22nd Refining & Petrochemicals Technology Meet

13-15 January, 2018
Mayfair Convention, Bhubaneswar, Odisha, India

Emerging Trends in Downstream Hydrocarbon Sector

Ministry of Petroleum and Natural Gas
Government of India
REGISTRATION/COLLECTION OF BADGES

Mandap, Hotel Mayfair Lagoon, Bhubaneswar

12th January 2018 : 1700 hrs to 2000 hrs

Mayfair Convention, Bhubaneswar

13th January, 2018 : 0730 hrs to 0900 hrs
13th January, 2018 : 1400 hrs to 1800 hrs
14th January, 2018 : 0800 hrs to 1200 hrs
15th January, 2018 : 0800 hrs to 1000 hrs
Inaugural Session
0930 – 1200 hrs
Venue: Central Hall

Tea
1200 – 1230 hrs
13 January, 2018

Technical Session - 1
1230 – 1400 hrs
Venue: Central Hall

Emerging Trends in Refining & Petrochemicals - I

Session Chairman: Shri R. Ramachandran
Director (Refineries)
Bharat Petroleum Corporation Ltd.

Technical Papers

1.1 Global Refining Outlook
N. Ravi Venkatesh, IHS Markit

1.2 Emerging Trends in Downstream Hydrocarbon Sector
Dr Partha P. Maitra, RIL

1.3 Emerging Trends in Downstream Petroleum Research
Dr S.S.V. Ramakumar, Indian Oil Research & Development Centre

Lunch
1400 – 1500 hrs
Technical Session – 2
1500 – 1630 hrs
Venue: Central Hall

Emerging Trends in Refining & Petrochemicals - II

Session Chairman: Shri B.V. Ramagopal
Director (Refineries) Designate
Indian Oil Corporation Ltd.

Technical Papers

2.1 Petrochemical Industry Trends and Opportunities – Focus on India
Sanjay Sharma, IHS Markit

2.2 Emerging India in Petrochemicals
Eshwar Yennigalla, S&P Global Platts

2.3 Hydrocarbon Sector - Challenges & Opportunities
S.K. Handa, Engineers India Ltd.

2.4 Seven Ways in which Residue Gasification can Unlock Value Chain for Indian Refiners
Robert Schouwenaar, Shell

Tea
1630 – 1645 hrs
Technical Session – 3
1645 – 1815 hrs
Venue: Central Hall

Refining and Beyond

Session Chairman:
Shri Ajay N. Deshpande
Director (Technical)
(Addl. Charge of Chairman & Managing Director)
Engineers India Ltd.

Technical Papers

3.1 Innovative Routes to Petrochemicals / Chemicals
Morten Schaldemose, Haldor Topsoe

3.2 Emerging trends in Downstream Hydrocarbon Sector
Sean Smyth, ExxonMobil

3.3 Electric Vehicles and the Impact on Refining Business in India and the World
George Popps, Stratas

3.4 Transforming Refining & Petrochemicals Sector - “Oil to Chemicals”
Sourabh Mukherjee, JACOBS
Poster Session – 1

Time duration for display - 0930 to 1815 hrs

1. Use of Plastic Waste in Road Construction
   
   Nikhil Gupta, Indian Oil Corporation Ltd., Bongaigaon Refinery

2. Improve Energy Efficiency and Robustness of Refinery through Maximizing Heat Recovery at Crude Distillation Unit
   
   Nur Suhaili, PETRONAS

3. Mild Hydrocracking of VGO – Clean Fuel Flexibility
   
   Kevin D. Carlson, CRI/Criterion Catalyst Company

4. Commissioning of 60 KTA PP Plant (Novolen Technology) with Specific Focus on the Study on the Effect of CO-Catalyst, External Donor on Ziegler Natta Catalyst and Hydrogen Response
   
   Mamta Lama, Brahmaputra Cracker and Polymer Limited (BCPL)

5. Low Cost Heater Revamp by Split Flow Technology
   
   Gauri Pawar, Hindustan Petroleum Corporation Ltd., Mumbai Refinery

6. Enhancing Energy Efficiency in Petroleum Refinery Sector of India through Perform, Achieve & Trade (PAT) Scheme: Opportunities & Policy Solutions
   
