/Amendments for Approval for Wide Circulation

| Sl. No. | Indian Standard/Document No. | Decision in Previous Meetings | Subcommittee Recommendation |
|---------|--|---|---|
| i. | <p>Revision of IS 14234 (Part 2) : 2017</p> <p>Lubricants for Spark-Ignition Air-Cooled Gasoline Engines – Specification Part 2 Four-Stroke Spark-Ignition Air-Cooled Engines for Scooters, Mopeds and Motorcycles</p> | <ul style="list-style-type: none"> In 11th meeting, the Committee requested Dr. Pankaj Bhatnagar to prepare draft revision of the standard and to ensure that the standard is in alignment with the JASO (Japanese Standards Organization) latest specification, ISO and API specifications. Revised draft provided by Dr. Bhatnagar. BIS highlighted that JASO standards have been referred in the draft and as per BIS practice, reference to standards other than IS and ISO should be avoided. However, all the lubricant manufacturers and two-wheeler manufacturers present in the meeting backed the reference to JASO standards because JASO specifications are very much prevalent in the industry for engine oils of 2 wheelers Committee agreed to the reference of JASO standards and requested BIS sectt. to issue the draft into wide circulation for a period of two months | <ul style="list-style-type: none"> Dr. Bhatnagar informed the Subcommittee that JASO T-903 2023 version is out. Hence, the Subcommittee <i>REQUESTED</i> Dr. Bhatnagar to prepare the revised draft incorporating provisions of latest JASO and provide the revised draft to BIS within end of July 2023. The Subcommittee <i>RECOMMENDED</i> BIS to circulate the revised draft into WC for 2 months. <p>COMMITTEE DECISION: The Committee <i>AGREED</i> with the recommendation of Subcommittee</p> |
| ii. | <p>PCD 25 (22088) Mineral and Re-Refined Base Oil – Specification</p> | <ul style="list-style-type: none"> Panel 4 created under Convenorship of Dr. Ajay Kumar Harinarain for development of draft. | <ul style="list-style-type: none"> The Subcommittee <i>NOTED</i> the status of the draft <p>COMMITTEE DECISION: Chairperson discussed the draft with committee members and</p> |



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| | | | <p>requested them to check the values prescribed for viscosity index, sulphur content, and other parameters. He requested members to review the draft thoroughly and provide comments to the panel</p> |
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3.2 Drafts Under Preparation

| Sl. No. | Indian Standard/New Subject | Decision in Previous Meetings | Subcommittee Recommendation |
|---------|---|---|--|
| vi. | <p>Revision of IS 5759 : 2006 Antifreeze Coolant - Specification (Second Revision)</p> | <ul style="list-style-type: none"> • Panel 1 under Convenorship of Shri Harsh Vardhan Jain, Vinni chemicals, created under PCD 25:SC 1 for revision of the standard. • The Committee requested Shri Harshvardhan Jain, Vinni chemicals, to collect the data for low phosphate coolants and request all the member OEMs of this Committee for confirmation of correctness of the data, limits and test methods. • The Committee requested Shri Neville Colaco, BASF, to collect the data for low silicate and after confirmation of correctness, he would send the details to Shri Harshvardhan Jain, for preparing the draft. • Additional changes recommended by Committee in the draft: <ul style="list-style-type: none"> a) To delete colour and provide proper justification for the same in the Foreword b) Alternate methods to be incorporated in testing anions and cations. For organic material and additives, HPLC, GC/GCMS and for cations, ICP can be used along with Ion Chromatograph. • During 11th meeting, the Committee further suggested to categorize the coolant based on phosphate limit into the following varieties: <ul style="list-style-type: none"> (a) Pure OAT (Organic Acid Technology); (b) Lowbrid; and (c) Hybrid • One meeting of the panel was conducted and the Panel informed that it will look into redrafting the standard, | <ul style="list-style-type: none"> • The Subcommittee <i>NOTED</i> the current status and <i>REQUESTED</i> Shri Harsh Vardhan Jain to convene meetings for the panel and provide a timeline for revising the standard • Shri Jain sought permission from the Subcommittee to include experts from Tata Motors and Artico Coolants in the panel as they have expertise in antifreeze coolants • Subcommittee <i>AGREED</i> to the proposal of Shri Jain. <p style="color: red; margin-top: 10px;">COMMITTEE DECISION: The Committee <i>AGREED</i> with the recommendation of Subcommittee</p> |



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| | | <p>categorizing it based on applications, as follows:</p> <ul style="list-style-type: none"> a) Automotive; b) Farm/Construction; c) Stationary; and d) Electric. <ul style="list-style-type: none"> • During 12th meeting, Chairman PCD 25 requested the Panel and Subcommittee to relook into the classification based on chemistry and then specify the applications under each chemistry. | |
| <p>vii.</p> | <p>Amendment to IS 13656 : 2019 Internal combustion engine crankcase oils for automotive application (Diesel And Gasoline) - Specification (Third Revision)</p> | <ul style="list-style-type: none"> • Comments received from Directorate of Standardization – Department of Defence (CQAPP) regarding problems being faced by them in certification due to removal of Qualification Approval (QA) and Product Identification (PI). • The Committee created Panel 3 under the Convenorship of Dr. Pankaj Bhatnagar, under PCD 25:SC 1 for formulating “Certification Procedure for Engine Oils, Gear Oil, and Axle Oil”. • One meeting of Panel 3 was conducted and Dr. Bhatnagar informed the Committee that QA and PI requirements were dropped in third revision of IS 13656 because these were not used generally except for defence applications. • He suggested that CQAPP’s concerns may be addressed by issuing an amendment to IS 13656, including QA and PI requirements and clearly mentioning that these are applicable for defence purposes only. • During further discussions, it was decided to verify the latest approval procedure being followed currently by CQAPP including the QA and PI requirements and accordingly amendments are to be framed. CQAPP also agreed with this proposal. • After deliberations, Dr Bhatnagar informed that the draft amendment to IS 13656 based on above inputs, will be provided by end of January 2022. • Additionally, the Committee pointed out that for the current requirements of the standard, testing facilities are not available in India and it will be difficult for complete certification process to be evolved in India. | <ul style="list-style-type: none"> • Dr. Pankaj Bhatnagar informed the Subcommittee that he has prepared revised draft incorporating latest QA and PI procedure and informed the Subcommittee that the draft will be circulated in the panel for study and comments. • Dr. Bhatnagar also informed that further deliberations are required in the panel with respect to formulation of certification procedure. • The Subcommittee AGREED with Dr. Bhatnagar for circulating the revised draft in panel for discussion and REQUESTED him to conduct meetings urgently to draft the certification procedure. <p>COMMITTEE DECISION: The Committee AGREED with the recommendation of Subcommittee and ADVISED to circulate the draft in Subcommittee once it is discussed in panel.</p> <p>Chairperson also advised that, for drafting certification procedure, the panel may look into API certification process, and also include BIS certification department in their panel discussions to enable BIS to provide certification to interested organisations.</p> |



