



	भारतीय मानक ब्यूरो BUREAU OF INDIAN STANDARDS
	(PETROLEUM, COAL & RELATED PRODUCTS DEPARTMENT)
AGENDA	
27 October 2023, Friday, 1030 - 1330 h	
Lubricants And their Related Products Sectional Committee	15th Meeting
Chairperson: Dr. Y P Rao, In Personal Capacity	Member Secretary: Ms. Kreeti Das
Meeting mode: Physical (WROL, BIS Mumbai)	

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 14TH MEETING OF PCD 25

The minutes of the 14th meeting of PCD 25, held in hybrid mode on 5 July 2023, was circulated to all members through BIS portal on 10 July 2023 and email on 11 July 2023. Comments received on the minutes from Dr. Kavita Rai:



<p>iii.</p>	<p>Food Grade and Biodegradable Lubricants</p>	<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"> 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 <u>for biodegradable hydraulic oil standard.</u> She further informed that ISO 6521-1 for air compressor lubricants <u>may be modified to include food grade requirements may be modified to include food grade and biodegradable requirement</u> 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 <u>(including food grade requirements) (including food grade and biodegradable requirement)</u> The Committee REQUESTED Dr. Kavita Rai to provide the modified content for ISO 6521-1 by July end 2023.
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*The Committee may **CONSIDER.***

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

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)
- 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) **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.
- c) **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
- d) **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 **CONSIDER**.*

2.4.2 The following organizations have less than 50 percent attendance:

- i. Afton Chemicals Pvt. Ltd., Mumbai
- ii. BASF India Ltd., Mumbai
- iii. Centre for High Technology, New Delhi
- iv. Food Safety and Standards Authority of India, New Delhi
- v. Hero Motocorp Limited, New Delhi
- vi. IPSS Sail, New Delhi
- vii. Indian Oil Corporation Limited - Refineries and Pipelines Division, New Delhi
- viii. Maruti Udyog Limited, Gurugram
- ix. Ministry of Road Transport and Highways, New Delhi
- x. National Test House, Kolkata
- xi. Reliance Industries Limited, Mumbai
- xii. Steel Authority of India, Centre for Engineering and Technology, Ranchi
- xiii. TVS Motor Company Limited, Hosur

2.4.3 Communication sent to all organizations having less than 50% attendance to review and update nominations.

2.4.4 Co-option Requests

- i. **Petroleum Re-refiners Association of India**

PRAI : Petroleum Re-Refiners' Association of India (PRAI) promotes, protects and assists the interests of its members within the hazardous waste industry. Members operate in the recovery / recycling of lubricants, fuels together with other liquid wastes. This includes wastes arising mainly from the servicing of automotive engines and other mechanical equipment. In addition to these, wastes arising from contaminated fuels, spillages, ships slops, tank bottoms, together with water contaminated with oil. As a result, the recovery and recycling of a variety wastes such as oil filters, catalysts, batteries and other waste products are also a major part of our interests.



Since 1970's PRAI, the Oil Recycling Association has served as the Indian trade body connecting the users that produce oily waste, legislators, regulators with the collection and processing companies that form most of its membership. Our members are part of the hazardous waste industry working in a mix of complex Health, Safety and Environmental Regulations.

Co-option request received from PRAI for PCD 25:1/P4 "Panel for Mineral and Re-refined Base Oil" with the following nomination:

a) Dr. S V Nivsarkar



Resume - Dr. S.V.
Nivsarkar.pdf

b) Shri Philip Mathew



RESUME_Philip
Mathew.pdf

ii. **Arteco Coolants**

Arteco Company Presentation:



ArtecoCorporatePres
entation.pdf



Arteco India at
Glance.pdf

Co-option request received from Arteco Coolants for PCD 25 with the following nomination:

