PROGRAMME

23rd Refining & Petrochemicals Technology Meet

12-14 January, 2019
Bombay Exhibition Centre, Goregaon, Mumbai, India

Aligning Refineries Towards Sustainable Future

BPCL, Mumbai Refinery

Petroleum and Natural Gas Ministry
Government of India
### REGISTRATION

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<tr>
<th>Date</th>
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<tr>
<td>11 January, 2019</td>
<td>1700 – 2000 hrs</td>
<td>Bombay Exhibition Centre Goregaon, Mumbai</td>
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<td>12 -14 January, 2019</td>
<td>0800 – 1300 hrs</td>
<td>Bombay Exhibition Centre Goregaon, Mumbai</td>
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Inaugural Session
0930 – 1130 hrs

Tea
1130 – 1200 hrs
Technical Session - 1
1200 – 1400 hrs
Venue : Grande “A”

Aligning Refineries Towards Sustainable Future

Session Chairperson : Shri Sanjiv Singh
Chairman
Indian Oil Corporation Ltd.

Technical Papers

1.1 Energy Trends and Refinery of Future
Bharat Goenka, Shell

1.2 Global Energy and Chemical Industry Outlook
Sanjay Sharma, IHS Markit

1.3 Sustainable Refining
Dr. Partha P. Maitra, RIL

1.4 Competitive Pathways for Crude to Chemicals
Ujjal Mukherjee, Chevron Lummus Global LLC

1.5 Global Refining Overview and Asia- Opportunity and Challenges
Anshuman, Stratas Advisors

Lunch
1400 – 1500 hrs
Technical Session – 2
1500 – 1645 hrs
Venue : Grande “A”

Moving Towards Sustainable Future - I

Session Chairperson : Shri M.K. Surana
Chairman & Managing Director
Hindustan Petroleum Corporation Ltd.

Technical Papers

2.1 A Process for Drop in Renewable Aviation Fuel: A Key to Sustainable Future
   Dr. Anjan Ray, CSIR-IIP

2.2 Crude to Consumables: Transforming the World Around Us
   Sourabh Mukherjee, JACOBS

2.3 New Trends and Opportunities in Hydrogen Production
   Martin Skov Skjøth Rasmussen, HTAS

2.4 Hydrogen : The Fuel of the Future
   Linde Engineering

2.5 A Process for the Catalytic Conversion of Waste Plastic into High Quality Fuels
   Dr. Sateesh Daggupati, RIL

Tea
1645 – 1700 hrs
Technical Session – 3  
1700 – 1845 hrs  
Venue: Grande “A”

Moving Towards Sustainable Future - II

Session Chairperson: Dr. Anil Kakodkar  
Chairman  
Scientific Advisory Committee on Hydrocarbons of  
Ministry of Petroleum & Natural Gas

Technical Papers

3.1  Improved Production of Bio Gas and Bio CNG from Lignocellulosic Biomass  
*Dr. Arvind M. Lali, DBT-ICT*

3.2  Converting Municipal Solid Wastes to Drop-in Hydrocarbon Fuels-Extending the Feedstock Choices for the IH2 process  
*Harshavardhan J. Choudhari, Shell*

3.3  “Biomass Burning in Fields” to “Bio-Crude Reserve of Nation”- A Massive Opportunity in Disguise for Surplus Biomass in India  
*Dharmesh Mahajan, Honeywell UOP*

3.4  Process Solutions for Transportation Fuels from Renewable Sources  
*Varun Ginotra, Axens*

3.5  Carbon Recycling : Clean Fuel and Clean Air  
*Prabhakar Nair, LanzaTech*

3.6  Praj’s Integrated 2G Smart Bio-Refinery  
*Vasudeo Joshi, PRAJ Industries Ltd.*
1. A Substitute to Claus Process for Sulphur and Ammonia Management
   Sagar Shukla, Haldor Topsoe

2. Co-processing - An Environmentally Sound Solution for a Zero Waste Future
   Arindam Das, Geo Cycle

3. Microwave Assisted Pyrolysis of Waste Mixtures and Catalytic Upgradation for
   the Production of Fuel Oils
   Dr. R. Vinu, IIT Madras

4. Development and Commercialization of Lubricity Improving Additive for Ultra
   Low Sulphur Diesel Fuel
   Dr. Sandip Bhowmik, Hindustan Petroleum Corporation Ltd. - R&D

5. Recovery of Heavy Metals from Petcoke Gasification Slag
   Dr. Sachchit Majhi, Reliance Industries Ltd. - Jamnagar Refinery