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| | | <ul style="list-style-type: none"> Hence, the Committee requested the Panel to look into developing a certification procedure based on the engine test data provided by additive companies in line with the documentation process followed by API for engine oils. In case of gear and axle oils, the Panel was requested to look into considering the LRI (SAE) approved products for certification. | |
| viii. | <p>Revision of IS 1118 : 2019 Gear lubricants multipurpose - Extreme Pressure Gear Oil - specification Second Revision</p> | <ul style="list-style-type: none"> Comments received from Directorate of Standardization – Department of Defence (CQAPP) regarding problems being faced by them in certification due to removal of Qualification Approval (QA) and Product Identification (PI). Further, editorial and typographical errors pointed out in the standard. Revised draft for IS 1118 provided by Dr. Pankaj Bhatnagar after correcting the editorial and typographical errors. However, the Committee requested Panel 3 to verify the latest approval procedure being followed by CQAPP and to include the QA and PI requirements in the revised draft. The Committee also requested the Panel to look into developing a certification procedure based on LRI (SAE) approved products for certification of gear oil for the testing facilities that are not available in India | <ul style="list-style-type: none"> Dr. Bhatnagar informed the Subcommittee that he has prepare and provided the revised draft Shri Ramaprabhu informed the Subcommittee that gear oils GL4 and GL5 are obsolete. However, members informed that these are still in use in defence and Shri Bhupendra Rathod informed that ancillar testing is available with IIP. Hence, the Subcommittee RECOMMENDED BIS to seek inputs from Department of Defence regarding relevance of these categories <p>COMMITTEE DECISION: Chairperson informed that GL5 rig test is very much available globally. Additionally, SAE J2360 is also available for for axle oil specifications. Based on GL5 performance test data, oil companies have been marketing GL4 oils by using 50% of GL-5 additive dosage.</p> <p>Hence, the Committee RECOMMENDED the panel to discuss whether SAE J2360 can be used for new category and revise the standard by including new grade equivalent to SAE J2360.</p> <p>The Committee REQUESTED Dr. Bhatnagar to provide the revised draft by end of September 2023</p> |



Item 4 ANY OTHER BUSINESS

4.1 Shifting of Panel for Transmission and e-Axle Fluids for Electric Vehicles under purview of PCD 25:SC 1

Subcommittee *RECOMMENDED* to shift the panel for Transmission and e-Axle Fluids for Electric Vehicles (PCD 25/P6) under the purview of PCD 25:SC 1 as this Subcommittee is looking after automotive lubricants and specialties.

COMMITTEE DECISION: The Committee *AGREED* with the recommendation of Subcommittee

ITEM 5 DATE AND PLACE FOR THE NEXT MEETING

COMMITTEE DECISION: The Committee *DECIDED* to convene the meetings either during 26 – 27 October 2023 or 30 – 31 October 2023.

Item 6 VOTE OF THANKS

The meeting ended with a vote of thanks from BIS to the Convenor and all members.

ANNEX I Meeting Attendance (Clause 0.3)

Subcommittee Members:

24. Shri Mukul Maheshwari, IOCL (R&D), Faridabad (Convenor)
25. Dr. Pankaj Bhatnagar, IOCL R&D, Faridabad
26. Dr. Sarita Seth, IOCL R&D, Faridabad
27. Dr. Devendra Singh, CSIR-IIP, Dehradun
28. Shri Manoj Srivastava, CSIR-IIP, Dehradun
29. Dr. Tarunendr Singh, BPCL, Mumbai
30. Shri Amitava Pal, BPCL, Mumbai
31. Shri M Rajendran, BPCL, Mumbai
32. Shri Abhijit A Sarkar, HPCL, Mumbai
33. Shri Tarun Sharma, HPCL, Mumbai
34. Sh. Lokender Singh Tevathiya, HPCL, Mumbai
35. Shri Ajay Agarwal, Shell India Markets Pvt Ltd., Mumbai
36. Shri Siva Kasturi, Shell India Markets Pvt Ltd., Mumbai
37. Shri Dhanesh Rathod, The Western India Genuine Ghee Company Private Limited, Mumbai
38. Shri Fredrick A., Bosch Ltd., Bengaluru
39. Shri Harsh Vardhan Jain, Vinni Chemicals Pvt Ltd, New Delhi
40. Shri Jaideep Sarnaik, Tide Water Oil Company India Limited, Kolkata
41. Shri Kiran N, Ashok Leyland Ltd., Chennai
42. Shri Mahesh P, Ashok Leyland Ltd., Chennai
43. Shri Neville Colaco, BASF India Ltd., Mumbai
44. Shri R N Gore, Central Institute of Road Transport, Pune
45. Shri R Ramaprabhu, Mahindra & Mahindra, Mumbai
46. Shri Siddhesh Savant, Ultra Plus Lubes Pvt Ltd., Mumbai
47. Dr. T C S M Gupta, Apar Industries Limited, Mumbai



48. Shri Yogesh Mahajan, Bajaj Auto Ltd., Pune

49. Shri Bhupendra Rathod, Swastik Oil Products Manufacturing Company Private Limited, Mumbai

Invitees

1. Shri Anant Bhargava, IFP Petro Products Pvt Ltd., Ghaziabad
2. Shri Sanjay Bhargava, IFP Petro Products Pvt Ltd., Ghaziabad

BIS Secretariat

4. Ms. Kreeti Das, Sc. C, PCD
5. Shri Hari Mohan Meena, Sc. C, PCD



Annex III

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|  | भारतीय मानक ब्यूरो BUREAU OF INDIAN STANDARDS |
| | (PETROLEUM, COAL & RELATED PRODUCTS DEPARTMENT) |
| MINUTES | |
| 4 July 2023, Tuesday, 1000 - 1300 h | |
| Industrial Lubricants & Specialty Products Subcommittee | 7th Meeting |
| Convenor: Shri Siva Kasturi, Shell India Markets Pvt Ltd | Member Secretary: Ms. Kreeti Das |

Item 0 OPENING OF THE MEETING

0.3 Welcome address

On behalf of BIS, Ms. Kreeti Das, Sc. C, welcomed all members to the 7th meeting of PCD 25:SC 2.

