



**MEPEC 2024**  
MIDDLE EAST PROCESS ENGINEERING  
CONFERENCE & EXHIBITION

organized by

**AIChE**  
The Global Home of Chemical Engineers

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The Definitive Event for Process Engineering in the Middle East

# Digitalizing Process Engineering for a Sustainable Future

MAY 6-8, 2024 | Dhahran Expo, Kingdom of Saudi Arabia

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**Program**

# Day 1 - Monday, 06 May 2024

Kingdom of Saudi Arabia

07:30 - **Registration**

08:00 - 08:30 **VIPs & Guests Arrival**

09:00 - 09:30 **Opening Remarks from 2024 MEPEC Conference Chairman**

📍 Plenary Hall

Master of Ceremony

**Eithne Treanor** CEO, E Treanor Media

Speaker

**Walid Al Naeem** Vice President & Chief Engineer, Aramco

09:30 - 10:00 **Keynote Session: Sustainable future - Key insights into the opportunities for Middle Eastern energy**

📍 Plenary Hall

Highlight Shell's progress toward its sustainability goals, core beliefs, and its revised Energy Transition Strategy. Provide insights and learnings from some of the changes taking place within Shell assets

Facilitator

**Eithne Treanor** CEO, E Treanor Media

Keynote Speaker

**Elise Nowee** President, Shell Catalysts & Technologies

10:00 - 10:30 **Keynote Session: Scaling Technologies for the Future: Our Approach to Collaborative Development and Innovation**

📍 Plenary Hall

How the process technology development landscape has changed over time, including the specific needs today. Need for accelerated development and deployment - how to manage risk and leverage new approaches. Collaboration between Operators and Technology providers. Collaboration between technology companies.

Facilitator

**Eithne Treanor** CEO, E Treanor Media

Keynote Speaker

**Bryan Glover** Chief Growth Officer & CTO, Honeywell

10:30 - 11:00 **Coffee Break & Exhibition Networking**

11:00 - 12:00 **Strategic Panel: Role of Process Excellence in Driving Sustainability**

📍 Plenary Hall

How to leverage the power of process excellence to cope with the upcoming storm of global climate risks.

Moderator

**Dr. Darlene Schuster** Executive Director & CEO, American Institute of Chemical Engineers (AIChE)

Speakers

**Hassan Hussain Al Hosani** Senior Vice President Projects and Technical, ADNOC Refining  
**Ebubekir Koyuncu** Chief Executive Officer, Air Products Qudra  
**Tim McMinn** Vice President Process Engineering & Products, ExxonMobil Technology and Engineering Company (EMTEC)