   S.S. Saini, Bureau of Energy Efficiency

7. Process Simulation and Techno-economic Analysis for Production of Propylene Oxide from Petro-FCC of BPCL Kochi Refinery
   
   Pintu Maity, Bharat Petroleum Corporation Ltd., Corporate R&D Centre

8. Differentiated Solvent for Refinery Tail Gas Treating Performance Enhancement with Improved Emission Compliance
   
   Ritesh Gulabani, DOW

9. UOP Solutions to Impact Hydrogen Management
   
   Prateek Pachauri, Honeywell UOP

10. Multi-functional Additive for Polypropylene
    
    Jatinder Singh Dhaliwal, Indian Oil Research & Development Centre

11. Leveraging Wireless Technology for Process Control
    
    Shyamal Bibar, ONGC Mangalore Petrochemicals Ltd.
12. Heat Transfer Enhanced Technologies for Energy Efficiency Improvement in a time of Environmental Challenges
   Amrendra Bet, TechnipFMC

   Rajeev Singh, KBR Technology

   Bhatu Chaudhary, Linde Engineering

15. Impact of Upstream Refinery Operations on Effluent Treatment Plant
   J.K. Joshi, Engineers India Ltd.

16. Topsoe’s Scale Catcher Technology for Mitigating Pressure Drop in Hydroprocessing Units
   Anuj Seth, Haldor Topsoe

17. A Novel Bi-functional Catalyst for the Production of Middle Distillates from Naphtha
   Dr. Rajaram Bal, CSIR, Indian Institute of Petroleum

   Malay Pramanik, HP Green R&D Centre, Hindustan Petroleum Corporation Ltd.

19. Energy efficiency improvement in Reformer of Hydrogen Unit at Numaligarh Refinery
   Geetali Kalita, Numaligarh Refinery Ltd.
Technical Session – 4
0830 – 1030 hrs
Venue: Central Hall

Advances in Refining Technology

Session Chairman
Shri L.K. Vijh
Director (T) Designate, EIL
Shri S.M. Vaidya
Executive Director (Ops), RHQ, IOCL

Technical Papers

4.1 MS quality Upgradation -Challenges & Approach for 95 RON beyond 2020
Brij Behari, Indian Oil Corporation Ltd.

4.2 Produce High Octane Gasoline in a Sustainable Way
Varun Ginotra and Francois Baron, Axens

4.3 WSA Technology - To Improve Reliability & Profitability of Refinery
Jens Kristen Laursen, Haldor Topsoe

4.4 Options for Increasing Margins with Invista’s DTL™ and Straight Run Upgrading Technologies
Ian Woodcock, Invista

4.5 BHTS ThruPlus® Enhanced Double Fired Furnace Technology for Increased Coker Heater Run Lengths
R.C. Kaarthik, Bechtel

Tea
1030 – 1045 hrs
Technical Session – 5
0830 – 1030 hrs
Venue: Crystal Hall

Gasification

Session Chairpersons:
Dr. Partha P. Maitra
President, Reliance Industries Ltd
Ms. Vartika Shukla
Executive Director, EIL

Technical Papers

5.1 Gasification Solutions for the Refinery and Petrochemical Industry
Anil Sarin, CB&I

5.2 Syngas from Gasification of Low Value Fuels as a Feedstock for Petrochemicals
Sunil Singhal, Fluor Daniel

5.3 Indigenous Gasifier Technology and Fabrication Capability for Long-Term Energy Security
Murur Venkatesh Prabhu, Larsen & Toubro

5.4 Carbon Recycling: Clean Fuel and Clean air
Prabhakar Nair, Lanzatech

5.5 Petcoke Gasification: A Better Option for Petcoke Utilisation in India
Aakash Agarwal, Indian Oil Corporation Ltd., BD (Petrochemicals)

Tea
1030 – 1045 hrs
Technical Session – 6
1045 – 1300 hrs
Venue: Central Hall

Innovations in Refining

Session Chairman: Shri M. Venkatesh
Director (R), MRPL

Technical Papers

6.1 Production of Petrochemical, Hexane, as a By-product from Isomerization Unit
Shreya Kondapalli, Bharat Petroleum Corporation Ltd., Mumbai Refinery

6.2 Low Cost Anti-Coking & Sulfiding Additive for Gas/Naphtha Cracker & Hydrotreating Catalyst
Biswajit Shown, Reliance Industries Ltd.