0.4 Opening remarks by the Convenor

Convenor welcomed everyone to the meeting and mentioned that some agenda items have been pending since 2 years, for example, merging of standards on gear oils and hydraulic oils and revision of fire resistant hydraulic oil standards. He requested all members to give their valuable inputs.

0.3 The attendance of the meeting is given in **Annex I**.

ITEM 1 CONFIRMATION OF THE MINUTES OF THE LAST MEETING

The Subcommittee *CONFIRMED* the minutes of the last meeting, as circulated.

Item 2 TITLE, SCOPE AND COMPOSITION OF PCD 25:SC 2

2.1 The Subcommittee *REQUESTED* BIS to prepare a draft scope and list of standards proposed to be under the scope of SC 2 and send it to convenor and members for checking and confirming. Thereafter, it will be approved by PCD 25.

COMMITTEE DECISION: The Committee *AGREED* with the recommendation of Subcommittee

2.2 The Subcommittee *NOTED* items 2.1, 2.3, and 2.4 of the agenda. Subcommittee *RECOMMENDED* BIS Sectt to write to all member organizations to update their nominations.

Item 3 ACTIVITIES OF INDUSTRIAL LUBRICANTS & SPECIALTY PRODUCTS SUBCOMMITTEE, PCD 25:2

3.1 Draft Standards/Amendments for Finalization



| Sl. No. | Document No. | Decision in Previous Meetings | Subcommittee Recommendation |
|---------|---|---|--|
| i. | PCD 25 (18597) Second Revision of IS 6552 : 1987 Straight mineral high demulsibility oils - Specification | <ul style="list-style-type: none"> Draft issued into WC in December 2021 for a period of 2 months. No comments received | <ul style="list-style-type: none"> The Subcommittee <i>RECOMMENDED</i> to finalize the document for printing with approval of PCD 25 <p>COMMITTEE DECISION: The Committee <i>DECIDED</i> to finalize the document for printing</p> |
| ii. | PCD 25 (18660) Third Revision of IS 2664 : 1980 Quenching oil - Specification | <ul style="list-style-type: none"> Draft issued into WC in December 2021 for a period of 2 months. No comments received | <ul style="list-style-type: none"> The Subcommittee <i>RECOMMENDED</i> to finalize the document for printing with approval of PCD 25 <p>COMMITTEE DECISION: The Committee <i>DECIDED</i> to finalize the document for printing</p> |

3.2 Draft Standards/Amendments for Approval for Wide Circulation

| Sl. No. | Indian Standard/Document No. | Decision in Previous Meetings | Subcommittee Recommendation |
|---------|---|--|--|
| iii. | IS 8406 : 1993 Gear lubricants for enclosed industrial gear drives - Specification (Second Revision) | <ul style="list-style-type: none"> Revised draft was provided by Dr. Jaiswal and the Committee requested BIS Sectt. to issue the draft into wide circulation. | <ul style="list-style-type: none"> Subcommittee <i>RECOMMENDED</i> BIS Sectt to send IS 15112 (Part 1) "Lubricants, industrial oils and related products (Class L) – Family C (Gears) Part 1 Specification for lubricants for enclosed gear systems" and IS 8406 to Dr. Kavita Rai and Shri Abhijit Sarkar to check whether these standards are overlapping If found overlapping, Subcommittee <i>RECOMMENDED</i> to explore the possibility of merging both standard. However, as IS 8406 is used by customs department, comments to be sought from them before merging the standards If not found overlapping, revised draft provided by Dr. Jaiswal to be circulated into WC <p>COMMITTEE DECISION: The Committee <i>AGREED</i> with the recommendation of Subcommittee and <i>REQUESTED</i> Dr. Kavita Rai and Shri Abhijit Sarkar to review and provide their inputs within 1 month.</p> |



3.3 Drafts Under Preparation

| Sl. No. | Indian Standard/New Subject | Decision in Previous Meetings | Subcommittee Recommendation |
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| ix. | <p>IS 10522 : 1983 Specification for antiwear hydraulic oil & IS 11656 : 1986 Specification for antiwear hydraulic oil extra heavy duty type & PCD 25 (14904) All weather antiwear hydraulic oils - Specification</p> | <ul style="list-style-type: none"> • Draft standard provided by Shri Sanjay Kumar after combining IS 10522 and IS 11656. • PCD 25(14904) was circulated into WC in October 2019 for a period of 2 months, no comments were received and draft was put up for finalization. • However, in 12th meeting, the Committee noted that the document can be combined with IS 10522 and IS 11656 • The Committee requested Shri Sanjay Kumar, Gulf Oil to review and provide the combined draft [combining IS 10522, IS 11656 and PCD 25(14904)] by December 2020. | <ul style="list-style-type: none"> • Subcommittee <i>RECOMMENDED</i> BIS to seek updated nominations from Gulf Oil lubricants as Shri Sanjay Kumar may not be continuing there • Subcommittee <i>RECOMMENDED</i> to check if Shri Umesh Dwivedi can represent Gulf Oil in SC 2 • Subcommittee <i>REQUESTED</i> Shri Umesh Dwivedi to use the draft prepared by Shri Sanjay Kumar after combining IS 10522 and IS 11656 and prepare the final draft by merging PCD 25 (14904) • Final draft prepared by Shri Umesh Dwivedi will be circulated into WC for a period of 60 days. • Shri Umesh Dwivedi informed that he will provide the final draft by end of July 2023 <p>COMMITTEE DECISION: The Committee <i>AGREED</i> with the recommendation of Subcommittee</p> |
| x. | <p>IS 10531 : 1983 Code of practice for selection and use of fire - Resistant hydraulic fluids</p> | <ul style="list-style-type: none"> • The Committee requested Shri Sanjay Kumar, Gulf Oil, Shri Siva Kasturi, Shell and Shri Rajiv Bhatnagar, Sarbi Industries to provide revised draft and to take assistance from ISO 7745 to prepare the revised draft. • The Committee also requested BIS Sectt to issue ISO 7745 and ISO 12922 into WC for adoption. | <ul style="list-style-type: none"> • BIS informed the Subcommittee that ISO 7745 is under revision, currently at DIS stage. The DIS document has been circulated to PCD 25 and PCD 25:SC 2 for comments. • The Subcommittee <i>RECOMMENDED</i> BIS Sectt to send ISO/DIS 7745 to Dr. T Singh for checking and Dr. Kavita Rai and Convenor will assist him. If found technically satisfactory, the FDIS draft to be circulated into WC for 30 days. • The Subcommittee <i>RECOMMENDED</i> to issue ISO 12922 into WC at the earliest |