6. Innovative and Efficient way to produce Sulphuric Acid from Sour Gas of
   Refineries
   Shanmuga Sundaram, Sud-Chemie

7. Bio Crude Co-Refining: The Untapped Opportunity for India
   Dr. Piyali Das, TERI

8. Hydrogen Production from Renewable Sources: Moving towards use of Agri-
   waste Biomass as Sustainable Feedstock
   Dr. Sanjukta Subudhi, TERI

9. Bottom of Barrel Upgradation to Fuels via Catalytic Partial Oxidation
   Pudi Satyanarayana Murty, Hindustan Petroleum Corporation Ltd. - R&D

10. Exploring Assam Crude UCO potential for VG 10 Grade Naphthenic Oil Production
    for Transformer Oil Application
    Lalit Kumar, Bharat Petroleum Corporation Ltd. - R&D

11. Production Feasibility of Furfuryl Alcohol and Furan Resin from Furfural in
    Numaligarh Refinery
    Geetali Kalita, Numaligarh Refinery Ltd.

12. Tube Inserts for Heat Exchangers
    Nicolas Aubin, PETROVAL

13. Energy Efficiency, Optimized
    Sumit Chintawar, ALPHA LAVAL India Pvt. Ltd.
14. BPCL MR Web based Monitoring of Pumps and Steam Traps  
   Priya Bhagwat, Mumbai Refinery, Bharat Petroleum Corporation Ltd.

15. Installation of Thermo-Compressor to Boost Surplus LP Steam Pressure using MP steam for CTA dryer  
   Amit Kumar, Panipat Refinery, Indian Oil Corporation Ltd.

16. Jet Type Fanless Cooling Tower in CPP at BPCL - Kochi  
   Samuthirapandian P., Kochi Refinery, Bharat Petroleum Corporation Ltd.

17. EngCryoTM: Better Hydrogen Utilization by Cryogenic Hydrogen Recovery  
   Ravi Kant Gupta, Engineers India Ltd.

18. Enhancement in Boiler Efficiency (Utility Boiler) and Emissions Reduction by Use of Oxygen Enriched Gas from Nitrogen Plant  
   Manas Kamal Dutta, Numaligarh Refinery Ltd.

19. Introduction of Lowest Lifecycle Cost (LLC) Pump in BPCL Mumbai Refinery  
   Avinash B. Gadekar, Mumbai Refinery, Bharat Petroleum Corporation Ltd.

20. PAFC Hydrogen Fuel Cell charging by using Tail Gas from PSA system in Ethylene Cracker Unit of Dual feed Petro - Polymer Plant  
   Manosh Jyoti Das, BCPL

21. Dividing Wall Columns for Petrochemical Naphtha Product Upgradation  
   Manish Bhargava, DWC Innovations

22. EB-X Technology: a Solution for a PX Plant's Performance Improvement  
   Sachin Joshi, GTC

   Chiranjeevi Thota, Bharat Petroleum Corporation Ltd. - R&D

24. Real Time Optimization: Digital Transformation Initiative for Oil & Gas  
   Sweta Aglawe, AVEVA
Technical Session – 4
0900 – 1100 hrs
Venue: Grande “A”

Gasification: Towards Sustainability

Session Chairperson: Dr. Partha P. Maitra
President
Reliance Industries Ltd.

Technical Papers

4.1 Plasma Gasification - Sustainable route to produce Petrochemicals from Refinery Waste
Srinivas Moturi, MRPL

4.2 A Pathway through Bio-refinery using Thermochemical Conversion: Opportunities for Biomass as a Mainstream Energy Source
Prof. S. Dasappa, IISc

4.3 Low Temperature Catalytic Gasification of High-Ash Indian Coal, Agri-Residue and Petcoke into High Quality Syn Gas
Dr. Asit Das, RIL

4.4 Petcoke to Methanol - Further to Propylene and Acrylic Acid
Dr. Siddhartha Mukherjee, Air Liquide

4.5 Integrated Refinery Scheme
Nan Liu, Shell

4.6 Novel Catalysts and Catalytic processes for Converting CO₂ to Fungible Liquid Fuels and Chemicals
Moti Herskowitz, Ben Gurion University, Israel

Tea
1100 – 1115 hrs
Technical Session – 5
0900 – 1100 hrs
Venue: Grande “B”

Quality Improvement: Options

Session Chairpersons:
Dr. Anjan Ray
Director, CSIR - IIP
Shri A.R.S. Bhandari
Senior Vice President, BORL

