



भारतीय मानक ब BUREAU OF INDIAN STANDARD

(PETROLEUM, COAL & RELATED PRODUCTS DEPARTMENT)

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	AGENDA	
	13 December 2024, Friday, 1000 -	1600 h
Lubricants A	nd their Related Products Sectional Committee	17 th Meeting
Chairperson:	Dr. Y P Rao, In Personal Capacity	Member Secretary: Ms. Kreeti Das
Meeting mod	e· Physical	·

Venue: BIS Western Regional Laboratory, 9, M.I.D.C., Behind Marol Telephone Exchange, Andheri (East),

Mumbai 400093

ITEM 0 WELCOME AND INTRODUCTORY REMARKS

0.1 Welcome by BIS

0.2 Opening Remarks by the Chairperson

ITEM 1 CONFIRMATION OF THE MINUTES OF THE 16TH MEETING OF PCD 25

The 16th meeting of PCD 25 was held in physical mode on 30 April 2024. The minutes of the meeting were circulated to all members through BIS portal and email on 18 June 2024. No comments were received on the minutes.

The Committee may **CONSIDER** confirmation of the minutes, as circulated.

ITEM 2 TITLE, SCOPE AND COMPOSITION OF PCD 25

2.1 The title of the Committee is given below:

TITLE - Lubricants and their Related Products Sectional Committee

The Committee may **NOTE**

2.2 The scope of the Committee is given below:

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, lubricant produced through synthesis routes and codes of practice for storage, handling, transport and application.

The Committee may **NOTE**

2.3 Liaison with ISO Committees

- ISO/TC 28 Petroleum and related products, fuels and lubricants from natural or synthetic sources (so far as it concerns its own scope)

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- ISO/TC 28/SC 4 Classifications and specifications

The Committee may **NOTE**

- **2.4** The present composition of PCD 25 and its Subcommittees is given in **Annex I**.
- **2.4.1** BIS Management has taken a strict view of participation in committee meetings and introduced the following new reforms regarding committee composition:
- a) **Mandatory 50% participation**: Organizations having less than 50% participation recommended to be withdrawn
- b) **Mandatory Comments on P Drafts:** It is mandatory for Committee members to comment on P-drafts as this draft is meant for review by Committee members only and it is important to have the views of all members on the draft at this stage.
- c) **Maximum Committee Members**: Composition of committee to be restricted to maximum 30 and balance among stakeholders not more than 1/3 manufacturers and not less than 2/3 other parties like consumers, regulators, ministries, academicians, R&D, and laboratories to be maintained.
- d) **Tenure for Members in Personal Capacity and Private Companies**: Members participating in personal capacity or representing private organizations to be removed/changed in 5 years
- e) **Establishment of Standardization Cells in Industry Association**: Industry associations are required to establish standardization cells and register in BIS standards portal, failing which, they will be removed from Committee.

The Committee may NOTE.

- **2.4.2** The following panel has been created to review the composition of PCD 25 and its SCs:
 - a) Dr. Y P Rao, Chairperson PCD 25 Convenor
 - b) Shri Mukul Maheshwari, Convenor PCD 25:1
 - c) Shri Siva Kasturi, Convenor PCD 25:2
 - d) Dr. T Singh, Convenor PCD 25:3
 - e) Representative from SIAM Dr. Sandeep Garg
- **2.4.2.1** The panel met on 9 May 2024 to review attendance of organizations and balance of stakeholders to recommend changes co-options/withdrawals. The panel recommended the following:

Organizations recommended for co-option:

- **a) TVS Motors**: Co-option request was accepted as it was previously a member of PCD 25 and an important stakeholder from point of view of two-wheeler OEMs
- b) Considering the low representation from technologists (R&D organization/academia) in the Committee, it was recommended to approach **IIT Delhi**, **IIT-BHU**, **IIT Madras**, and **IISc Bangalore** seeking interest in participation in the work of PCD 25 and its SCs.