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| | | | <ul style="list-style-type: none"> The Subcommittee <i>REQUESTED</i> Shri Umesh Dwidevi (Gulf Oil), Shri Siva Kasturi (Shell) and Shri Rajiv Bhatnagar (Sarbi Industries) to provide the revised draft by July 2023 <p>COMMITTEE DECISION: The Committee <i>AGREED</i> with the recommendation of Subcommittee</p> |
| xi. | IS 10532 (Part 1) : 1983 Specification for fire - Resistant hydraulic fluids: Part 1 dilute emulsions for powered supports | <ul style="list-style-type: none"> The Subcommittee had requested Shri Sanjay Kumar, Gulf Oil, Shri Siva Kasturi, Shell, Shri Bhupendra Rathod, Swastik Oil, and Shri Rajiv Bhatnagar, Sarbi Industries to verify ISO 12922:2012 Lubricants, industrial oils and related products (class L) — Family H (Hydraulic systems) — Specifications for hydraulic fluids in categories HFAE, HFAS, HFB, HFC, HFDR and HFDR for its adoption replacing all/ few parts of IS 10532. The Committee, in its 11th meeting decided to adopt ISO 12992, however no decision is taken whether the adopted ISO would replace IS 10532 Parts 1,2, and 3. | <ul style="list-style-type: none"> The Subcommittee <i>CONFIRMED</i> that ISO 12922 can replace IS 10532 (Parts 1 – 5) and <i>RECOMMENDED</i> to issue ISO 12922 into WC for 2 months at the earliest The Subcommittee also <i>RECOMMENDED</i> to especially seek comments from DGMS on the WC as they may be using IS 10532 series of standards <p>COMMITTEE DECISION: The Committee <i>AGREED</i> with the recommendation of Subcommittee but also <i>RECOMMENDED BIS</i> to seek comments from IIP, NTH, HPCL, and IOCL regarding availability of test methods prescribed in the ISO standard in India</p> |
| xii. | IS 10532 (Part 2) : 1983 Specification for fire - Resistant hydraulic fluids - Part 2 : invert emulsions (Water - In - Oil) type | | |
| xiii. | IS 10532 (Part 3) : 1983 Specificaion for fire - Resistant hydraulic fluids - Part 3 : water glycol type | | |
| xiv. | IS 1115 : 1986 Specification for general purpose cutting oil, soluble (Second Revision) | <ul style="list-style-type: none"> The Committee had requested Dr. Venkatesan, IOCL (Mktg), to provide the revised draft by November 2021 | <p>The Subcommittee <i>RECOMMENDED</i> to follow up with Dr. Venkatesan with copy to Shri Rajesh Nambiar</p> <p>COMMITTEE DECISION: The Committee <i>AGREED</i> with the recommendation of Subcommittee</p> |
| xv. | IS 13256 : 1992 Air compressor lubricants - Types daa and dab - Specification | <ul style="list-style-type: none"> In the 12th meeting, the Committee had decided to adopt ISO 6521-1 (Lubricants, industrial oils and related products (Class L) — Family D (compressors) —Part 1: Specifications of categories DAA and DAB (lubricants for reciprocating and drip feed rotary air compressors) However, no decision is taken whether the adopted ISO standard would replace IS 13256 | <p>The Subcommittee <i>CONFIRMED</i> that ISO 6521-1 will replace IS 13256 and <i>RECOMMENDED BIS</i> to issue the ISO standard into WC at the earliest</p> <p>COMMITTEE DECISION: For food grade and biodegradable lubricants, convenor of concerned panel (PCD 25/P1), Dr. Kavita Rai, informed that ISO 6521-1 can be</p> |



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| | | | <p>modified to include food grade and biodegradable variety. The Committee <i>REQUESTED</i> the panel (PCD 25/P1) to provide the modification to be included in ISO 6521-1 and <i>DECIDED</i> that BIS will issue ISO 6521-1 into WC for adoption with technical modification</p> |
| xvi. | <p>IS 14385 : 1996 Aluminium cold rolling oils - Specification</p> | <ul style="list-style-type: none"> During the 12th meeting, the Committee requested Shri Venkatesh Krishnan and Shri Harshad Pandit, Hindalco, to provide the revised draft | <ul style="list-style-type: none"> The Subcommittee <i>RECOMMENDED</i> BIS Sectt to follow up with Shri Venkatesh Krishnan and Shri Harshad Pandit, Hindalco, for the revised draft, with copy to Dr. T Singh Revised draft to be circulated into WC for a period of 2 months. <p>COMMITTEE DECISION: The Committee <i>AGREED</i> with the recommendation of Subcommittee</p> |
| xvii. | <p>IS 1589 : 1994 Oil, cylinder - Specification (First Revision)</p> | | <ul style="list-style-type: none"> Dr. Kavita Rai informed that both standards were examined by IOCL and it was observed that the products cylinder oil and axle oil are very different with different values for viscosity and flash point. |
| xviii. | <p>IS 1628 : 1986 Specification for axle oil (Second Revision)</p> | <ul style="list-style-type: none"> In the previous meetings, the Committee had recommended to merge both standards as both cylinder oil and axle oil can be used in sponge iron plants, sugar mills, paper industry, corrugated industry etc. The Committee had requested Dr. Kavita Rai to provide the revised merged draft. RDSO had also informed that they support the merging of the standards | <ul style="list-style-type: none"> It was also informed by members of the Subcommittee that Railways uses IS 1589 and IS 1628 separately After deliberations, the Subcommittee <i>RECOMMENDED</i> not to merge these standards For revision of the standards, Subcommittee <i>RECOMMENDED</i> BIS to write to RDSO for comments on the standard <p>COMMITTEE DECISION: The Committee <i>AGREED</i> with the recommendation of Subcommittee and <i>REQUESTED</i> Dr. Kavita Rai to prepare the revised document</p> |
| xix. | <p>IS 1758 : 1986</p> | <ul style="list-style-type: none"> The Committee had requested Dr. Pankaj Bhatnagar, IOCL R&D, to provide the revised draft by May 2021 | <ul style="list-style-type: none"> The Subcommittee <i>RECOMMENDED</i> BIS to follow up with Dr. Pankaj Bhatnagar to provide the revised draft |