6.3 In-situ Solvent Purification Using Ion-Exchange Technology
Rajeswari D., Bharat Petroleum Corporation Ltd., Kochi Refinery

6.4 Development and Commercialization of In-house Technology for Production of High Quality Low Benzene Gasoline by Novel Extractive Distillation of High Olefinic FCC Gasoline
Abhishek Jha, Reliance Industries Ltd.

6.5 Innovative Solution to Meeting Today’s Gasoline Specifications
Matthew Clingerman, Dupont

6.6 Innovative Process and Catalytic Technologies from Chevron Lummus Global Opens up Newer Frontiers
Subhasis Bhattacharya, Chevron Lummus Global

Lunch Break
1300 – 1400 hrs
Technical Session – 7
1045 – 1300 hrs
Venue: Crystal Hall

PVC - Options

Session Chairpersons: Shri K.K. Jain
Executive Director, (BD-PC), IOCL
Shri K. Ravi
Executive Director, West Coast Refinery, BPCL

Technical Papers

7.1 PVC: India Perspective
Clement Choo, S&P Global Platts

7.2 PVC Production by Carbide route
Naresh Jain and Shirish Puranik, DCM Shriram

7.3 Advanced PVC Process - Improving Product Quality and Lowering Capital Investment
Sagar Nawander, KBR Technology

7.4 VCM / PVC Technology
J.K. Joshi, Thyssenkrupp

7.5 Consideration on Development of PVC and Relevant Sector In India
Zhao Minwei, TCC China

7.6 PVC - RIL Experience
Rajesh Biyani, Reliance Industries Ltd.

Lunch Break
1300 – 1400 hrs
Technical Session – 8
1400 – 1600 hrs
Venue: Central Hall

Energy Efficiency Improvement

Session Chairpersons: Mr. Charles Reith
CEO, Solomon Associates
Shri K.K. Acharya
Head of Central Technical Services, RIL

Technical Papers

8.1 Innovative Ideas in Energy Conservation
Vartika Shukla, Engineers India Ltd., R&D

8.2 Energy Cost Efficiency Index™- Insights into Changing Energy Mix Trends
Kevin Henke, Solomon Associates

8.3 Energy Conservation by Waste Heat Recovery from Low Temperature Process Streams
G.V. Sathish, Indian Oil Corporation Ltd., Paradip Refinery

8.4 Energy Efficiency Improvements at GSFC, Vadodara
Utkarsh Yajnik, Gujarat State Fertilizer Corporation Ltd.

8.5 Organic Rankine Cycle-Prospects of Implementation in Refineries
Piyush Kant and Alexey Shorokhov, GCE Group

Tea Break
1600 – 1615 hrs
Technical Session – 9
1400 – 1600 hrs
Venue: Crystal Hall

Styrene and Derivatives

Session Chairpersons:
- Shri M.V. Ravi Someswarudu
  ED (PC-O&M) & OIC, GAIL
- Shri S. Bharatan
  CGM, HPCL – HQ

Technical Papers

9.1 Derivatives of Styrene
V.T. Nandakumar, Supreme Petrochem

9.2 Styrene Value Chain
Malini Hariharan, ICIS

9.3 Styrene from Py Gas - Myths and Facts
Sachin Joshi, GTC

9.4 UOP/Lummus Technology for Production of Ethylbenzene and Styrene Monomer
Rakesh Kumar, CB&I

Tea Break
1600 – 1615 hrs
Technical Session – 10
1615 – 1815 hrs
Venue: Central Hall

Advances in Catalyst Management

Session Chairpersons: Dr M.O. Garg
President (R&D), RIL
Shri U. Venkataramana
Director (Tech), CPCL

Technical Papers

10.1 **GRANITE™ sets the New Benchmark in FCC Technology**
Carel Pouwels, Albemarle