Organizations recommended for withdrawal:

- **a)** NETRA NTPC Limited, Noida in view of non-participation in two consecutive meetings (less than 50% attendance)
- **2.4.2.2** The recommendations were circulated to PCDC vide email dated **17 May 2024** and in absence of any objection, were approved by PCDC Chair by email on **27 May 2024**.

The Committee may **NOTE**.



2.5 Restructuring of Sectional Committees

BIS Management has required that all Sectional Committees must identify sectors, sub-sectors, and sub-sub-sectors under their scope of work and accordingly restructure the Committees. The groups that are supposed to continue for routine work, e.g., review of composition of PCD 25 and its SCs, will be called working panels. The groups that may be dissolved after their respective work is complete, will be called working groups.

Accordingly, BIS has identified the following sectors, sub-sectors, and sub-sub-sectors under PCD 25 and restructured PCD 25 as follows:

SECTOR LUBRICANTS & GREASES Lubricants for Lubricants for Greases for Automotive & **Industrial Petroleum Petroleum** Petroleum **SUB-SUB-Biobased Biobased Biobased SECTORS Recycled Recycled Recycled**



Subcommittees (3):

- **a) PCD 25:1** Automotive Lubricants & Specialities (Including Brake Fluid and Radiator Coolant) Subcommittee
- b) PCD 25:2 Industrial Lubricants & Specialty Products Subcommittee
- c) PCD 25:3 Automotive and Industrial Greases Subcommittee

Working Panels (3):

- a) PCD 25/WP 1 Panel for Review of Composition of PCD 25 and its SCs
- b) PCD 25/WP 2 Food Grade and Biodegradable Lubricants
- c) PCD 25/WP 3 Food Grade and Biodegradable Greases

Working Groups (7):

PCD 25

a) PCD 25/WG 1 – Working Group for R&D Project on Revision of Standards / Formulation of New Standards on Temporary Corrosion Preventives

PCD 25:1

- a) PCD 25:1/WG 1 Working Group for Revision of IS 5759: 2006 Antifreeze Coolant
- **b) PCD 25:1/WG 2** Working Group for Formulation of Certification Procedure for Engine Oils, Gear Oil, and Axle Oils
- c) PCD 25:1/WG 3 Working Group for Transmission and e-Axle Fluids for Electric Vehicles
- d) PCD 25:1/WG 4 Working Group for Formulation of Standards for Base Oil

PCD 25:2

- a) PCD 25:2/WG 1 Working Group for Formulation of Standards on Aviation Grade Hydraulic Fluids
 PCD 25:3
 - a) PCD 25:3/WG 1 Working Group for Greases for Electric Vehicles

The Committee may **CONSIDER**.

2.6 Resolution of PCD 1 to Transfer Test Methods for Lubricants, Greases, Specialty Products and Additives

The Sectional Committee PCD1 has more than 200 Indian standards and all the standards are covered by five subcommittees. PCD1:6 is one of them and is responsible for formulating Indian Standards on test methods for Lubricants, Greases, Speciality Products, and Additives. There are 51 Indian Standards in the Subcommittee PCD1:6.

Formulation of product standards related to Lubricants and their Related Products are covered by Sectional Committee PCD25. There are 89 Indian standards in this Sectional Committee PCD25.

Keeping in mind a workload and a lack of expertise related to Lubricants, Greases, Speciality Products, and Additives in PCD1:6, PCD 1 recommended transferring the scope of PCD 1:6 from PCD1 and BIS Secretariat requested to consider creation a separate Sectional Committee for test methods in place of Subcommittee PCD1:6 or transferring these standards in Sectional Committee PCD 25 with modification in the scope of PCD25.

The Committee may CONSIDER.

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ITEM 3 R&D PROJECTS TO SUPPORT STANDARDIZATION

Bureau of Indian Standards (BIS), as the National Standards Body of India is responsible for formulating Indian Standards for products, processes and services. In the pursuit of this endeavour, it has so far developed more than 22000 Indian Standards. It is important that no standard should be developed without intensive and insightful research work, which is not confined only to the review of the existing literature and focus group discussions on the subject chosen for standardization, but also covers the detailed field level study of the existing processes and practices in product manufacturing and service delivery. This requires a large network of domain area experts to carry out the research & development work. The Memorandum of Understanding with the premier educational institutions imparting technical and professional education opens the window to the opportunities to expand this network substantially by utilizing the intellectual capital that resides with the faculty and the research scholars in these institutions. This association is conceived not only as a way to promote research & development work necessary for standards formulation but also to enrich the research ecosystem in these educational institutions.