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| | <p>Specification for jute batching oil (Second Revision)</p> | | <ul style="list-style-type: none"> Revised draft to be circulated into WC for 2 months. <p>COMMITTEE DECISION: The Committee <i>AGREED</i> with the recommendation of Subcommittee and Dr. Pankaj Bhatnagar agreed to provide the revised draft within 10 days</p> |
| <p>xx.</p> | <p>IS 2297 : 1997 Gear lubricants, compounded - Specification (Third Revision)</p> | <ul style="list-style-type: none"> In the 12th meeting the Committee had recommended Subcommittee to check whether ISO 6743-6 and ISO 12925-1 can be adopted to replace the standard The Committee had also recommended that if it is not possible to adopt ISO standard, the Subcommittee will revise the existing standard by considering global specifications | <ul style="list-style-type: none"> BIS informed the Subcommittee that ISO 6743-6 is already adopted as IS 11159 (Part 7) : 2019 and ISO 12925-1 is already adopted as IS 15112 (Part 1) : 2022 The Subcommittee <i>RECOMMENDED</i> to send IS 15112 (Part 1) and IS 2297 to Dr. Kavita Rai, Shri Abhijit Sarkar, Dr. O P Singh, and to CQAPP Kanpur to check whether these standards are overlapping, and if so, whether IS 15112 (Part 1) can replace IS 2297. <p>COMMITTEE DECISION: The Committee was of the view that IS 15112-1 does not cover compounded gear oils. AGMA has specification for compounded gear oils. Committee <i>REQUESTED</i> Shri Abhijit Sarkar to prepare the revised draft and <i>RECOMMENDED</i> to check the latest AGMA specification and ISO 12925-1,2,3</p> |
| <p>xxi.</p> | <p>IS 4543 : 1977 Specification marquenching oil (First Revision)</p> | <ul style="list-style-type: none"> Shri Sanjay Kumar, Gulf Oil, had provided the revised draft and upon verifying the draft, the Committee had suggested that Annex for test method on quencometer and justification for changes in foreword, need to be included. Shri Sanjay Kumar had agreed to incorporate the changes and provide modified draft. The Committee had also requested Shri Sanjay Kumar to check the feasibility for adoption of ISO 9950 and Shri Sanjay Kumar agreed to inform the same | <ul style="list-style-type: none"> Subcommittee <i>RECOMMENDED</i> BIS to seek updated nominations from Gulf Oil lubricants as Shri Sanjay Kumar may not be continuing there Subcommittee <i>RECOMMENDED</i> to check if Shri Umesh Dwivedi can represent Gulf Oil in SC 2 Subcommittee <i>REQUESTED</i> Shri Umesh Dwivedi to provide the modified draft and also to check the feasibility of referring ISO 9950 as the test method |



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| | | | <p>COMMITTEE DECISION: The Committee <i>AGREED</i> with the recommendation of Subcommittee</p> |
| xxii. | <p>IS 5730 : 1970 Specification for volatile corrosion inhibitor powder</p> | <ul style="list-style-type: none"> The Committee had requested Shri Rajiv Bhatnagar from Sarbi Industries to provide the revised draft as they are manufacturers of IS 5730. The Committee also decided to discuss withdrawal of the standard if revised draft is not received from Shri Bhatnagar as the existing standard may not be relevant In 12th meeting, Shri Bhatnagar agreed to provide the revised draft by September 2021 | <ul style="list-style-type: none"> The Subcommittee <i>RECOMMENDED</i> BIS to follow up with Shri Rajiv Bhatnagar to provide the revised draft with copy to Dr. T Singh and Convenor Convenor also stated that he will provide contact details of companies manufacturing VCI powder and Subcommittee <i>REQUESTED</i> BIS to send formal letters to them seeking comments on the standard If revised draft and/or comments from VCI manufacturers are not received, Subcommittee will consider archiving of the standard in next meeting <p>COMMITTEE DECISION: The Committee <i>AGREED</i> with the recommendation of Subcommittee</p> |
| xxiii. | <p>IS 6049 : 1971 Code of practice for application of temporary corrosion preventives</p> | <ul style="list-style-type: none"> The Committee had observed that the standard needs to be updated to include the latest technologies of ultrasonic spraying etc being used in the industry The Committee after deliberations decided to request Shri Rajiv Bhatnagar, Sarbi Industries to provide the drafts within 2 months, i.e., by the end of January 2020 The Committee after further discussions requested Member Secretary, Shri Siva Kasturi, Convenor PCD 25:2 and Shri Sanjay Kumar, Gulf Oil to verify if any ISO standard is available for adoption | <ul style="list-style-type: none"> The Subcommittee <i>RECOMMENDED</i> BIS to follow up with Shri Rajiv Bhatnagar to provide the revised draft with copy to Dr. T Singh and Convenor Convenor also stated that he will provide contact details of relevant companies and Subcommittee <i>REQUESTED</i> BIS to send formal letters to them seeking comments on the standards If revised drafts and/or comments from companies are not received, Subcommittee will consider archiving of both standards in next meeting <p>COMMITTEE DECISION: The Committee <i>AGREED</i> with the recommendation of Subcommittee Dr. T Singh informed that he had conversation with Shri Rajiv Bhatnagar and he confirmed that</p> |
| xxiv. | <p>IS 6050 : 1971 Specification for temporary corrosion preventives, strippable, hot dipping type</p> | | |



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| | | | draft will be provided within 2 weeks. |
| xxv. | <p>IS 9182 (Part 1) : 1993</p> <p>Lubricants for wire ropes and fibre cores - Specification: Part 1 lubricants for fibre core of wire - Ropes (First Revision)</p> | <ul style="list-style-type: none"> Shri Shiva, Convener, informed the Committee that AGMA CG Guidelines for coupling grease and wire rope greases are followed internationally and agreed to revise all the three parts. As the drafts were not provided till 11th meeting, Dr. T Singh agreed to prepare the draft standard for compound type and grease type and Shri Umesh Dwivedi, Gulf oil, agreed to assist Dr. T Singh. Dr. T Singh and Shri Umesh Dwivedi agreed to provide the drafts by October 2021 | <ul style="list-style-type: none"> The Subcommittee <i>RECOMMENDED</i> BIS to follow up with Shri Umesh Dwivedi to provide the revised draft with copy to Dr. T Singh <p>COMMITTEE DECISION: The Committee <i>AGREED</i> with the recommendation of Subcommittee</p> |
| xxvi. | <p>IS 9182 (Part 2) : 1993</p> <p>Lubricants for wire ropes and - Fibre cores - Specification part - 2 lubricants for wire strands and ropes . (First Revision)</p> | | |
| xxvii. | <p>IS 9182 (Part 3) : 1993</p> <p>Lubricants for wire ropes and fibre cores - Specification: Part 3 lubricants for rope dressing in service (First Revision)</p> | | |
| xxviii. | <p>IS 9554 : 1980</p> <p>Specifications for lubricants for open gears</p> | <ul style="list-style-type: none"> The Committee had observed that ISO/CD 12925-2 can be considered for adoption under dual numbering once it is finalized. It is also noted that IS 16909 : 2018 Girth Gear Lubricants Specification has been published for gear lubricants. Upon deliberations, the Subcommittee requested BIS sectt., to provide these documents to Dr Deepak Saxena, IOC(R&D), Shri Siva, Shell and Dr. T. Singh, BPCL. They were requested to verify whether (i) ISO/CD 12925-2 can be adopted, replacing IS 9554 only or can replace both IS 9554 and IS 16909 or (ii) retain both and adopt | <ul style="list-style-type: none"> Subcommittee <i>RECOMMENDED</i> to send ISO 12925-2 “Lubricants, industrial oils and related products (class L) — Family C (gears) — Part 2: Specifications of categories CKH, CKJ and CKM (lubricants open and semi-enclosed gear systems)”, IS 9554, and IS 16909 to Dr. T Singh, Shri Umesh Dwivedi, and Convenor to verify whether the ISO standard can replace both Indian Standards or one of them |