12:00 - 13:00 **Prayers, Lunch & Exhibition Networking**

13:00 - 14:00 **Technical Session I**

Process Excellence I 📍 Session Room A	New Energies I 📍 Session Room B	Digitalization I 📍 Session Room C	Decarbonization & Energy Transition VII 📍 Session Room D
<p>Moderator <b>Kelepile E. Meleloe</b> Process Engineer, GME Operations Engineering Solutions Department, Aramco</p> <hr/> <p><i>Managing High-Risk Transitions: How Petro Rabigh Partnered with Grace to Deliver Refinery Value and Successfully Manage Technology Change</i></p> <p>Speaker <b>Graeme MacAulay</b> Technical Service Manager, W.R. Grace &amp; Co</p> <hr/> <p><i>Leverage Process Simulation Tool for FCC Catalyst Selection</i></p> <p>Speaker <b>Mohammad Rakib</b> Research Science Specialist, Aramco</p> <hr/> <p><i>Reconfiguration of Naphtha Splitters Using Dividing Wall Column Technology</i></p> <p>Speaker <b>Ratheesh Sureshbabu</b> Senior Manager, Process Technology, Bharat Petroleum Corporation Limited</p>	<p>Moderator <b>Dr. Basim Abussaud</b> Associate Professor, Dept. of Chemical Engineering, King Fahd University of Petroleum &amp; Minerals (KFUPM)</p> <hr/> <p><i>Overcoming Modularisation Challenges for Low Carbon Hydrogen (LCH) Plants</i></p> <p>Speaker <b>Eric Maina</b> Engineering Manager, MCDERMOTT</p> <hr/> <p><i>Ereact™: Production of Chemicals and Sustainable Aviation Fuels Using Electrified Synthesis Gas Generation</i></p> <p>Speakers <b>Aadesh Harale</b>, Aramco <b>Adam Kadhim</b> Product Line Director, Topsoe</p> <hr/> <p><i>Technoeconomic Study on the Thermochemical Recycling of Waste Plastic to Produce Dimethyl Ether</i></p> <p>Speaker <b>Mohammad Awwad</b> Master's Degree Student, KAUST Catalysis Center</p>	<p>Moderator <b>Dr. Steve Hall</b>, Independent Industry Consultant</p> <hr/> <p><i>End-to-End Optimization of Stabilization Columns through Advanced Process Control</i></p> <p>Speaker <b>Alaa Aljassim</b> Process Engineer, Aramco</p> <hr/> <p><i>AI-Enhanced Gasoline Blending System for Refineries</i></p> <p>Speaker <b>Abdul Gani Abdul Jameel</b> Assistant Professor, King Fahd University of Petroleum &amp; Minerals (KFUPM)</p> <hr/> <p><i>AI Approach to Real Manufacturing World: AI Solution for an HCR Plant and AI Hybrid Solution for a TDM Plant</i></p> <p>Speaker <b>Chang-Ha Lee</b> CEO &amp; Professor, DogWoodAI &amp; Yonsei University</p>	<p>Moderator <b>Dr. Nasiru M. Tukur</b> Engineering Consultant, P&amp;CSD, Aramco</p> <hr/> <p><i>A Plant's Sustainability By Utilizing Flare Gas Recovery System</i></p> <p>Speakers <b>Abdulaziz Al Qubali</b> Project Engineer, Aramco <b>Naseem Al Rashedi</b> Supervisor Engineer, Aramco</p> <hr/> <p><i>Incremental Approach to Decarbonization for Steam Crackers</i></p> <p>Speaker <b>Jose De Barros</b> Vice President, Ethylene Business Group, Lummus Technology</p> <hr/> <p><i>Unlocking Sustainable Chemistry: Landfill Gas Utilization for Green Chemical Production</i></p> <p>Speaker <b>Sultan Alsaif</b> Technology &amp; Innovation Director, SIRC Saudi Investment Recycling Company</p>