10.2 **Catalyst Developments Enable Improved FCC Unit Profitability**
Bilge Yilmaz, BASF

10.3 **FCCU Catalytic Solutions**
Dr Kryukov O. Viktorovich, KNT Group Russia

10.4 **Innovative Catalyst & Adsorbents for Up-Gradation of Ethylene & Propylene Monomers to Polymer Grade**
Aravind Narayanan, Sudchemie

10.5 **Precious Metal Management**
Shankhaneel Borah, MMTC - PAMP
Technical Session – 11
1615 – 1815 hrs
Venue: Crystal Hall

Olefins

Session Chairpersons:
Shri M.R. Meshram
ED (PC and R&D), GAIL
Shri T.D.V.S. Gopalakrishna
CGM, IOCL-PDR

Technical Papers

11.1 Linde Steam Cracker & UNIPOL™ PE Process Integration
Franz Dalitz, Linde Engineering

11.2 High Value Petrochemical Intermediates
Francois Baron, Axens

11.3 METEOR™ Ethylene Oxide/Ethylene Glycol Process Technology
Mark Ballard, DOW

11.4 Sustainable Development in Polyolefin Industry
Dr Shin-ichi Kojoh, Mitsui

11.5 UNIPOL® PP – Leading PP technology with broadest product capability
Yogesh Mishra, W.R. GRACE
Poster Session – 2

Time duration for display - 0830 to 1300 hrs

1. **KF 780 STARS®: The New, Proven All-Round Catalyst for Distillates & VGO Hydrotreating**
   
   *Sudipto Chakraborty*, Albemarle

2. **Innovative method to treat fire water through ultrasonic systems**

   *Mahendra Singh Bhadauria*, Bharat Oman Refinery Ltd.

3. **Power savings by Provision of PM (Permanent Magnet) blower in ETP**

   *Narayan Salvi*, Bharat Petroleum Corporation Ltd., Mumbai Refinery

4. **Complete Conversion of High Sulfur Residual Fuel Oil to Petrochemicals**

   *Goutam Biswas*, Chevron Lummus Global

5. **Concept of Hydrogen flaring control in HGU - An Energy Efficiency Measure**

   *Manikandan Thannasi*, Chennai Petroleum Corporation Ltd.

6. **Development of Alternate Processes for Lower Olefins (C2-C4): Taking a Step Forward**

   *Indrajit K. Ghosh*, CSIR, Indian Institute of Petroleum

7. **Covalent Organic Framework (COF) Materials for Methane Storage**

   *Nandakumar T.*, GAIL (India) Ltd.

8. **Optimise Furnace Performance & Productivity by Topsoe Digital Service Initiative (Topsoe Furnace Manager (TFM) and TrueTemp™)**

   *Sachin Panwar and Ronnie Dalsgaard*, Haldor Topsoe

9. **Energy Efficient Design with Light Desorbent Parex Aromatics Technology**

   *Anup Dhaigude*, Honeywell UOP

10. **Energy Efficiency & Reliability Improvements in Design of New Full Conversion Hydrocracker at HPCL Visakh Refinery**

    *Prasanth Gudavalli*, Hindustan Petroleum Corporation Ltd., HQ

11. **Improved Heat Integration by Introduction of Hot Separator Drum in Prime G+ Unit**

    *Rohit Sachan*, Hindustan Petroleum Corporation Ltd., Mumbai Refinery
12. Novel Design of Attrition Rig for FCC Catalyst Selection for Improved Reliability  
   Somanath Kukade, HP Green R&D Centre, Hindustan Petroleum Corporation Ltd.

13. A Cost Effective and Novel Dewaxing Aid Polymer for Lube Refinery: A Make in India Product Development  
   CH Siva Kesava Raju, HP Green R&D Centre, Hindustan Petroleum Corporation Ltd.

14. HPFurnOKare online heater cleaning chemical  
   Sairam Madala, HP Green R&D Centre, Hindustan Petroleum Corporation Ltd.