Technical Papers

5.1 Octamax®: An Indigenous Technology for Conversion of Cracked C4 Stream to High-Octane Gasoline
S. Saravanan, IOC (R&D)

5.2 Etherification - Route to High RON Gasoline
Amardeep Puri, Axens

5.3 Octane Solutions - KSAAT, NexOCTANE, MAXISOM Technologies
Indraneel Nandi, KBR Technology

5.4 Enhancing LC - FINING to include LSFO production
Goutam Biswas, CLG

5.5 Octane Boost and Capacity Increase for Hydrotreated Naphtha
Brant Aggus, Invista

5.6 Advances in Alkylation Technologies, AlkyClean®
Puneet Puri, McDermott Technology

Tea
1100 – 1115 hrs
Technical Session – 6
1115 – 1300 hrs
Venue : Grande “A”

Innovations in Refineries – Profit Improvement

Session Chairpersons :
Shri Vinod S. Shenoy
Director (R), HPCL
Ms. Vartika Shukla
Executive Director (R&D), Engineers India Ltd.

Technical Papers

6.1 Energy optimisation through Utilities Energy Reduction
Joan Sanroma, KBC

6.2 Insights into Reducing Steam System Size and Fresh Water Usage
Kevin Henke, Solomon Associates

6.3 Innovative Business Process for Sulphur Recovery System
Asawari V. Kelkar, Mumbai Refinery, BPCL

6.4 Recovery of Ammonia from Refinery Sour Gases
V. Kamesh Jayanti, EIL

6.5 SWAATS - A New Commercialised Process for Processing Acid Gas and Alternative Product for Sulphur
Sachin Joshi, GTC

6.6 Maximizing Light Olefin Potential from FCC unit
Mukund Balachandran, Grace

Lunch Break
1300 – 1400 hrs
Technical Session – 7
1115 – 1300 hrs
Venue : Grande “B”

Advances in Refining Technology

Session Chairpersons :
Shri M. Venkatesh
Managing Director, MRPL
Shri S.K. Handa
Director (PJ) Designate, Engineers India Ltd.

Technical Papers

7.1 The Power of Pretreat
Pieter Lusse, Albemarle

7.2 Honeywell UOP Uniflex™ MC™ Technology – Maximizing Profitability with High Residue Conversion
Honeywell UOP

7.3 ART’s Catalyst Technology for Ebullating Bed Resid Hydrocracking
Balbir Lakhanpal, ART Hydroprocessing

7.4 A Self Sufficient Hydrogen Generation unit : Largest in India
S.N. Sheshachala, HPCL

7.5 Next Generation Higee based Amine Process
Mukesh Shivhare, EIL

7.6 From Motor Fuels to Petrochemicals: A Stepwise Implementation Program Unlocking Opportunities for Refiners
Dilip Dharia, TechnipFMC

Lunch Break
1300 – 1400 hrs
Technical Session – 8
1400 – 1600 hrs
Venue: Grande “A”

Innovations in Refineries: Products

Session Chairpersons:
Shri B.V. Ramagopal
Director (R), Indian Oil Corporation Ltd.
Shri Prasad K Panicker
Executive Director (I/C), Kochi Refinery, BPCL

Technical Papers

8.1 Cost Effective Indigenous Dewaxing Catalyst BHARAT-hiCAT for LOBS Production: Development and its Commercial Performance
BPCL (R&D)

8.2 Production of D 80 (De Aromatised Solvent) in BPCL Mumbai Refinery
N. Suresh Kumar, Mumbai Refinery, BPCL

8.3 HPCORRMIT - A Novel Cost Effective Inhibitor for LPG Pipelines – A Make in India Initiative
K. R. Krishna, HPCL (R&D)

8.4 Safer and Effective Sulphiding Chemistry for Refinery and Petrochemical Plants
Parag Shah, Dorf Ketal

8.5 A Reliable Technology for Liquid Hydrocarbons Drying
Regis Taillon, Quadrimex Chemical

Tea Break
1600 – 1615 hrs
Technical Session – 9
1400 – 1600 hrs
Venue: Grande “B”

Catalysts: Next Generation 1

Session Chairpersons:
Dr. S.S.V. Ramakumar
Director (R&D), Indian Oil Corporation Ltd.
Shri Amar Kumar
Senior VP & Head Ops., Nayara Energy Ltd.