The R&D guidelines are attached.



R&D Guidelines Sep 2023.pdf

The Subcommittee may **CONSIDER** utilizing the provision of R&D projects for revision of standards/development of new standard

ITEM 4 ACTIVITIES OF PCD 25

4.1 The program of work and list of standards published under PCD 25 are attached.



The Committee may NOTE.

4.2 Details of Subcommittee Meetings

Details of Subcommittee	Date of the meeting	Minutes
10 th Meeting of PCD 25:1 Automotive Lubricants & Specialties (Including Brake Fluid and Radiator Coolant) Subcommittee	9 December 2024, 1500 - 1700 h	Will be available after
10 th Meeting of PCD 25:2 Industrial Lubricants & Specialty Products Subcommittee	11 December 2024, 1400 - 1700 h	respective subcommittee meetings
10 th Meeting of PCD 25:3 Automotive And Industrial Greases Subcommittee	10 December 2024, 1500 - 1700 h	

The Committee may CONSIDER and ENDORSE the recommendations of the Subcommittees.

4.3 Draft Standards/Amendments for Finalization

Sl. No.	Document Number	Decision in Previous Meetings	Action Taken/Current Status	
i.	PCD 25 (25017)WC Biodegradable Lubricants – Environmentally Acceptable Hydraulic Fluids (HE)	 The Committee <i>NOTED</i> that ISO 15380 is in Wide Circulation with document number PCD 25 (25017)WC for a period of 60 days, ending on 6 May 2024. As informed by BIS, the Committee <i>NOTED</i> that there are 3 EN standards closely related to biobased lubrication technology: BS EN 16575:2014 Bio-based products. Vocabulary CEN/TR 16227:2011 Liquid petroleum products. Biolubricants. Recommendation for terminology and characterisation of biolubricants BS EN 16807:2016 Liquid petroleum products. Biolubricants. Criteria and requirements of biolubricants. Criteria and requirements of biolubricants The Committee <i>DIRECTED</i> BIS to procure these standards and circulate to PCD 25 and its SCs for seeking inputs for adoption after obtaining necessary approvals. The Committee also <i>DIRECTED</i> BIS to propose adoption of these standards as ISO standards to ISO/TC 28/SC 4 and this matter can be proposed and backed by Indian delegation during the ISO/TC 28 meetings in India in September 2024. 	 No comments have been received on the WC document PCD 25 (25017)WC. The Committee may CONSIDER finalizing the document for printing. The following standards have been put up for procurement: BS EN 16575:2014 Biobased products. Vocabulary CEN/TR 16227:2011 Liquid petroleum products. Bio-lubricants. Recommendation for terminology and characterisation of biolubricants BS EN 16807:2016 Liquid petroleum products. Bio-lubricants. Criteria and requirements of biolubricants and bio-based lubricants Once these standards are procured, they will be circulated to PCD 25 and its SCs and the matter of their adoption as ISO standards may be deliberated in upcoming meetings. The Committee may NOTE. 	
ii.	PCD 25(23378)WC Biodegradable Lubricating Greases - Specification	 The Committee <i>ENDORSED</i> the recommendations of PCD 25/P5 "Panel for Food Grade and Biodegradable Greases" on comments received on PCD 25 (23378)P and to issue the modified draft into WC for a period of 60 days. The Committee also <i>ENDORSED</i> the recommendation of panel to seek 	 The document is circulated into WC with document number PCD 25(23378)WC for a period of 60 days ending on 7 January 2025. Mail has been sent to grease manufacturers to seek data on availability of test specimen for elastomer test and to OEMs to provide data on test specimen 	