a) Shri Amol Chore



Amol Chore _
Profile.pdf

*The Committee may **CONSIDER**.*

2.5 Panels and Working Groups under PCD 25 and its SCs

- i. PCD 25 : P1 Panel for Food Grade and Biodegradable Lubricants (Convenor – Dr. Kavita Rai, IOCL R&D)
- ii. PCD 25 : P5 Panel for Food Grade and Biodegradable Greases (Convenor – Dr. Tarunender Singh, BPCL)
- iii. PCD 25 : 1 : P1 Revision of IS 5759 : 2006 Antifreeze Coolant (Convenor – Shri Harsh Vardhan Jain, Vinni Chemicals Pvt Ltd)
- iv. PCD 25 : 1 : P2 Panel for Transmission and e-Axle Fluids for Electric Vehicles (Convenor – Shri Anand Kumar, Afton Chemicals Pvt Ltd)
- v. PCD 25 : 1 : P3 Formulation of Certification Procedure for Engine Oils, Gear Oil, and Axle Oils (Convenor – Dr. Pankaj Bhatnagar, IOCL R&D)
- vi. PCD 25 : 1 : P4 Panel for Formulating Standards for Base Oil (Convenor – Dr Ajay Kumar Harinarain, IOCL R&D)



Bureau of Indian Standards

15th Meeting of PCD 25

- vii. PCD 25 : 2 : P1 Panel for Formulation of Standards on Aviation Grade Hydraulic Fluids (Convenor – Shri Siva Kasturi, Shell India Markets Private Limited, Mumbai)
- viii. PCD 25 : 3 : P1 Panel for Greases for Electric Vehicles (Convenor – Dr. T Singh, BPCL)

*The Committee may **NOTE**.*

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 given in **Annex II**.



Annex II_PoW.pdf

*The Committee may **NOTE***

4.2 Details of Subcommittee Meetings


Details of Subcommittee	Date of the meeting	Minutes
8 th Meeting of PCD 25:1 Automotive Lubricants & Specialties (Including Brake Fluid and Radiator Coolant) Subcommittee	25 October 2023, 1000 - 1200 h	Will be available after respective subcommittee meetings



8 th Meeting of PCD 25:2 Industrial Lubricants & Specialty Products Subcommittee	26 October 2023, 1000 - 1330 h	
8 th Meeting of PCD 25:3 Automotive And Industrial Greases Subcommittee	25 October 2023, 1430 - 1630 h	

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

4.3 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(23378)P Food Grade and Biodegradable 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. 	<ul style="list-style-type: none"> Draft issued into P-draft circulation for 1 month with document no. PCD 25 (23378)P on 25 Aug 2023. Comments received on the document attached:  Comments%20on%20PCD%2025(23378) The Subcommittee may CONSIDER

4.4 Drafts Under Preparation

Sl. No.	Indian Standard/New Subject	Decision in Previous Meetings	Action Taken/Current Status
i.	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. 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 biodegradable base oil for hydraulic system and recommended Committee to adopt it for biodegradable hydraulic oil standard. 	<ul style="list-style-type: none"> 2023 version of ISO 15380 is under publication. WC draft will be prepared once the latest version is published and issued into circulation for 2 months. The Subcommittee may NOTE



		<ul style="list-style-type: none"> Hence, the Committee DECIDED to issue ISO 15380 into WC for 2 months for identical adoption 	
ii.	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 last meeting, the Committee REQUESTED Lubrizol to assist Dr. T Singh in preparing a white paper on the subject. 	<ul style="list-style-type: none"> Lubrizol nominated Shri Sandeep Sarode and Shri Nitin Chaudhari to assist Dr. T Singh in preparing a white paper on the subject. Update on the project is awaited. <i>The Subcommittee may CONSIDER</i>

4.5 Revision/Reaffirmation of Standards Due for Review

Sl. No.	Indian Standard	Due Date	Current Status
1.	IS 8406 : 1993 Gear lubricants for enclosed industrial gear drives - Specification	May 2021	<ul style="list-style-type: none"> Indian Standard is under revision in PCD 25:2 <i>Committee may CONSIDER reaffirming the standard with revision.</i>
2.	IS 1012 : 2002 Turbine lubricating oils - Specification	February 2023	<ul style="list-style-type: none"> Standard was circulated to all members on 18 Nov 2022 for review and comments. No comments received. <i>Committee may CONSIDER reaffirming the standard</i>
3.	IS 1115 : 1986 Specification for general purpose cutting oil, soluble	February 2023	<ul style="list-style-type: none"> Indian Standard is under revision in PCD 25:2 <i>Committee may CONSIDER reaffirming the standard with revision.</i>
4.	IS 11186 : 1985 Specification for synthetic grinding fluid	February 2023	<ul style="list-style-type: none"> Standard allocated for revision to Shri Shakti Mishra, HPCL <i>Committee may CONSIDER reaffirming the standard with revision.</i>
5.	IS 11656 : 1986 Specification for antiwear hydraulic oil extra heavy duty type	February 2023	<ul style="list-style-type: none"> Indian Standard is under revision in PCD 25:2 <i>Committee may CONSIDER reaffirming the standard with revision.</i>
6.	IS 14234 (Part 1) : 2002	February 2023	<ul style="list-style-type: none"> Standard was circulated to all members on 18 Nov 2022 for review and comments. No comments received.