14:00 - 14:30 **Coffee Break & Exhibition Networking**

14:30 - 15:30 **Technical Session II**

Process Excellence II	Decarbonization & Energy	Digitalization II	Process Excellence XI
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📍 Session Room A	Transition I 📍 Session Room B	📍 Session Room C	📍 Session Room D
<p>Moderator <b>Shakeel Kadri</b> Executive Director &amp; CEO, CCPS</p> <hr/> <p><i>Manage Process Safety By Making an Big Impact on Nuisance Alarm Management</i></p> <p>Speaker <b>Jai Chainani</b> Senior Process Control Engineer, Aramco</p> <hr/> <p><i>Achieving Operational Excellence through SSX</i></p> <p>Speaker <b>Mohammad Albuzaid</b> Organizational Development Consultant, KANZ</p> <hr/> <p><i>Evaluation of the Disposal of a Sour Water Stream to Protect the Integrity of a Flare System in an Oil and Gas Processing Facility</i></p> <p>Speaker <b>Simon Wohnsiedler</b> Lead Process Engineer, Aramco</p>	<p>Moderators <b>Tim McMinn</b> Vice President Process Engineering &amp; Products, ExxonMobil Technology and Engineering Company (EMTEC) <b>Dr. Debalina Sengupta</b> Program Director, Coastal Resilience, Texas Sea Grant, Texas A &amp; M University</p> <hr/> <p><i>Valorizing Biomass Waste into Activated Carbon for a Low Carbon Economy</i></p> <p>Speakers <b>Manar Al Attar</b> Process Engineering Student, International Maritime College of Oman <b>Anfal Al-Shezawi</b> Process Engineer (Student), International Maritime College of Oman</p> <hr/> <p><i>Reduction of CO2 Emissions on the Crude Desalting Systems: A Focus on Fourth-Generation Dual-Frequency Electrostatic Technology</i></p> <p>Speakers <b>John Philip Marshal</b> Process Engineer, SLB <b>Arun Goel</b> Concept Solution Engineering Manager, SLB</p> <hr/> <p><i>Membrane Reactors for Low Carbon Hydrogen Production</i></p> <p>Speaker <b>Alaa Albasry</b> Associate Engineer, Aramco</p>	<p>Moderator <b>Faisal Ahmad Raza</b> Technical Expert - Process, SLB Saudi Arabia</p> <hr/> <p><i>Enhancing Reaction Furnaces Temperature Monitoring through Machine Learning</i></p> <p>Speaker <b>Abdullah Alhumaid</b> Associate Engineer, Aramco</p> <hr/> <p><i>Digitization of Gas-Oil Separation Plant (GOSP) Space Using an Hybrid/AI Model</i></p> <p>Speakers <b>Faisal Ahmad Raza</b> Technical Expert - Process, SLB Saudi Arabia <b>Mohamed Nassar</b> MENA -Tech Sales Process Twin &amp; APM, SLB</p> <hr/> <p><i>Advanced Process Control Tools Toward Plant Optimization.</i></p> <p>Speakers <b>Almuhannad Basuni</b> Advanced Process Control Engineer, Saudi Aramco Mobil Refinery Company Ltd. (SAMREF) <b>Safi M. AlBuhairi</b> Staff Process Control Engineer, Saudi Aramco Mobil Refinery Company Ltd. (SAMREF)</p>	<p>Moderator <b>Dr. Mohamed Bin Shams</b> Chair and Associate Professor, Department of Chemical Engineering, University of Bahrain</p> <hr/> <p><i>Evaluation of the Maturity LEVEL of the Process Safety Culture for OIL and Gas Industry Workers in a Region of the Middle EAST</i></p> <p>Speaker <b>Leonardo Cotrufo</b> Lead Engineer, Aramco</p> <hr/> <p><i>Samref SRU Catalyst Management, Retrofit and Optimization Initiatives during the 2023 T/A</i></p> <p>Speakers <b>Khalid Ghazal</b> Technical Process Engineering (Sulfur &amp; Amine Specialist), Saudi Aramco Mobil Refinery Company Ltd. (SAMREF) <b>Marc Elia</b> Regional Sales Manager, Axens</p> <hr/> <p><i>Consequences and Mitigations to High Sulfur Condenser Inlet Temperature</i></p> <p>Speaker <b>Ziyad Alshahrani</b> Process Engineer, Aramco</p>

15:30 - 16:30 **Technical Session III**

Process Excellence III 📍 Session Room A	Decarbonization & Energy Transition II 📍 Session Room B	Digitalization III 📍 Session Room C	Digitalization VII 📍 Session Room D
Moderator	Moderators	Moderator	Moderator

**Gyorgy Szekely** Assistant Professor in Chemical Engineering, King Abdullah University of Science and Technology (KAUST)

*Chevron Lummus Global's Hydroprocessing Success at Jazan Refinery*

Speaker

**Suresh Kumar Nellore** Process Design Engineer, Chevron Lummus Global (CLG)

*An Optimal Crude Oil Selection in a Refinery with Lube Hydroprocessing Capacity*

Speaker

**Lujayn Alsayooif** Economic Optimization Specialist, Bapco Refining

*Enhancing Safety and Emergency Response in Industrial Processes: Implementation of HF Alky Critical Operating Parameter (COP) for Hazard Mitigation.*

Speaker

**Almuhannad Basuni** Advanced Process Control Engineer, Saudi Aramco Mobil Refinery Company Ltd. (SAMREF)

**Tim McMinn** Vice President Process Engineering & Products, ExxonMobil Technology and Engineering Company (EMTEC)

**Dr. Debalina Sengupta** Program Director, Coastal Resilience, Texas Sea Grant, Texas A & M University

*Blue Hydrogen and Ammonia: Large Scale with Ultra Low Carbon Intensity*

Speaker

**Jesper Poulsen** Licensing Manager, Topsoe

*Performance Evaluation of Membrane Reactor for Low Carbon H2 Production*

Speaker

**Rakesh Kumar** Lead Engineer, Research & Analytical Service Department, Aramco

*Carbon Dioxide Transport with Impurities: Optimal Design and Operation of Pipelines*

Speaker

**Ahmed Alhajaj** Assistant Professor, Khalifa University

**Fawaz Sahan** Senior Engineering Consultant, IIoT Leader and Chairman of Instrumentation Standards, Aramco

*Industrial Internet of Things Architecture Standardization (Benefits, Challenges & Remediations)*