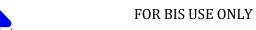


Burea	u of Indian Standards	नागक प्रश्नप्रतीय	17 th Meeting of PCD 25
		data from grease manufacturers for availability of test specimen for the elastomer test and also requested OEMs to provide data on what test specimens are being used by them for elastomer test. • The Committee also <i>DIRECTED</i> BIS to procure SS 155470 : 2020 "Lubricants, industrial oil and related products (Class L) - Requirements for environmentally acceptable lubricating greases (family X)" and recommended the panel to review the Swedish standard to check if any technical upgradation can be made to the indigenous document PCD 25 (23378).	being used by them for elastomer test. Request has been put up for procurement of SS 155470: 2020 "Lubricants, industrial oil and related products (Class L) - Requirements for environmentally acceptable lubricating greases (family X)". Once the standard is obtained, it will be circulated in the working group for examining if any technical upgradation can be made to the indigenous document PCD 25 (23378). The Committee may NOTE.
iii.	PCD 25 (25403)WC First Revision of IS 16775: 2018 / ISO/TS 11365: 2011 Petroleum and Related Products — Guidance for the Maintenance and Use of Triaryl Phosphate Ester Turbine-Control Fluids	• The Committee <i>NOTED</i> that the latest ISO 11365 : 2017 is under preparation for circulation into WC.	 The document was circulated into WC with document number PCD 25(25403)WC for a period of 60 days ending on 24 June 2024. No comments have been received on the WC document. The Committee may CONSIDER finalizing the document for printing.

4.4 Draft Standards/Amendments for Approval for Wide Circulation NIL

4.5 Drafts Under Preparation

Sl. No.	Indian Standard/New Subject	Decision in Previous Meetings	Action Taken/Current Status
i.	Specification for Food Grade Greases	 The Committee <i>NOTED</i> that BIS could not find the working document on food grade greases and <i>REQUESTED</i> Dr. T Singh to provide the working draft again. The Committee <i>DIRECTED</i> BIS to circulate the draft for P-draft circulation for a period of 30 days. 	 The working draft for food grade grease specification has been shared by Dr. T Singh. The document is under editing for preparation of Pdraft and shall be circulated by end of December 2024. The Committee may NOTE.



ii.



	•	The Committee NOTED that there has
Greases for Solar		been no progress on the subject and
Panels/Dielectric		REQUESTED Dr. T Singh to seek
Grease		information from NLGI, ELGI, and CLGI
		for preparation of the white paper

Input awaited from Dr. T Singh.

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The Committee may CONSIDER.

4.6 Revision/Reaffirmation of Standards Due for Review

Sl.	CI CI				
No.	Indian Standard	Due Date	Current Status		
1.	IS 7623 : 2019 Multipurpose industrial grease - Specification	-	 In last meeting, the Committee <i>REAFFIRMED</i> the standard with revision and <i>REQUESTED</i> Dr. T Singh to review the standard and provide revised draft. Editable file was sent to Dr. T Singh. Revised draft awaited. <i>The Committee may CONSIDER.</i> 		
2.	IS 8654 : 2019 Automotive hydraulic brake fluid, heavy duty - Specification	-	 In last meeting, the Committee REAFFIRMED the standard with revision and REQUESTED Shri Harsh Vardhan Jain to review the standard and provide revised draft. Editable file was sent to Shri Harsh Vardhan Jain. Revised draft awaited. The Committee may CONSIDER. 		
3.	IS 10522 : 1983 Specification for antiwear hydraulic oil	November 2024	 This standard is being considered for merging along with IS 3098, IS 11656, and PCD 25(14904) and allocated to the group - Shri Abhijit Sarkar (HPCL), Shri Nitin Chaudhari and Shri Sandeep Sarode (Lubrizol), Shri Umesh Dwivedi (Gulf Oil), and Shri C S Balamurugan (Tide Water) - for preparing merged working draft. The Committee may CONSIDER reaffirming the standard with revision. 		
4.	IS 10531:1983 Code of practice for selection and use of fire - Resistant hydraulic fluids	November 2024	 This standard is being superseded by the revised version of IS 15178, which has completed WC and PCD 25:2 has recommended for finalization. Hence, this standard will stand withdrawn after publication of revised version of IS 15178. The Committee may NOTE. 		
5.	IS 10532 (Part 1): 1983 Specification for fire - Resistant hydraulic	November 2024	The adoption of ISO 12922 : 2020 is currently under publication which will supersede all parts of IS 10532, i.e., Parts 1 to 5.		