15. Innovative Way to Troubleshoot Polypropylene (PP) Resin Pneumatic Conveying System  
   Mousom Some, Indian Oil Corporation Ltd., Paradip Refinery

16. Refinery and Petrochemical Integration- Concept of Petrochemical Refinery  
   Ritwik Kumar Hatial, Mangalore Refinery and Petrochemicals Ltd.

17. Energy Management System implementation for cross country hydrocarbon pipelines, Opportunities & challenges : Experience sharing of PCRA  
   Atul Vyawahare, Petroleum Conservation & Research Association

18. Advances in Hydroprocessing Catalyst Technology  
   Samarth Shah, Porocel Industries

19. Premium FCC Catalysts and Additives for Today's Refining Challenges  
   Mukund Balachandran, W.R. GRACE

20. Molecule Based Naphtha Flow Sheet towards Optimization of Xylenes Recovery  
   Bhoja Kandela, Reliance Industries Ltd.
Poster Session – 3

Time duration for display – 1400 to 1815 hrs

1. Producing Superior Quality Plant Fuel from FCCU Clarified Oil Using Cold Filtration Technology
   Sasi I., Bharat Petroleum Corporation Ltd., Kochi Refinery

2. Foray of Advanced Process Control into CCR Regeneration Section
   Shreya Kondapalli, Bharat Petroleum Corporation Ltd., Mumbai Refinery

3. Innovative Approach by Carrying Out Online Sulphiding of Hydrogenator in Hydrogen Generation Unit to Reduce Turn-Around Days
   D.K. Zutshi, Bharat Petroleum Corporation Ltd., Mumbai Refinery

   Rajesh Vankayala, Bharat Petroleum Corporation Ltd., Corporate R&D Centre

5. Reactive Adjunct Technology: Innovative Desalting Chemical Program
   Vivek Srinivasan, Dorf Ketal

   Alka Sharma, Engineers India Ltd.

   Ravi Kant Gupta, Engineers India Ltd.

8. Integrated Advanced Maintenance System improves the Reliability
   Tilak V. Patel, Essar Oil Ltd.

9. Improving SRU Reliability
   Dharmendra Pandey, Essar Oil Ltd.

10. Improve Process Design Accuracy Using Uncertainty Analysis
    Soumitro Nagpal, Fluor Daniel

11. IT-OT Integration for Enhancing Environmental Governance: A Case Study of HPCL - MR
    Harsh Kujur and Sukhwinder Singh, Hindustan Petroleum Corporation Ltd., Mumbai Refinery
12. HPCoSoL - Novel process for selective aromatics extraction for enhancing lube oil yields
   
   Srinivasa Rao Ganagalla, HP Green R&D Centre, Hindustan Petroleum Corporation Ltd.

13. Sludge Volume Measurement in Refinery Oil Storage Tanks by Thermography Method
   
   Krishna Sarkar, Hindustan Petroleum Corporation Ltd., Visakh Refinery

14. Reliability Improvement with High TAN Crude: New Methodology for Determination of Total Naphthenic Acid (NAN) and TAN in Crude Oil by using Potentiometric Techniques
   
   Dr Y.S. Jhala, Indian Oil Corporation Ltd., Gujarat Refinery

15. A New Tool for unit Optimization and reliability improvement by Gas Chromatographic Simulated Distillation (HTSIMDIS) for the Determination of the Boiling Point Distributions of Crude Oils
   
   Dr Y.S. Jhala, Indian Oil Corporation Ltd., Gujarat Refinery

16. Energy Savings in GT Atomizing Air
   
   V.K. Srivastava, Indian Oil Corporation Ltd., Haldia Refinery

17. Emerging trends in automation for future refineries
   
   Sudhanshu Shekhar, Indian Oil Corporation Ltd., Paradip Refinery

18. Improved Delayed Coking Process through Use of Additive
   
   Pradeep P.R., Indian Oil Research & Development Centre

19. Economic Analysis of Various Integration Models for Use of Pet Coke
   
   Mangalore Refinery and Petrochemicals Ltd.