Technical Papers

9.1 Novel Catalysts and Catalytic Processes for Converting Waste Biomass to Fungible Liquid Fuels and Chemicals
Moti Herskowitz, Ben Guiron University, Israel

9.2 On Purpose Catalyst Supports for Sophisticated Catalyst Design
Dr. Alexander Malyschew, SASOL Performance Chemicals

9.3 Maximize Refinery Margin by Leveraging Criterion’s Hydrocracking Pre-Treat Catalyst and Shell Reactor Internals
Rambabu Raja, Shell - Criterion

9.4 Latest Development in VGO Hydro-treatment Catalysts
Vaibhav Khandelwal, Axens

9.5 Solving Refiner’s Challenges through Latest Generation Topsoe’s HELPSc™ Technology and HySwell™ Catalyst
Raju Chopra, HTAS

Tea Break
1600 – 1615 hrs
Technical Session – 10
1615 – 1815 hrs
Venue : Grande “A”

IR 4.0: Digital Revolution

Session Chairpersons
Shri C.J. Iyer
Executive Director (I/C), Mumbai Refinery, BPCL
Mr. Sergey Denisov
Chief Development Officer, Nayara Energy Ltd.

Technical Papers

10.1 Industry 4.0 in Oil & Gas : Relooking at Digital Transformation with a Risk Based Approach
Rati Bhattacharya, DuPont

10.2 Leveraging Cloud to drive Operational Excellence
Akshay Gupta, Honeywell UOP

10.3 Initiatives and Steps towards Industrial Revolution 4.0
Priya Bhagwat, Mumbai Refinery, BPCL

10.4 Accelerating Digital Transformation in the Indian Refining Industry (IR 4.0)
Ron Beck, Aspentech

10.5 Digital Mission for Downstream : Next Generation Advance Plant Analytics
Murli Dhar Agrawal, TCS

10.6 Digitisation in Petroleum Refineries : A Way Forward
Simon Rogers, Yokogawa
Technical Session – 11
1615 – 1815 hrs
Venue : Grande “B”

Petrochemicals for Business Sustainability

Session Chairpersons :
Shri M.V. Someswurudu
ED (PC-O&M) & Officer-in-Charge, GAIL-Pata
Shri S. Bharatan
CGM (PJ-PS), Hindustan Petroleum Corporation Ltd.

Technical Papers

11.1 Dow Global Technologies LLC, METEOR™ EO-RETRO 2000 Catalyst for Ethylene Oxide Production
Mark Ballard, DOW

11.2 The EMTAMSM process: A Path to Advanced Paraxylene Production
Michel Molinier, ExxonMobil Chemical Company

11.3 Adding Value to Refinery LPG Streams: Propane / Butane Dehydrogenation and Polypropylene
Gijs TenBerge, McDermott Technology

11.4 Refinery Off Gas Cracker
Reliance Industries Ltd.

11.5 HPPO-The leading PO Technology
Dr. David Bolz, EVONIK Resource Efficiency

11.6 Evaluating Revamp Configuration Using Catalytic Olefins Technology: A Case Study
Pratap Vijay Singh, KBR Technology
1. Insitu Supholane Solvent Regeneration using ION Exchange Technology
   D Rajeswari, Kochi Refinery, Bharat Petroleum Corporation Ltd.

2. Replacement of Duplex Stainless Steel with Alloy 825 can increase the Service Life of REAC in HCU
   Debashis Thakur, Numaligarh Refinery Ltd.

   Dr. Y.S. Jhala, Gujarat Refinery, Indian Oil Corporation Ltd.

4. Integrating Block Chain with IR 4.0 for Hydrocarbon Industry
   Parag Bhatt, UPES

5. Implementation of “EngHOGTM” Process for Desulphurization of Very Low Pressure Hotwell Offgases
   Sanjib Paul, Engineers India Ltd.

6. A Novel Approach to Maximize Power Import from Grid with Improved Reliability in a Captive Power Plant with Double Bus-Bar Arrangement
   Akshata Kotharkar, ONGC Mangalore Petrochemical Ltd.

7. Making Hydrogen Back from H\textsubscript{2}S: A Modified Thermochemical S-I cycle
   Subham Paul, CSIR - Indian Institute of Petroleum

8. K Model: Desktop Solution for Crude Oil Blend Compatibility and Blend Optimization for Increasing Heavy Oil Processing
   Rajeev Kumar, Bharat Petroleum Corporation Ltd. - R&D

9. Integration of VAM Technology with LRVP Technology for Replacement of last Two Stages of Steam Ejectors
   Harish SVS, Gujarat Refinery, Indian Oil Corporation Ltd.