November 2024



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1983

- Oil) type

glycol type

IS 10647: 1983

Specification for wheel bearing grease

IS 12203:1999

purposes -

Revision)

Revision)

Revision)

Lithium base grease for automotive

Specification (First

Non - Soap grease -

Specification (First

IS 12790: 1999

IS 12927: 2004

IS 13256: 1992 Air compressor

IS 13796: 2004 Molybdenum

for lubricants -

Revision)

disulphide powder

Specification (First

lubricants - Types daa and dab -**Specification**

Glass mould oils -**Specification (First**

1983

6.

7.

8.

9.

10.

11.

12.

13.

fluids: Part i dilute emulsions for powered supports

IS 10532 (Part 2):

Specification for fire -

Resistant hydraulic fluids - Part 2 : invert emulsions (Water - In

IS 10532 (Part 3):

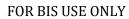
Specificaiton for fire -

Resistant hydraulic fluids - Part 3 : water

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•	Hence, these standards will stand withdrawn after publication of national adoption of ISO 12922: 2020. The Committee may NOTE.			
•	The revised version of the standard has been			
•	finalized and sent for printing. The Committee may CONSIDER reaffirming the standard with revision.			
•	The revised version of the standard has been finalized and sent for printing. The Committee may CONSIDER reaffirming the standard with revision.			
•	The Committee may CONSIDER allocating the standard for review through ARP/expert/WG/Intern.			
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•	The revised version of the standard has been finalized and sent for printing. The Committee may CONSIDER reaffirming the standard with revision.			
•	The Committee may CONSIDER allocating the			

standard for review through

ARP/expert/WG/Intern.





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		1	17 Needing of 1 db 25
IS 14745 : Thermic f Specificat	Novembe	er 2024	The Committee REQUESTED Shri Shakti Mishra, HPCL, to provide the revised draft within 1 week and DIRECTED BIS to issue the document into WC for 60 days. Editable file of the standard was sent to Shri Shakti Mishra, revised draft awaited. The Committee may CONSIDER reaffirming the standard with revision.
15. IS 2297 : 1 Gear lubricompound Specificat Revision)	cants,	• er 2024	The revised version of the standard is under WC with document number PCD 25(27070)WC ending on 6 February 2025. The Committee may CONSIDER reaffirming the standard with revision.
16. IS 2664 : 1 Specificat quenching (Second R	on for Novembe	• er 2024	The revised version of the standard has been finalized and sent for printing. The Committee may CONSIDER reaffirming the standard with revision.
	on for oil, mineral oil	• er 2024	This standard is being considered for merging along with IS 10522, IS 11656, and PCD 25(14904) and allocated to the group - Shri Abhijit Sarkar (HPCL), Shri Nitin Chaudhari and Shri Sandeep Sarode (Lubrizol), Shri Umesh Dwivedi (Gulf Oil), and Shri C S Balamurugan (Tide Water) – for preparing merged working draft. The Committee may CONSIDER reaffirming the standard with revision.
18. IS 4543 : 1 Specificat marquenc (First Rev	on Novembe	• er 2024	The revised version of the standard is under WC with document number PCD 25(26883)WC ending on 3 January 2025. The Committee may CONSIDER reaffirming the standard with revision.
19. IS 4578 : 1 Lubricant Lubricatin refrigerat machiner Specificat Revision)	s - ng oil for ion Novembe	• er 2024	The revised version of the standard is under WC with document number PCD 25(26917)WC ending on 11 January 2025. The Committee may CONSIDER reaffirming the standard with revision.
20. IS 5730 : 1 Specificat volatile co inhibitor	on for Novembe	er 2024	The standard is proposed for revision through R&D for temporary corrosion preventives. The Committee may CONSIDER reaffirming the standard with revision.
21. IS 6050 · 1	.971 Novembe	or 2024	Standard With revision.