	Lubricants for air - Cooled spark - Ignition engines - Specification: Part 1 two - Stroke spark - Ignition engines		<ul style="list-style-type: none"> Committee may CONSIDER reaffirming the standard
7.	IS 14384 : 1996 Colloidal graphite dispersion in oil - Specification	February 2023	<ul style="list-style-type: none"> Standard allocated to Dr. T Singh for revision Committee may CONSIDER reaffirming the standard with revision.
8.	IS 14385 : 1996 Aluminium cold rolling oils - Specification	February 2023	<ul style="list-style-type: none"> Indian Standard is under revision in PCD 25:2 Committee may CONSIDER reaffirming the standard with revision.
9.	IS 14779 : 2000 General purpose oil based temporary corrosion preventives - Specification	May 2021	<ul style="list-style-type: none"> Standard was circulated to all members on 18 Nov 2022 for review and comments. No comments received. Committee may CONSIDER reaffirming the standard
10.	IS 14847 : 2000 Lithium complex grease for industrial purposes - Specification	May 2021	<ul style="list-style-type: none"> Standard was circulated to all members on 18 Nov 2022 for review and comments. No comments received. Committee may CONSIDER reaffirming the standard
11.	IS 15112 (Part 1) : 2002 / ISO 12925-1 : 1996 General classification of lubricants, industrial oils and related products: Part 1 class L	February 2023	<ul style="list-style-type: none"> Latest version of ISO standard is ISO 12925-1 : 2018. Committee may CONSIDER adopting the latest version of the ISO standard Committee may CONSIDER reaffirming the standard with revision
12.	IS 1589 : 1994 Oil, cylinder - Specification	May 2021	<ul style="list-style-type: none"> Indian Standard is under revision in PCD 25:2 Committee may CONSIDER reaffirming the standard with revision.
13.	IS 1628 : 1986 Specification for axle oil	February 2023	<ul style="list-style-type: none"> Indian Standard is under revision in PCD 25:2 Committee may CONSIDER reaffirming the standard with revision.
14.	IS 1758 : 1986 Specification for jute batching oil	February 2023	<ul style="list-style-type: none"> Indian Standard is under revision in PCD 25:2 Committee may CONSIDER reaffirming the standard with revision.



15.	IS 495 : 1967 Specification for graphite flake for lubricants	February 2023	<ul style="list-style-type: none"> Document finalized and sent for printing <i>The Subcommittee may NOTE.</i>
16.	IS 5759 : 2006 Antifreeze Coolant - Specification	February 2023	<ul style="list-style-type: none"> Indian Standard is under revision in PCD 25:1 <i>Committee may CONSIDER reaffirming the standard with revision.</i>
17.	IS 6049 : 1971 Code of practice for application of temporary corrosion preventives	February 2023	<ul style="list-style-type: none"> Indian Standard is under revision in PCD 25:2 <i>Committee may CONSIDER reaffirming the standard with revision.</i>
18.	IS 6263 : 2018 Volatile corrosion inhibitor (VCI) treated paper - Specification	March 2023	<ul style="list-style-type: none"> Standard was circulated to all members on 18 Nov 2022 for review and comments. No comments received. <i>Committee may CONSIDER reaffirming the standard</i>
19.	IS 16775 : 2018 ISO / TS 11365:2011 Petroleum and related products - Guidance for the maintenance and use of triaryl phosphate ester turbine control fluids	March 2023	<ul style="list-style-type: none"> Latest version of ISO standard is ISO 11365 : 2017. <i>Committee may CONSIDER adopting the latest version of the ISO standard</i> <i>Committee may CONSIDER reaffirming the standard with revision</i>
20.	IS 14234 (Part 2) : 2017 Lubricants for Spark-Ignition Air-Cooled Gasoline Engines - Specification Part 2 Four-Stroke Spark-Ignition Air-Cooled Engines for Scooters, Mopeds and Motorcycles	March 2022	<ul style="list-style-type: none"> Indian Standard is under revision in PCD 25:1 <i>Committee may CONSIDER reaffirming the standard with revision.</i>

4.6 Revision of Pre-2000 Standard

Sl. No.	Indian Standard	Decision in Previous Meeting	Current Status
1.	3098:1983	<ul style="list-style-type: none"> The Committee REQUESTED Shri Umesh Dwivedi, Gulf Oil, to prepare revised draft of hydraulic oil for 3 	<ul style="list-style-type: none"> Communication sent to Shri Umesh Dwivedi with editable file of IS 3098.