10. Replacing TAN Constraint with True Corrosivity Constraint in Refinery
    Anurag Verma, Reliance Industries Ltd. - Technology Group

11. Closed Sampling System for Pressurized Dome and Cone Roof Tanks
    Basha Nadeem Syedazam, Bharat Oman Refinery Ltd.

12. Achieving Operational Excellence in Utility Boiler
    Angshuman Das, Numaligarh Refinery Ltd.
13. Advanced Exposure Protection cum Fire Suppression Water Mist Curtain System for Storage Tanks  
   Syed Faizan Ali, Bongaigaon Refinery, Indian Oil Corporation Ltd.

14. Precious Metal Management for Oil and Petrochemical Industry  
   Shankhaneel Borah, PAMP Switzerland

15. Efficient Steam Traps and Condensate Management  
   Rajesh Kulkarni, Thermax Ltd., Pune

16. Novel Method of Food Grade Hexane Production from Par-ISOM Unit  
   Syed Imran Ahmed R, Kochi Refinery, Bharat Petroleum Corporation Ltd.

17. Shifting to Ammonia Injection for better PH Control in TGTU  
   M Venkata Sudhakar, Kochi Refinery, Bharat Petroleum Corporation Ltd.

18. E-Mobility and Battery - Present Indian Scenario and Future Scope  
   Malay Pramanik, Hindustan Petroleum Corporation Ltd. - R&D

19. Octane Barrel Increment with Optimized Energy Utilization Isomerization Case  
   Mannu Jha, Mangalore Refinery and Petrochemicals Ltd.

20. Adopting Industry 4.0 Revolutionized Digital Technologies in Petroleum Refining and Petrochemical Industry  
   Sathish Ganesan Vaithianathan, Paradip Refinery, Indian Oil Corporation Ltd.

   Ankit Thakur, Xylem Water Solutions India Pvt. Ltd.

22. Indigenous Tail Gas Treating Technology to Process Ultra-low pressure Tail Gas from Sulphur Recovery Unit  
   Saptarshi Paul, Engineers India Ltd.

23. In house Rigorously Developed EDR Furnace Models for Calculating Fouling Resistance and Recommend Cleaning and Substantiate the Effectiveness of Cleaning Agent  
   Prasad V., Mumbai Refinery, Bharat Petroleum Corporation Ltd.

24. Coker Furnace Anti foulant  
   Bharat Joisar, Dorf Ketal
Technical Session – 12
0830– 1030 hrs
Venue : Grande “A”

Catalysts : Next Generation 2

Session Chairpersons :
- Dr. M.O. Garg
  President, Reliance Industries Ltd.
- Shri M. Vinay Kumar
  Group General Manager (I/C - Refinery), MRPL

Technical Papers

12.1 Luminate™ – Latest Catalyst Innovation to Maximize Value Addition in FCC Units
   Amit Kumar Shah, BASF

12.2 Hydroprocessing of Renewable Feedstocks - Challenges and Solutions
   Sylvain Verdier, HTAS

12.3 Real time Optimization of FCC Catalyst Selectivity
   Paul Diddams, Johnson Matthey

12.4 Accu(R) Spheres : New technology for making small spheres not previously available
   Paul Szymborski, Saint Gobain NorPro

12.5 Catalysts and Process Technologies for Olefin Derivatives - Aligning Refineries towards an Economically Sustainable Future
   John T. Haley, Rezel Catalysts Corporation

12.6 FCC Catalytic Solutions Adsorbents Hydrotreating and Hydrocracking Catalysts
   Oleg Kryukov, KNT Russia

Tea Break
1030 – 1045 hrs
Technical Session – 13
0830 – 1030 hrs
Venue: Grande “B”

Best Operational Practices

Session Chairpersons:
Shri S.N. Pandey
Managing Director, CPCL
Shri P.V. Ravitej
CGM, Mumbai Refinery, BPCL

Technical Papers

13.1 Paraxylene Generator: Tatoray Regeneration – First Time in India
Prashant Kulkarni, OMPL

13.2 Virtualisation Technology for Process Controls
Royston Rohan Mascarenhas, OMPL

13.3 Robotic Technique for Processing API Separator Sludge
Dnyanesh Suresh, Mumbai Refinery, HPCL

13.4 Towards Hydrogen Economy - Opportunities and Challenges
S Barathy, GAIL India Ltd.

13.5 Centralised Mvar and MW control of generators in CPP through Electrical Control System
Shinod Kumar K.B., Kochi Refinery, BPCL