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	Specification for temporary corrosion preventives, strippable, hot dipping type		
22.	IS 6552 : 1987 Specification for straight mineral high demulsibility oils (First Revision)	November 2024	 The revised version of the standard has been finalized and sent for printing. The Committee may CONSIDER reaffirming the standard with revision.
23.	IS 9182 (Part 1): 1993 Lubricants for wire ropes and fibre cores - Specification: Part 1 lubricants for fibre core of wire - Ropes (First Revision)	November 2024	
24.	IS 9182 (Part 2): 1993 Lubricants for wire ropes and - Fibre cores - Specification part - 2 lubricants for wire strands and ropes . (First Revision)	November 2024	 These standards are under revision and allocated to Shri Umesh Dwivedi (Gulf Oil) for preparing the revised draft. The Committee may CONSIDER reaffirming the standard with revision.
25.	IS 9182 (Part 3): 1993 Lubricants for wire ropes and fibre cores - Specification: Part 3 lubricants for rope dressing in service (First Revision)	November 2024	
26.	IS 9554 : 1980 Specifications for lubricants for open gears	November 2024	 This standard is under revision and allocated to Shri Umesh Dwivedi (Gulf Oil) for preparing the revised draft. The Committee may CONSIDER reaffirming the standard with revision.
27.	IS 9611 : 1980 Specifications for cutting oil soluble, clear	November 2024	 The revised version of the standard, provided by Dr. Pankaj Bhatnagar is under preparation for circulation into WC. The Committee may CONSIDER reaffirming the standard with revision.



4.7 Revision of Pre-2000 Standard

NIL

ITEM 5 INTERNATIONAL ACTIVITY

5.1 P Membership and Participation

BIS is a participating member of the following ISO technical committees and PCD 25 is the corresponding National Mirror Committee (NMC) dealing with their activities.

Sl. No.	ISO Technical Committee/Subcommittee/WG	Registered Committee Member/Expert (relevant to PCD 25)
1.	ISO/TC 28 Petroleum and related products, fuels and	Shri Siva Kasturi, Shell India
	lubricants from natural or synthetic sources	Shri Mukul Maheshwari, IOCL R&D
		Dr. Y P Rao, In personal capacity
		Dr. T Singh, formerly BPCL
		Head, PCD
		Ms. Kreeti Das, Member Secretary
		The Committee may NOTE.
2.	ISO/TC 28/SC 4 Classifications and specifications	Shri Mukul Maheshwari, IOCL R&D
		Dr. Kavita Rai, IOCL R&D
		Shri Abhijit Sarkar, HPCL
		Dr. T Singh, formerly BPCL
		Dr. G D Thakre, CSIR-IIP
		Head, PC Head, PCD
		Ms. Kreeti Das, Member Secretary
		The Committee may NOTE.
3.	ISO/TC 28/SC 4/WG 3 Classification and specifications of hydraulic fluids	Dr. Kavita Rai, IOCL R&D – already
		registered
		The Committee may NOTE .
		In the last meeting, call for experts was carried out and following experts were recommended by members:
		Abhijit Sarkar, HPCL
		Shri M Rajendran, BPCL R&D, Mumbai
		Tapas Chakraborti, Gulf Oil
		The Committee may CONSIDER .
4.	ISO/TC 28/SC 4/WG 16 Classifications and specifications of industrial gear oils, turbine oils, compressor oils and lubricating greases	In the last meeting, call for experts was carried out and following experts were recommended by members:

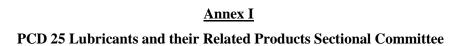
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			Abhijeet Sarkar, HPCL	
			Shri M Rajendran, BPCL	
			Tapas Chakraborti, Gulf Oil	