	Specification for oil, hydraulic, mineral oil type	<p>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).</p> <ul style="list-style-type: none"> The Committee REQUESTED him to provide the draft by end of August 2023 	<ul style="list-style-type: none"> Revised draft awaited. <i>The Committee may CONSIDER</i>
2.	IS 4578 : 1997 Lubricants - Lubricating oil for refrigeration machinery - Specification	<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 	<ul style="list-style-type: none"> Communication sent to Shri Abhijit Sarkar with editable file of IS 4578. Revised draft awaited. <i>The Committee may CONSIDER</i>
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 	<ul style="list-style-type: none"> Communication sent to Shri Shakti Mishra along with editable file, revised draft awaited Revised draft awaited <i>The Committee may CONSIDER</i>
4.	IS 12790 : 1999 Non - Soap grease - 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 	<ul style="list-style-type: none"> Communication sent to Dr. T Singh, BPCL, along with editable file, revised draft awaited Revised draft awaited <i>The Committee may CONSIDER</i>
5.	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 	<ul style="list-style-type: none"> Communication sent to Dr. Singh along with editable file, revised draft awaited Revised draft awaited <i>The Committee may CONSIDER</i>
6.	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 	<ul style="list-style-type: none"> Communication sent to Shri Shakti Mishra along with editable file, revised draft awaited Revised draft awaited <i>The Committee may CONSIDER</i>

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
1.	ISO/TC 28 Petroleum and related products, fuels and lubricants from natural or synthetic sources	<p>Dr. Raj Kumar Singh, CSIR – IIP (nomination updated)</p> <p>Shri Mukul Maheshwari, IOCL R&D (nomination updated)</p> <p>Dr. T Singh, BPCL</p> <p>Head, PCD</p> <p>Ms. Kreeti Das, Member Secretary</p> <p><i>The Committee may CONSIDER approval of updated nominations.</i></p>
2.	ISO/TC 28/SC 4 Classifications and specifications	<p>Dr. Kavita Rai, IOCL R&D</p> <p>Shri Mukul Maheshwari, IOCL R&D (nomination updated)</p> <p>Head, PC Head, PCD</p> <p>Ms. Kreeti Das, Member Secretary</p> <p><i>The Committee may CONSIDER approval of updated nominations and nominating experts for greases.</i></p>

ITEM 6 ANY OTHER BUSINESS**ITEM 7 ANNUAL MEETING CALENDAR**

Sl. No.	Sectional Committee / Subcommittee	Dates
1	PCD 25, PCD 25:1, PCD 25:2, PCD 25:3	4-5 July 2023 (Completed)
2	PCD 25, PCD 25:1, PCD 25:2, PCD 25:3	25 – 27 October 2023
3	PCD 25, PCD 25:1, PCD 25:2, PCD 25:3	9 - 10 January 2024

ITEM 8 VOTE OF THANKS



Annex I

PCD 25 Lubricants and their Related Products Sectional Committee

Sl No.	Organization	Member Name	Member Email	Member Designation	Role	13 th	14 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@aftonchemical.com		Principal Member	N	N	0/2
3.	Ashok Leyland Limited, Chennai	Shri D. Balakrishnan	balakrishnan.d2@ashokleyland.com	Deputy General Manager- PD	Alternate Member	Y	Y	2/2
		Mr. Mahesh P	Mahesh.P@ashokleyland.com	General Manager	Principal Member			
4.	BASF India Limited, Mumbai	Shri Ashok Sambandam	sambandam.ashok@basf.com	General Manager - Sales	Alternate Member	N	N	0/2
		Sh. Neville Colaco	neville.colaco@basf.com	General Manager - Sales	Principal Member			
5.	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			
6.	Balmer Lawrie and Company Limited, Kolkata	Shri Srinivasan Murali	murali.s@balmerlawrie.com		Alternate Member	Y	Y	2/2