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| | | <p>this ISO draft or (iii) adopt ISO draft, replacing both the Indian standards and prepare a new standard, for the remaining gear oils not covered in ISO draft (It was assumed that after adopting ISO draft, IS 9554 may need to be revised for bituminous type, separately) and provide the recommendation/ draft/s, by the end of March 2020.</p> <ul style="list-style-type: none"> In the 11th meeting, Shri Vijay Deshmukh, Standard Grease, agreed to provide the revised draft, covering both bituminous and polymer type. Revised draft is received from Shri Vijay Deshmukh BIS Sectt. agreed to provide IS 16909, ISO 12925-2 and IS 9554 to Shri Umesh Dwivedi, Gulf Oil by 15 September 2021. Shri Umesh Dwivedi agreed to provide the draft revision by 15 Nov 2021. | <ul style="list-style-type: none"> If ISO 12925-2 cannot replace IS 9554, Subcommittee <i>REQUESTED</i> Shri Umesh Dwivedi to provide the revised draft. <p>COMMITTEE DECISION: The Committee <i>AGREED</i> with the recommendation of Subcommittee and <i>REQUESTED</i> Shri Umesh Dwivedi to provide inputs and revised draft by July 2023</p> |
| <p>xxix.</p> | <p>IS 9611 : 1980 Specifications for cutting oil soluble, clear</p> | <ul style="list-style-type: none"> The Committee had noted that BHEL may be using this standard and upon discussions, Dr Pankaj Bhatnagar and Sh Nitish, IOCL agreed to provide the draft revision Draft revision was provided by Shri Bhatnagar, however, BIS Sectt noted that IS 210 referred in the standard was revised and Grade 25 as mentioned in the draft was no longer applicable. Dr Pankaj Bhatnagar, IOC (R&D) agreed to provide the revised draft incorporating the changes that are suggested, by October 2021. | <ul style="list-style-type: none"> The Subcommittee <i>RECOMMENDED</i> BIS to follow up with Dr. Pankaj Bhatnagar (IOCL R&D) and Shri Nitish (IOCL Mktg) to provide the revised draft Revised draft to be circulated into WC for 2 months. <p>COMMITTEE DECISION: The Committee <i>AGREED</i> with the recommendation of Subcommittee and Dr. Pankaj Bhatnagar agreed to provide the revised draft by end of August 2023</p> |
| <p>xxx.</p> | <p>Aviation Grade Hydraulic Fluids</p> | <ul style="list-style-type: none"> Panel 1 created under Convenorship of Shri Siva Kasturi, Shell India and Committee recommended representatives from Indian Air Force, IOCL (Mktg), IOCL (R&D), CEMILAC, and DGAQA. Dr A.S.Khatiat, IOC(Mktg) was requested to coordinate with these organizations for obtaining the nominations of relevant experts. The scope of this Panel is to identify the subjects and prepare the specifications in which Indian Air Force is interested. NWIP received from Indian Air Force | <ul style="list-style-type: none"> The Subcommittee <i>RECOMMENDED</i> the following composition for the panel: <ul style="list-style-type: none"> - Shri Siva Kasturi – Convenor - Gp Capt A Shrivastava, Dir. Of Indigenization, Dept of Defence - CEMILAC - DGAQA - IOCL (R&D) - IOCL (Mktg) - Avi Oils - Mitesh Rathod, Swastik Oil - Harsh Vardhan Jain, Vinni Chemicals |



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| | | <ul style="list-style-type: none"> In 13th meeting, Shri Siva Kasturi informed the Committee that he has gathered required inputs and agreed to provide the draft by end of January 2022 | <ul style="list-style-type: none"> The Subcommittee <i>RECOMMENDED</i> BIS to seek nomination of representatives from the above organizations for the panel so that meeting can be called urgently Dr. Kavita Rai suggested the panel to refer to JSS 9150-090 : 2021 Hydraulic fluid for military aircraft OM15 for preparation of working document <p>COMMITTEE DECISION: The Committee <i>AGREED</i> with the recommendation of Subcommittee and <i>RECOMMENDED</i> to add HPCL in the panel</p> |
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Item 4 DATE AND PLACE FOR THE NEXT MEETING

The Subcommittee NOTED the annual meeting calendar and informed that PCD 25 may see less participation if meetings are held during 10 – 11 October because Conference of Tribology Society of India is being organized at NIT Srinagar from 5 – 7 October 2023 and NLGI is organizing a training for food grade greases in Mysore from 12 – 13 October 2023. Hence, Subcommittee *RECOMMENDED* to shift the meetings to the next week, i.e., 16 – 20 October 2023.

COMMITTEE DECISION: The Committee *DECIDED* to convene the meetings either during 26 – 27 October 2023 or 30 – 31 October 2023.

Item 6 VOTE OF THANKS

The meeting ended with a vote of thanks from BIS to the Convenor and all members.