Speaker

**Omar Alabdulwahed Sr.** Industrial Computer Engineer, Aramco

*Physics-Informed Automated Discovery of Kinetic Rate Models*

Speaker

**Miguel Ángel de Carvalho Servia** PhD Candidate, Imperial College London

*Innovative Process Analyzer Technology for Measuring Gas Composition*

Speaker

**Ali Aldossary** Engineering Specialist, Aramco

**Dr. Steve Hall**, Independent Industry Consultant

*Enhancing Ethylene Steam Cracker Equipment Design through AI: Addressing Thermal Stresses and Predicting Remaining Useful Life in Cold Boxes*

Speakers

**Saravana Bhavan Baskaran** Engineering Specialist, Aramco  
**Prashant Kumar** Senior Business System Analyst, Aramco  
**Joud Al Jalaoud** Data Scientist, Aramco

*AI Based Multi-Unit Real Time Optimizer (First Refinery in the Middle East)*

Speaker

**Othman Shamrani**, Aramco (invited)

*Phosphate Injection Prediction Tool*

Speaker

**Abdulsalam Ali** Process Engineer, Aramco

16:30 - 17:00 **Exhibition Inauguration**

17:00 - 17:30 **Inauguration Ceremony**

Master of Ceremony

**Eithne Treanor** CEO, E Treanor Media

Speakers

**Wail A. Al Jaafari** Executive Vice President Technical Services, Aramco

**Dr. Darlene Schuster** Executive Director & CEO, American Institute of Chemical Engineers (AIChE)

17:30 - 18:00 **Break**

18:00 - 18:30 **Gala Dinner Guests Arrival**

18:30 - 20:00 **Gala Dinner**

📍 Emerald Hall



# Day 2 - Tuesday, 07 May 2024

Kingdom of Saudi Arabia

07:30 -	<b>Registration</b>
08:00 - 08:30	<b>VIPs &amp; Guests Arrival</b>
09:00 - 09:20	<b>Keynote Session</b> 📍 Plenary Hall
	Facilitator <b>Eithne Treanor</b> CEO, E Treanor Media
	Keynote Speaker <b>Dr. Khalid Al-Qahtani</b> Senior Vice President, Engineering Services, Aramco
09:20 - 09:40	<b>Keynote Session: A Balancing Act: Current and Future Realities in the Energy Transition Through Process Technologies and Innovation</b> 📍 Plenary Hall
	Facilitator <b>Eithne Treanor</b> CEO, E Treanor Media
	Keynote Speaker <b>Leon de Bruyn</b> President and CEO, Lummus Technology
09:40 - 10:30	<b>Panel Discussion: Bridging the Learning Gap between Academia and Industries</b> 📍 Plenary Hall
	Strategies for closer collaboration, curriculum alignment, and skills development between academia and process engineering industries. Industry leaders and academic experts share insights to prepare students for real-world challenges and enhance industry relevance in academic curricula.
	Moderator <b>Eithne Treanor</b> CEO, E Treanor Media
	Speakers <b>Dr. Mamdouh A. Al Harthi</b> Dean of Chemicals and Materials College, King Fahd University of Petroleum & Minerals (KFUPM) <b>Saad H. Binmatlig</b> President & CEO, Yanbu Aramco Sinopec Refinery Co. (YASREF) <b>Bassam Al Bokhari</b> CEO, EnergyTech <b>Dr. Dave Dixon</b> Professor, South Dakota School of Mines & Technology
10:30 - 11:00	<b>Coffee Break &amp; Exhibition Networking</b>
11:00 - 12:00	<b>Strategic Panel: Accelerating the Energy Transition with Digitalization &amp; Artificial Intelligence</b> 📍 Plenary Hall
	Where are the best use cases in the field, how to connect with the right capabilities/talent, what does success look like, etc?
	Moderator <b>Eithne Treanor</b> CEO, E Treanor Media
	Speakers <b>Bart Boesmans</b> Chief Technology Officer, ACWA Power <b>Norm Gilsdorf</b> CEO, Plant.Digital