		Dr Mohan Lal Das	das.ml@balmerlawrie.com		Principal Member			
7.	Bharat Petroleum Corporation Limited, Mumbai	R Subramanian	subramanianr@bharatpetroleum.in		Principal Member	Y	Y	2/2
		Dr Tarunender Singh	singhtarun@bharatpetroleum.in	Chief Manager(Customer services)	Alternate Member			
		Shri M Rajendran	rajendranm@bharatpetroleum.in					
8.	Bosch Limited, Bengaluru	Fredrick A.	Fredrick.A@in.bosch.com	Senior Manager (Development)	Principal Member	Y	Y	2/2
		Raghuveer Rao	Raghuveer.Rao@in.bosch.com	Deputy Manager (Development)	Alternate Member			
9.	CSIR - Indian Institute of Petroleum, Dehradun	Dr. Raj K Singh	rksingh@iip.res.in	Principal Scientist	Principal Member	Y	Y	2/2
		Dr. G.D. Thakre	gdthakre@iip.res.in	Senior Principal Scientist	Alternate Member			
		Shri Sailesh Kr. Singh	sk.singh@iip.res.in		Young Professional			
10	Central Pollution Control Board, New Delhi	Shri Dinabandhu Gouda	dinabandhu.cpcb@nic.in	Scientist E	Principal Member	Y	N	1/2
11	Centre for High Technology, New Delhi	Dr N. S. Raman	raman.selai@cht.gov.in	Director	Alternate Member	N	N	0/2
		P. Raman	ed.cht@cht.gov.in	Executive Director (In Charge)	Principal Member			



		Shekar Kulkarni	kulkarni@cht.gov.in	Additional Director	Young Professional			
12	Chennai Petroleum Corporation Limited, Chennai	Shri H. Ramakrishnan	ram@cpcl.co.in	Senior Manager (QC)	Alternate Member	Y	Y	2/2
		Dr V. Selvavathi	vselvavathi@cpcl.co.in	Dr., DGM (QC)	Principal Member			
13	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			
14	Directorate General of Quality Assurance, Ministry of Defence, Kanpur	Sh. A K Kanaujia	ashokkumar.kanaujia@gov.in	SSO-II	Alternate Member	Y	Y	2/2
		Dr. Om Prakash Singh	omprakash.singh75@gov.in	Principal Scientific Officer	Principal Member			
15	Food Safety and Standards Authority of India, New Delhi	Nomination Awaited			Principal Member	N	N	0/2
16	Gulf Oil Lubricants India Limited, Mumbai	Girish Jange	girish.jange@gulfoil.co.in	Sr. General Manager - Global Technology	Alternate Member	Y	N	1/2
		Jencen Mathai Arivannoor	jencen.arivannoor.ch@gulfoil.co.in	Sr. R&D Scientist	Alternate Member			
17	Hero Motocorp Limited, New Delhi	Shri Feroz Ali Khan	feroz.khan@heromotocorp.com	Head- Global Regulations Technical	Principal Member	N	N	0/2



		Shri Rakesh Sharma	rakesh.sharma@heromotocorp.com	Skill Team Lead - Global Regulations Technical	Alternate Member			
		Shri Diwit Prajapati	diwit.prajapati@heromotocorp.com	Associate Manager - Global Regulations Technical	Alternate Member			
18	Hindustan Petroleum Corporation Limited, Mumbai	Sh. Lokender Singh Tevathiya	lokender@hpcl.in	Chief Manager - Quality Control	Principal Member	Y	Y	2/2
		Ashish Khanna	akhanna@hpcl.in	General Manager - Technical Services	Alternate Member			
		Shri Abhijit A Sarkar	aasarkar@hpcl.in	Deputy General Manager – Product Development & OEM Business	Young Professional			
19	IPSS Sail, New Delhi	Shri Avadesh Kumar Gupta	dgmlubcell@gmail.com		Principal Member	N	N	0/2
		Shri G Sneha Raju	gsneha.raju@sailbsl.in		Alternate Member			
20	Indian Oil Corporation (MKTG), Mumbai	Shri S. Venkatesan	svenkatesan@indianoil.in	General Manager (Lube – QC)	Alternate Member	Y	N	1/2
		Shri H S Negi	negihs@indianoil.in	Dy. General Manager (Technical Services)	Principal Member			