20. Energy and Water conservation by Coagulant Change over from Aluminum Sulfate to Poly Aluminum Chloride (PAC) at a Conventional Water Treatment Plant
   
   Manash Kamal Dutta, Numaligarh Refinery Ltd.
### Technical Session – 12

0830– 1030 hrs  
Venue: Central Hall

**Biomass Upgradation**

| Session Chairpersons | Shri L.K. Vijh  
Director (Technical) Designate, EIL  
Dr. S.K. Puri  
CGM, IOCL (R&D) |
|----------------------|--------------------------------------------------|

#### Technical Papers

<table>
<thead>
<tr>
<th>Paper ID</th>
<th>Title</th>
<th>Author(s)</th>
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<tr>
<td>12.1</td>
<td>Production of High Quality Bio-Oil from Biomass Residues and Waste Plastics via Microwave Assisted Co-Pyrolysis and Catalytic Upgradation</td>
<td>Vinu Ravikrishnan, Indian Institute of Technology, Madras</td>
</tr>
<tr>
<td>12.2</td>
<td>Low Temperature Catalytic Gasification of Biomass into High Quality Syngas without Liquid Production</td>
<td>Dr Sateesh Daggupati, Reliance Industries Ltd.</td>
</tr>
<tr>
<td>12.3</td>
<td>Conversion of Mixed Organic Residue Feedstocks to Drop-In Hydrocarbon Fuels via the IH2® Technology</td>
<td>Vikrant Urade, Shell</td>
</tr>
<tr>
<td>12.4</td>
<td>Bio-Oil: An Introduction to the Next Opportunity Feedstock for FCC</td>
<td>Dilip Dharia, Technip</td>
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</tbody>
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**Tea Break**  
1030 – 1045 hrs
Technical Session – 13
0830 – 1030 hrs
Venue: Crystal Hall

Automation

Session Chairman: Shri S.S. Sunderajan
Managing Director, BORL

Technical Papers

13.1 Benefiting from Digital Transformation in Refining Today and Tomorrow
Ron Beck, AspenTech

13.2 Industry 4.0 in Refinery & Petrochemical Industries
Srivardhan Gandhi, Engineers India Ltd.

13.3 Connecting people and processes for smarter production
Danielle Schindlbeck, Honeywell UOP

13.4 Reliable Power Solution for Petchem Complex- Grid Islanding
Satyabrata Mishra, GAIL (India) Ltd.

Tea Break
1030 – 1045 Hrs
Technical Session – 14
1045 – 1245 hrs
Venue: Central Hall

2G Ethanol

Session Chairpersons:
Shri Gandham Sriganesh
ED, HPCL (R&D)
Shri M. Vinaykumar
CGM (I/C), MRPL

Technical Papers

14.1 Axens’ innovative solutions for processing multiple biomass-derived feedstocks
Larissa Perotta, Axens

14.2 Praj’s Integrated 2G Smart Bio-refinery
Vasudeo Joshi, PRAJ Industries

14.3 The Future of Biofuels in India
Shreerang Kardale, Stratas

14.4 BioRefinery from Bamboo Feedstock - A Game Changer
Rupam Kumar Sarmah, Numaligarh Refinery Ltd.
Technical Session – 15
1045 – 1245 hrs
Venue: Crystal Hall

Best Practices and Operational Excellence

Session Chairpersons:
Shri G.S. Singh
Executive Director, Paradip Refinery, IOCL
Shri S.N. Pandey
ED (Optimisation), IOCL-CO

Technical Papers

15.1 Best Practices to Meet the Challenge of Heavier Residue Processing
Opinder K. Bhan, Shell

15.2 Best Practices on Corrosion Mitigation at Sulfolane Extraction Unit
Azmad B.A. Ghani, PETRONAS

15.3 Technological solution for Enhancing safety and productivity of storage tanks and Terminals
Prasad Thomas, Ecotech

15.4 Present, Future Scenario of Petrochemical Sector and role of OPaL
Rajeev Vijay, OPaL

15.5 Chloride Removal Best Practices For Reliable & Profitable Operations
Himanshu Chauhan, Johnson Matthey
Vote of Thanks

1245 – 1300 hrs
Venue: Central Hall

Lunch
1300 – 1400 hrs
Poster Session – 4

Time duration for display - 0830 to 1400 hrs

1. Air Flow Improvement with Latest Technology Whizz Wheel Air Fin Cooler
   Nilesh Jadhao, Bharat Oman Refinery Ltd.

2. Innovative Steps carried out for Confirming Exchanger Leak While Unit in Operation
   S. Navinraj, Bharat Petroleum Corporation Ltd., Kochi Refinery