The Committee may **CONSIDER.**

ITEM 6 ANY OTHER BUSINESS ITEM 7 VOTE OF THANKS



17th Meeting of PCD 25



Sl No.	Organization	Member Name	Member Email	Member Designation	Role	15 th	16 th	Total
1	IN INDIVIDUAL CAPACITY	Dr Y. P. Rao	yprao2012@gmail.com	Chairperson	Chairperson	Y	Y	2/2
2	Afton Chemicals Private Limited, Mumbai	Shri Anand Kumar	Anand.kumar@aftonchemica l.com		Principal Member	Y	N	1/2
3		Shri Mahesh P	Mahesh.P@ashokleyland.co m	General Manager	Principal Member	Y	Y	2/2
		Shri P Ramesh	ramesh.p5@ashokleyland.com	Senior Manager	Alternate Member			
4	Bajaj Auto Limited, Pune	Shri Yogesh. R. Mahajan	yrmahajan@bajajauto.co.in		Principal Member	Y	Y	2/2
		Shri Ramesh Goykar	rgoykar@bajajauto.co.in	Manager	Alternate Member			
5	Balmer Lawrie and Company Limited, Kolkata	Dr. Somnath Chattopadhyay	chattopaddhyay.s@balmerla wrie.com	Sr Manager	Principal Member	N	Y	1/2
	Elimitea, Norkata	Shri MadhabaChandra Dash	dash.mc@balmerlawrie.com	Manager (R&D)	Alternate Member			
6	Bharat Petroleum Corporation Limited, Mumbai	Shri M Sohail Akhtar	akhtarm@bharatpetroleum.i n	GENERAL MANAGER I/C (P&AD)	Principal Member	Y	Y	2/2
		Nomination Awaited			Alternate Member			
7	Bosch Limited, Bengaluru	Shri Raghuveer Rao	Raghuveer.Rao@in.bosch.co	Deputy Manager (Development)	Principal Member	N	N	0/2

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8	CSIR - Indian Institute of	Dr. Daviandra Cinak	devendra@iip.res.in	Principal Scientist	Drain aireal Manalaga	N	N	0 /2
	Petroleum, Dehradun	Dr. Devendra Singh	gdthakre@iip.res.in		Principal Member	IN	IN	0/2
		Dr. G.D. Thakre		Senior Principal Scientist	Alternate Member			
9	Chennai Petroleum Corporation Limited, Chennai	Shri ABDUL KAREEM	kareem@cpcl.co.in	DGM(TS-QC)	Principal Member	Y	N	1/2
		Shri M. Balaguru	mbalaguru@cpcl.co.in	Manager (TS-QC)	Alternate Member			
		Shri S. Arun Prakash	arunprakashs@cpcl.co.in	Asst. Manager (TS-QC)	Alternate Member			
10	Consumer Guidance Society of India, Mumbai	Dr. Sitaram Dixit	sitaram.dixit@gmail.com	Chairman	Principal Member	Y	Y	2/2
		Dr. M. S. Kamath	dr.m.s.kamath@gmail.com	General Secretary	Alternate Member			
11	Directorate General of Quality Assurance, Ministry of Defence, Kanpur	Dr. Om Prakash Singh	omprakash.singh75@gov.in	Principal Scientific Officer	Principal Member	Y	Y	2/2
	of Defence, Kanpur	Shri Vikin Jain	vikin.jain2630@gov.in	SSO - II	Alternate Member			
12	Gulf Oil Lubricants India Limited, Mumbai	Shri Girish Jange	girish.jange@gulfoil.co.in	Sr. General Manager - GlobalTechnology	Principal Member	Y	Y	2/2
		Shri Jencen Mathai Arivannoor	jencen.arivannoor.ch@gulfoi l.co.in	Sr. R&D Scientist	Alternate Member			
		Shri Umesh Chandra Dwivedi	umesh.dwivedi@gulfoil.co.in	General Manager - Global Technology	Alternate Member			
13	Hindustan Petroleum Corporation Limited,	Shri Lokender Singh Tevathiya	lokender@hpcl.in	Chief Manager - Quality Control	Principal Member	Y	Y	2/2
	Mumbai	Shri Abhijit A Sarkar	aasarkar@hpcl.in	Deputy General Manager – Product Development &OEM Business	Alternate Member			
14	Indian Oil Corporation	Shri Abhijeet Chakraborti	achakravorty@indianoil.in	Chief Manager (Lube QC)	Alternate Member	Y	Y	2/2