13.6 How Green, Cool and Energy Efficient is your Cooling System?
Shailesh Harani, Armec Cooling Tower Pvt Ltd.

Tea Break
1030 – 1045 Hrs
Technical Session – 14
1045 – 1215 hrs
Venue : Grande “A”

Benchmarking

Session Chairpersons : Shri K.K. Jain
Executive Director, Barauni Refinery, IOCL
Shri M.B. Pimpale
Executive Director (Ref. PJ), Mumbai Refinery, BPCL

Technical Papers

14.1 Insights into Pipeline Benchmarking and Olefins Benchmarking
Radhika Ojha, Solomon Associates

14.2 Improving Project Performance through Benchmarking : A Refining & Petrochemical Perspective
Manoj K Prabhakar, Independent Project Analysis Inc

14.3 Safety Benchmarking : Insights from Oil & Gas Industry Experience
Srinivasan Ramabhadran, DuPont

14.4 Global Strategies for Successful Execution of Mega Petrochemical Projects
Arun Kumar Jain, Fluor Daniel

Vote of Thanks
1215 - 1300 hrs
Grande “A”

Lunch
1300 – 1400 hrs
Technical Session – 15  
1045 – 1215 hrs  
Venue: Grande “B”

Operational Risk Management in Petrochemicals Units

Session Chairpersons:  
Shri G. Sriganesh  
Executive Director (R&D), HPCL  
Shri V.J. Rao  
Executive Director, Oil Industry Safety Directorate

Technical Papers

15.1 Improving Business Success through Operational Risk Management  
Nicholas Bahr, DuPont

15.2 Safety Design Practices followed for Extrusion Building in a US Polyolefin plant - A Case Study  
Babanna Biradar, Bechtel

15.3 Operator Training and Certification - A Vital Component for Safe Operations of a Petrochemical Plant  
Philippe Buch, IFP Training

15.4 Case studies of the Industrial Disaster (Dust Particle Explosion)  
Balamurugan N, OMPL

Vote of Thanks  
1215 - 1300 hrs  
Grande “A”

Lunch  
1300 – 1400 hrs
1. Auto blending of MS and HSD: Optimization and Minimization of Quality give Away and Operational Excellence to achieve BS-VI  
   *Dr. Y.S. Jhala*, Gujarat Refinery, Indian Oil Corporation Ltd.

2. IIOT Application in Refinery - Crude & Vacuum Distillation Unit  
   *Ashwani Malhotra*, Engineers India Ltd.

3. Floating Anchors, Provisions for Reducing Refractory Dislodging at CCU Incinerator  
   *Mohommad Ismail Hussain*, Numaligarh Refineries Ltd.

4. Making CCR Cooling Water Line Piggable, helping to achieve Throughput of 4000 TPD consistently  
   *Prafull Vijaykumar Madne*, Mumbai Refinery, Bharat Petroleum Corporation Ltd.

5. Innovative Modification of Process Air Compressor in PTA to run Unit without Expander  
   *Joydeep Choudhury*, Panipat Refinery, Indian Oil Corporation Ltd.

6. Reliability Improvement of GE Make Frame VI GT  
   *Prabahar K*, Kochi Refinery, Bharat Petroleum Corporation Ltd.

7. Improve Hydroprocessing Campaign Length and Product Quality with Contaminant Removal  
   *Hemant Sharma*, PALL Corporation

8. Pivoting on Higher Cracking Activity and FCC Profitability  
   *Tiepan Shi*, HCpekt FCC Catalyst

9. Energy Optimisation in a CHP Plant in Refinery  
   *N.V.B. Subrahmanyam*, BHEL GE Gas Turbine Services Pvt. Ltd.

10. Recovery of Valuable Hydrocarbons from Petroleum Crude Sludge via Microwave Pyrolysis and Catalytic Upgradation  
    *P Francis Prashanth*, IIT Madras

11. Enabling Synergies Delivering Solutions for Butadiene Extraction Units  
    *Sumit Ghiya*, Linde Engineering

12. Strategies for Reliability Improvement of Electrical Systems in Petroleum Refineries  
    *G. Hanmanth Rao*, Chennai Petroleum Corporation Ltd.
Sponsors for 23rd RPTM

PLATINUM

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DuPont

Forbes Marshall

Haldor Topsoe

DBT-ICT Centre for Energy Biosciences
Institute of Chemical Technology, Mumbai
Gateway of India

Siddhivinayak Temple

Sealink

Centre for High Technology
&
Bharat Petroleum Corporation Limited