3. Crude and Vacuum Unit Furnace Skin Temperature Calculation through Online Simulation Using Aspen Online
   Priya Bhagwat, Bharat Petroleum Corporation Ltd., Mumbai Refinery

4. Reliability Improvement of Centrifugal Pumps in Hydrocarbon Service namely LGO, VD, LVGO and HVGO in CDU3 Unit
   Santosh Kale, Bharat Petroleum Corporation Ltd., Mumbai Refinery

5. Steam Saving by Installing Welded Plate Type Heat Exchanger in RMP, ARU, SWS1
   Rahul Pawar, Bharat Petroleum Corporation Ltd., Mumbai Refinery

6. DeBottlenecking of OHCU Product Stripper Performance by Modification of Internals in Product Stripper
   Sitangshu Gupta, Chennai Petroleum Corporation Ltd.

7. New Method for Increasing Significant Gas Oil Yield and Energy Efficiency in Crude Distillation Unit
   Dr Sunil Kumar, CSIR, Indian Institute of Petroleum

8. Energy Improvement Measures In Grassroot CDU VDU Design - A Case Study
   Abhijeet Kumar Ram, Engineers India Ltd.

9. Revamping Diesel Hydrotreating Unit for simultaneous co-processing of Diesel and VGO
   Sachin Shrivasatava, Hindustan Petroleum Corporation Ltd., Mumbai Refinery

10. Energy Efficient Dividing Wall Column process for the production of Chemical Grade Propylene from C3/C4 rich streams of FCCU
    Marial Abhijeet Vijay, HP Green R&D Centre, Hindustan Petroleum Corporation Ltd.
11. **Swift Identification of Leaks Online in High Pressure Exchangers in DHT - A Case Study**  
   G.V. Madhav, Hindustan Petroleum Corporation Ltd., Visakh Refinery

12. **Changing Energy mix**  
   *Muralidhar Behera*, Indian Oil Corporation Ltd., Corporate Optimization

13. **Steam Reduction in ISOM and INDMAX**  
   *Mamoni Basumatary*, Indian Oil Corporation Ltd., Guwahati Refinery

14. **Case Study Regarding Online Identification of Leaking Breech lock Exchanger and Innovative Approach Adopted To Troubleshoot the Leak in DHDT Unit of Paradip Refinery**  
   *Prasanta Adhikari*, Indian Oil Corporation Ltd., Paradip Refinery

15. **Pressure Swing Adsorption Unit – The Preferred Separation Technology in Refineries**  
   *Mangesh Gampawar*, Linde Engineering

16. **Fresh Catalyst vs In-Situ/Ex-Situ Regenerated Catalyst: Process Parameters & Economics in High Severity Hydrocracker**  
   *Ritwik Kumar Hatial*, Mangalore Refinery and Petrochemicals Ltd.

17. **Improving Energy Efficiency in Fluidized Catalytic Cracking Unit – A Practical Experience**  
   *Mannu Jha*, Mangalore Refinery and Petrochemicals Ltd.

18. **Helical Baffle Exchanger- A Shift in Use of Heat Exchanger Technology– A Case Study in Numaligargh Refinery Ltd.**  
   *Rupam Goswami*, Numaligargh Refinery Ltd.

19. **Catalyst and Technology Support – Journey from the Fuel Based Refinery to High Margin Petrochemical Feedstock Refining**  
   *John T. Haley*, Rezel Catalyst Corporation

20. **DHDS Throughput Maximization by Using Heavy Kerosene as Filter Backwash**  
   *Ashish Manne*, Reliance Industries Ltd.
### Sponsors for 22nd RPTM

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- Clariant
- ExxonMobil

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- aspentech
- DORF Ketal
- Quadrimex Chemical
Lingaraja Temple, Bhubaneswar

Puri Jagannath Rath-Yatra

Konark Sun Temple

Centre for High Technology
&
Indian Oil Corporation Ltd.