ANNEX I Meeting Attendance (Clause 0.3)

Subcommittee Members:

50. Shri Siva Kasturi, Shell India Markets Pvt Ltd (Convenor)
51. Shri Abhijit A Sarkar, HPCL, Mumbai
52. Shri Shakti P Mishra, HPCL, Mumbai
53. Dr. Devendra Singh, CSIR – IIP
54. Dr. G D Thakre, CSIR – IIP
55. Shri Dhanesh Rathod, The Western India Genuine Ghee Company Private Limited, Mumbai
56. Dr. Chanakya Tripathi, IOCL (R&D), Faridabad
57. Dr. Kavita Rai, IOCL (R&D), Faridabad
58. Dr. O P Singh, DGQA, Kanpur



Bureau of Indian Standards

14th Meeting of PCD 25

59. Dr. Tarunendr Singh, BPCL, Mumbai

60. Shri Harsh Vardhan Jain, Vinni Chemicals Pvt Ltd, New Delhi

61. Shri Nitin Chaudhari, Lubrizol India Ltd, Mumbai

62. Shri Bhupendra Rathod, Swastik Oil Products Manufacturing Company Private Limited, Mumbai

63. Shri Umesh Dwivedi, Gulf Oil Lubricants India Limited, Mumbai

BIS Secretariat

6. Ms. Kreeti Das, Sc. C, PCD

7. Shri Hari Mohan Meena, Sc. C, PCD



Annex IV

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| | भारतीय मानक ब्यूरो BUREAU OF INDIAN STANDARDS |
| | (PETROLEUM, COAL & RELATED PRODUCTS DEPARTMENT) |
| MINUTES | |
| 4 July 2023, Tuesday, 1600 - 1730 h | |
| AUTOMOTIVE AND INDUSTRIAL GREASES SUBCOMMITTEE | 7th Meeting |
| Convenor: Dr. Tarunendr Singh, BPCL, Mumbai | Member Secretary: Ms. Kreeti Das |

Item 0 OPENING OF THE MEETING

0.5 Welcome address

On behalf of BIS, Ms. Kreeti Das, Sc. C, welcomed all members to the 7th meeting of PCD 25:SC 3.

0.6 Opening remarks by the Convenor

Convenor, Dr. T Singh, welcomed all members to the 7th meeting of PCD 25:SC 3 and looked forward to thorough discussion on the documents under development.

0.3 The attendance of the meeting is given in **Annex I**.

ITEM 1 CONFIRMATION OF THE MINUTES OF THE LAST MEETING

The Subcommittee *CONFIRMED* the minutes of the last meeting, as circulated.

Item 2 TITLE, SCOPE AND COMPOSITION OF PCD 25:SC 3

2.1 The Subcommittee *REQUESTED* BIS to prepare a draft scope and list of standards proposed to be under the scope of SC 3 and send it to convenor and members for checking and confirming. Thereafter, it will be approved by PCD 25.

COMMITTEE DECISION: The Committee *AGREED* with the recommendation of Subcommittee

2.2 The Subcommittee *NOTED* items 2.1 and 2.3 of the agenda. Subcommittee *RECOMMENDED* BIS Sectt to write to all member organizations to update their nominations.

Item 3 ACTIVITIES OF AUTOMOTIVE AND INDUSTRIAL GREASES SUBCOMMITTEE

3.1 Draft Standards/Amendments for Finalization



| Sl. No. | Document No. | Decision in Previous Meetings | Action Taken/Current Status |
|---------|--|--|--|
| iii. | PCD 25 (17990) Second Revision of IS 495 : 1967 Specification for graphite flake for lubricants | <ul style="list-style-type: none"> Draft was issued into WC on 3 Sep 2021. Comments received from Shri Anup Chandra given in Annex II. The Committee had requested Dr T Singh, Convener PCD 25:3, to verify the comments and send the draft for printing in consultation with Chairman PCD 25 by end of January 2022. | <ul style="list-style-type: none"> The Subcommittee <i>REVIEWED</i> the comments received on WC document and <i>RECOMMENDED</i> not to accept the comment as laboratory equipment are periodically calibrated and there is no need to refer to IS 6365 for electric oven used in the test method. Hence, the Subcommittee <i>RECOMMENDED</i> to finalize the document and send it for printing with approval of PCD 25 <p>COMMITTEE DECISION: The Committee <i>AGREED</i> with the recommendation of Subcommittee</p> |

3.2 Draft Standards/Amendments for Approval for Wide Circulation

| Sl. No. | Indian Standard/Document No. | Decision in Previous Meetings | Action Taken/Current Status |
|---------|--|---|---|
| i. | PCD 25 (14340) Second Revision of IS 12203 : 1999 Lithium Base Grease for Automotive Purposes | <ul style="list-style-type: none"> Draft was issued into WC for 2 months in July 2019. However, after the WC period, several changes with respect to test methods were made in the draft. | <ul style="list-style-type: none"> The Subcommittee <i>RECOMMENDED</i> BIS Sectt to prepare the WC document, send it to Dr. T Singh and Dr. N K Pokhriyal for checking, and issue into WC for 1 month as there is urgent requirement of revised standard <p>COMMITTEE DECISION: The Committee <i>AGREED</i> with the recommendation of Subcommittee</p> |
| ii. | PCD 25 (14360) First Revision of IS 10647 : 1983 Specification for wheel bearing grease | <ul style="list-style-type: none"> Draft was issued into WC for 2 months in July 2019. However, after the WC period, several changes with respect to test methods were made in the draft. | <ul style="list-style-type: none"> The Subcommittee <i>RECOMMENDED</i> BIS Sectt to prepare the WC document, send it to Dr. T Singh and Dr. N K Pokhriyal for checking, and issue into WC for 1 month as there is urgent requirement of revised standard |