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17th Meeting of PCD 25

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	(MKTG), Mumbai	Shri H S Negi	negihs@indianoil.in	Dy. General Manager (Technical Services)	Principal Member			
15	Indian Oil Corporation (R and D Centre), Faridabad	Nomination Awaited			Alternate Member	Y	N	1/2
	and D Centrey, Faridabad	Shri Mukul Maheshwari	maheshwarim@indianoil.in	Chief General Manager In- Charge (LT)	Principal Member			
16	Lubrizol India Limited, Mumbai	Shri Rahul Misra	rahul.misra@lubrizol.com	Senior Director- Technology	Principal Member	N	Y	1/2
		Shri Nitin Chaudhari	nitin.chaudhari@lubrizol.co m	Product manager metalworking fluids and grease	Alternate Member			
17	Mahindra Research Valley, Chennai	Shri R. Ramaprabhu	r.ramaprabhu@mahindra.co m		Principal Member	N	N	0/2
		Shri Jeevannobi G	gnanadhas.jeevannobi@mahi ndra.com	Sr. Lead Engineer - Fluids Technology	Alternate Member			
18	National Test House, Kolkata	Shri Bhaskar N Barsagade	bnbarsagade@nth.gov.in	Scientist B (Chemical)	Alternate Member	Y	Y	2/2
		Dr. Mangesh Gharpure	m.gharpure@nth.gov.in	Scientist C (Chemical)	Principal Member			
19	Reliance India Limited, Mumbai	Shri Balasubramanian K	Balasubramanian.kuppuswa my@ril.com	Vice President	Principal Member	Y	Y	2/2
		Shri K. K. Sreeramachandran	sreeramachandran.kartha@r il.com	Vice President - Strategy	Alternate Member			
20	Research Designs and Standards Organization	Shri Bharat Prasad	bharatprasad2501@gmail.co m	Assistant Research Officer	Alternate Member	N	Y	1/2

Petroleum, Coal, and Related Products Department



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Bureau of Indian Standards

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	(DDCO) I -l -		-1-1-1505((@					
	(RDSO), Lucknow	Shri Kamal Prakash Singh	singh150566@gmail.com	Deputy Director (M&C)	Principal Member			
21	Society of Indian Automobile Manufacturers (SIAM), Delhi	Shri Prashant Kumar Banerjee	pkbanerjee@siam.in	Executive Director	Principal Member	N	N	0/2
	plantiaceurers (on mr), Demi	Dr. Sandeep Garg	sgarg@siam.in	Dy. Executive Director	Alternate Member			
22	Swastik Oil Products Manufacturing Company Private Limited, Mumbai	Shri Bhupendra Rathod	bhupendrarathod2002@yah oo.co.in		Principal Member	N	Y	1/2
	i i ivate Limiteu, Mumbai	Shri Sanat Rathod	sanatswastikoil@gmail.com		Alternate Member			
		Shri Mitesh Rathod	mitesh@swastikoil.com		Alternate Member			
23	TVS Motor Company Limited, Hosur	Shri Sumith Joseph	joseph.sumith@tvsmotor.com	Deputy General Manager - R & D Powertrain	Principal Member	New Co-option		
		Shri Manish Gopal	manish@tvsmotor.com	DGM (Material science Group – R&D)	Alternate Member			
		Shri Nithin Madhav	nithin.madhav@tvsmotor.com	Senior Manager R&D	Alternate Member			
24	Tata Motors Limited, Pune	Shri Pallipalayam Gowrishankar	p.gowrishankar@tatamotors. com	General Manager	Principal Member	Y	Y	2/2
		Shri Pallav Chatterjee	pallav.chatterjee@tatamotor s.com	Senior Manager	Alternate Member			
25	Vinni Chemicals Pvt. Ltd., New Delhi	Shri Harsh Vardhan Jain	harsh@vinnichemicals.com		Principal Member	N	Y	1/2