21	Indian Oil Corporation (R and D Centre), Faridabad	Dr Pankaj Bhatnagar	bhatnagarp@indianoil.in		Alternate Member	Y	Y	2/2
		Shri Mukul Maheshwari	maheshwarim@indianoil.in		Principal Member			
22	Indian Oil Corporation Limited - Refineries and Pipelines Division, New Delhi	Shri Ashwani Sharma	sharmaa2@indianoil.in		Principal Member	N	N	0/2
		Shri R. K. Chugh			Alternate Member			
23	Lubrizol India Limited, Mumbai	Shri Kapil Telang	Kapil.Telang@Lubrizol.com	Associate Director - Product Management Group, Lubrizol Additive - IMEA Region	Principal Member	N	Y	1/2
		Shri Sreehari Kumar	sreehari.kumar@lubrizol.com	Product Manager	Alternate Member			
24	Mahindra and Mahindra Limited, Mumbai	Shri R. Ramaprabhu	r.ramaprabhu@mahindra.com		Principal Member	Y	Y	2/2
25	Maruti Udyog Limited, Gurugram	Shri Ashok Permude	ashok.permude@maruti.co.in		Principal Member	N	N	0/2
		Shri Narinder Kumar	Kumar.Narinder@maruti.co.in		Alternate Member			
26	Ministry of Petroleum and Natural Gas, New Delhi	Shri Rajesh Manocha	manocha.rajesh@gov.in		Principal Member	Y	N	1/2
27		Shri G Sharan			Principal Member	N	N	0/2



	Ministry of Road Transport and Highways, New Delhi	Shri S S Nahar			Alternate Member			
28	National Test House, Kolkata	Shri Bhaskar N Barsagade	bnbarsagade@nth.gov.in	Scientist B (Chemical)	Alternate Member	N	N	0/2
		Dr. Mangesh Gharpure	m.gharpure@nth.gov.in	Scientist C (Chemical)	Principal Member			
29	Netra NTPC Limited, Noida	Rajiv Satyakam	rsatyakam@ntpc.co.in	AGM-NETRA	Principal Member	Y	N	1/2
		Vani G. D.	vanigd@ntpc.co.in	Manager-NETRA	Alternate Member			
30	Reliance India Limited, Mumbai	Shri Balasubramanian K	Balasubramanian.kuppuswamy@ril.com	Vice President	Principal Member	N	N	0/2
		Shri K. K. Sreeramachandran	sreeramachandran.kartha@ril.com	Vice President - Strategy	Alternate Member			
31	Research Designs and Standards Organization (RDSO), Lucknow	Shri Bharat Prasad	bharatprasad2501@gmail.com	Assistant Research Officer	Alternate Member	Y	N	1/2
		Shri Kamal Prakash Singh	singh150566@gmail.com	Deputy Director (M&C)	Principal Member			
32	Society of Indian Automobile Manufacturers (SIAM), Delhi	Shri Prashant Kumar Banerjee	pkbanerjee@siam.in	Executive Director	Principal Member	Y	Y	2/2
		Dr. Sandeep Garg	sgarg@siam.in	Dy. Executive Director	Alternate Member			
33		Shri Balakrishna Bisoyi	balakrishna.bisoyi@sail.in	GM (Mech)	Principal Member	N	N	0/2



	Steel Authority of India, Centre for Engineering and Technology, Ranchi	Shri Anujeet Rituraj	a.rituraj@sail.in	GM (MECH)	Principal Member			
34	Swastik Oil Products Manufacturing Company Private Limited, Mumbai	Shri Bhupendra Rathod	bhupendrarathod2002@yah oo.co.in		Principal Member	Y	Y	2/2
		Shri Sanat Rathod	sanatswastikoil@gmail.com		Alternate Member			
		Shri Mitesh Rathod	mitesh@swastikoil.com		Young Professional			
35	TVS Motor Company Limited, Hosur	Shri Ajith Kumar	ajith.kumar@tvsmotor.co.in		Principal Member	N	N	0/2
36	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				
37	Vinni Chemicals Pvt. Ltd., New Delhi	Shri Harsh Vardhan Jain	harsh@vinnichemicals.com		Principal Member	Y	Y	2/2