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|---|--|---|--|---|------|------------------------------|------------------------------|--|----|----|----|--------------|---|----|----|----|----|---|----------------------------------|----------------------------------|----------------------------------|----|--|--|--|
| | | | COMMITTEE DECISION: The Committee <i>AGREED</i> with the recommendation of Subcommittee | | | | | | | | | | | | | | | | | | | | | | |
| iii. | Fourth Revision of IS 507 : 1993 General purpose grease for defence applications - Specification (Third Revision) | <ul style="list-style-type: none"> The Subcommittee noted that the modified draft provided by Dr T Singh, Convener PCD 25:3 and the new requirements added in the draft considering the additional test that had been mentioned in the bids invited by the Ministry of Defence for LG 280 Grease Grade 2 as per IS 507. The details of the new requirements have been mentioned below. | | | | | | | | | | | | | | | | | | | | | | | |
| | | <table border="1"> <tr> <td>Wear Preventing Properties mean wear Scar Dia, mm, Max</td> <td>0.70</td> <td>0.70</td> <td>0.70</td> <td>IP Ba ter 75 loa Kg ru pe mi</td> </tr> <tr> <td>Extreme pressure Properties Mean Hertz Load, Kg, Min</td> <td>40</td> <td>40</td> <td>40</td> <td>IP (R tir Se</td> </tr> <tr> <td>Evaporati on Loss % by mass at 100±2°C for 1 hrs, Max</td> <td>10</td> <td>10</td> <td>15</td> <td>IP</td> </tr> <tr> <td>Roll Stability a. Condition of Grease b. Work penetrati</td> <td>No liquific ation or separa tion</td> <td>No liquific ation or separa tion</td> <td>No liquific ation or separa tion</td> <td>[P</td> </tr> </table> | Wear Preventing Properties mean wear Scar Dia, mm, Max | 0.70 | 0.70 | 0.70 | IP Ba ter 75 loa Kg ru pe mi | Extreme pressure Properties Mean Hertz Load, Kg, Min | 40 | 40 | 40 | IP (R tir Se | Evaporati on Loss % by mass at 100±2°C for 1 hrs, Max | 10 | 10 | 15 | IP | Roll Stability a. Condition of Grease b. Work penetrati | No liquific ation or separa tion | No liquific ation or separa tion | No liquific ation or separa tion | [P | | | |
| | | Wear Preventing Properties mean wear Scar Dia, mm, Max | 0.70 | 0.70 | 0.70 | IP Ba ter 75 loa Kg ru pe mi | | | | | | | | | | | | | | | | | | | |
| | | Extreme pressure Properties Mean Hertz Load, Kg, Min | 40 | 40 | 40 | IP (R tir Se | | | | | | | | | | | | | | | | | | | |
| | | Evaporati on Loss % by mass at 100±2°C for 1 hrs, Max | 10 | 10 | 15 | IP | | | | | | | | | | | | | | | | | | | |
| Roll Stability a. Condition of Grease b. Work penetrati | No liquific ation or separa tion | No liquific ation or separa tion | No liquific ation or separa tion | [P | | | | | | | | | | | | | | | | | | | | | |
| | | | | <ul style="list-style-type: none"> The Subcommittee RECOMMENDED BIS Sectt to prepare the WC document, send it to Dr. T Singh and Dr. N K Pokhriyal for checking, and issue into WC for 2 months | | | | | | | | | | | | | | | | | | | | | |
| | | | | COMMITTEE DECISION: The Committee <i>AGREED</i> with the recommendation of Subcommittee | | | | | | | | | | | | | | | | | | | | | |



| | | | | | | | |
|--|--|---|------------|------------|------------|--------|--|
| | | on change from original | -25 to +45 | -25 to +45 | -25 to +45 | | |
| | | Oxidation Stability pressure drop after 100 Hrs, kpa, Max | 35 | 35 | 35 | [P:94] | |
| | | <ul style="list-style-type: none"> • The Subcommittee recommended to change the requirement of Mineral Lubricating Oil in clause 4.2.1 to ISO VG 150 for Grade 1, ISO VG 100 for Grade 2 and ISO VG 22 for Grade 3. • The Subcommittee recommended to add clause 4.2.2 “Calcium based Soap with desired additives to meet Extreme Pressure, Antiwear, Oxidation Stability, Rust and Corrosion tests.” • The Committee reviewed the recommendations of the Subcommittee and decided to change the Flash Point, Min of Mineral Lubricating Oils in clause 4.2.1 to 230 °C for Grade 1, 220 °C for Grade 2 and 160 °C for Grade 3. • The Committee agreed with rest of the recommendations of the Subcommittee and requested BIS Sectt to send the draft into Wide Circulation for two months as a fresh document. | | | | | |

Item 4 ANY OTHER BUSINESS

4.1 Shifting of Panel for Greases for Electric Vehicles under purview of PCD 25:SC 3

COMMITTEE DECISION: The Committee *DECIDED* to shift the Panel for Greases for Electric Vehicles (PCD 25/P7) under the purview of PCD 25:SC 3 as this Subcommittee is looking after industrial and automotive greases.

4.2 Convenorship of PCD 25:SC 3/P1 Greases for Electric Vehicles

Dr. T Singh informed that Dr. Arnab Chattopadhyay is no longer associated with Balmer Lawrie, hence a Convenor needs to be appointed for the panel.



COMMITTEE DECISION: After deliberations, the Committee **DECIDED** that BIS will write to Balmer Lawrie for latest nominations and also to nominate a suitable expert to act as Convenor of the Panel. This is because Balmer Lawrie and Co. Ltd., Kolkata has the necessary expertise for greases for EV.

4.3 Co-option Request of Waxpol Industries

Dr. T Singh informed that co-option request from Waxpol has been received for the panel for greases for EV. However, on discussion with Waxpol, Dr. Singh observed that Waxpol currently is not a manufacturer of such greases but is under process of product development. Hence, he recommended that already sufficient industries are represented in the panel and membership of Waxpol may not be required.

COMMITTEE DECISION: After deliberations, the Committee **DECIDED** that there is currently sufficient representation in the panel and request from Waxpol may be considered at a later date, if required.

ITEM 5 DATE AND PLACE FOR THE NEXT MEETING

COMMITTEE DECISION: The Committee **DECIDED** to convene the meetings either during 26 – 27 October 2023 or 30 – 31 October 2023.

Item 6 VOTE OF THANKS

The meeting ended with a vote of thanks from BIS to the Convenor and all members.

ANNEX I

Meeting Attendance (Clause 0.3)

Subcommittee Members:

64. Dr. Tarundendr Singh, BPCL, Mumbai (Convenor)
65. Shri Abhijit A Sarkar, HPCL, Mumbai
66. Shri Ajay Kumar Harinarain, IOCL R&D, Faridabad
67. Dr. N K Pokhriyal, IOCL R&D, Faridabad
68. Dr. Virender Kumar, IOCL (Mktg), Mumbai
69. Shri Dhanesh Rathod, The Western India Genuine Ghee Company Private Limited, Mumbai
70. Shri Harsh Vardhan Jain, Vinni Chemicals Pvt Ltd, New Delhi
71. Shri Shrey Garg, The Waxpol Industries Limited, Kolkata
72. Ms. Uma Shankar Upadhyay, The Waxpol Industries Limited, Kolkata
73. Shri Chandreshwar Dayal, The Waxpol Industries Limited, Kolkata
74. Shri Umesh Chandra Dwivedi, Gulf Oil Lubricants India Limited, Mumbai

BIS Secretariat

8. Ms. Kreeti Das, Sc. C, PCD
9. Shri Hari Mohan Meena, Sc. C, PCD