**Dr. Kian Mossanen** CIO and SVP, Siemens Energy

**Ahmad Al-Abdrabbuh** Senior Executive Vice President & Board Director, Yokogawa MEA

12:00 - 13:00 **Prayers, Lunch & Exhibition Networking**

13:00 - 14:00 **Technical Session IV**

Process Excellence IV 📍 Session Room A	New Energies II 📍 Session Room B	Digitalization IV 📍 Session Room C	Decarbonization & Energy Transition VIII 📍 Session Room D
<p>Moderator <b>Fadi Mhaini</b> Vice President &amp; Managing Director, MENA, Lummus Technology</p> <hr/> <p><i>Discover Your Plant Potentials</i></p> <p>Speaker <b>Mohamed Abouzid</b> Process Engineer, TASNEE</p> <hr/> <p><i>Zero Pellet Migration to Waste Water</i></p> <p>Speaker <b>Ahmad Al-Ansari</b> Polymer Process Manager, YANPET</p> <hr/> <p><i>Benefits of Switching from Conventional High Temperature to Low Temperature Catalyst in the Tail Gas Treating Unit</i></p> <p>Speaker <b>Khalid Nadhem</b> Senior Process Engineer, Bapco Refining</p>	<p>Moderator <b>Mohammad Mozahar Hossain</b> Professor, Dept. of Chemical Engineering, King Fahd University of Petroleum &amp; Minerals (KFUPM)</p> <hr/> <p><i>Methanol to Jet: A Promising Pathway for Sustainable Aviation Fuel</i></p> <p>Speaker <b>Mohammed Rustom</b> Market Development Director - ME Region - Sustainable Technology Solutions, Honeywell UOP (invited)</p> <hr/> <p><i>Simulation of Bio-Oil Production from Fast Pyrolysis of Dates Waste Biomass in Saudi Arabia to Produce Fuels and Chemicals</i></p> <p>Speaker <b>Ariel Gursida</b> PhD Candidate, King Fahd University of Petroleum &amp; Minerals (KFUPM)</p> <hr/> <p><i>Leveraging Digital Process Twins for Efficient and Flexible Hydrogen Production: From Design to Operation</i></p> <p>Speaker <b>Taseer Seer</b> Senior Applications Engineer, Siemens</p>	<p>Moderator <b>Saifuddin Sheikh</b> Sr. Director – Solution Consulting, AspenTech</p> <hr/> <p><i>Refinery Energy Demand Forecasting through Data Analytics and Machine Learning – a Case Study</i></p> <p>Speakers <b>Omar Naeem</b> Lead Digitalization &amp; Optimization Engineer, Aramco <b>Muhammad Abbas</b> Engineering Specialist, Aramco</p> <hr/> <p><i>Saudi Aramco's Process Digital Twins: Advances &amp; Implementation Strategy</i></p> <p>Speaker <b>Abdullah Alghazal</b> Process Optimization Engineer, Aramco</p> <hr/> <p><i>Refinery Wide Process Simulation Digital Twin (PSDT)</i></p> <p>Speakers <b>Essam Bazuher</b>, Aramco (invited) <b>Majed Aldalbahi</b> Digital Transformation Lead, Aramco</p>	<p>Moderator <b>Dr. Hayat Abdulla Yusuf</b> Assistant Professor and PCAP Program Coordinator, University of Bahrain</p> <hr/> <p><i>Techno-Economic-Environmental Analysis of Hydrogen Production and Transportation Network in Saudi Arabia</i></p> <p>Speaker <b>Fatimah Alhassan</b> Student, King Fahd University of Petroleum &amp; Minerals (KFUPM)</p> <hr/> <p><i>Challenges and Opportunities for Integration of Mixed Plastic Waste and Plastic Derived Oil into Refineries, Crackers and Plastic Sinks</i></p> <p>Speakers <b>Rasha Daadoush</b> Co-Lead - Aramco Sabic Circular Solutions Technology Integration Team, Aramco <b>Salahdine EL Idrissi</b> Engineering Specialist, Aramco</p> <hr/> <p><i>Methane Pyrolysis Integration for Low Carbon Ammonia and Urea Production</i></p> <p>Speaker <b>Muhamad Reda Galih Pangestu</b> Master's Degree Student, King Fahd University of Petroleum &amp; Minerals (KFUPM)</p>

14:00 - 14:30 **Coffee Break & Exhibition Networking**

14:30 - 15:30 **Technical Session V**

Process Excellence V 📍 Session Room A	Decarbonization & Energy Transition III 📍 Session Room B	Digitalization V 📍 Session Room C	Process Excellence XII 📍 Session Room D
<p>Moderator <b>Amer Saleem</b> Advisor SCP JCP, Saudi Chevron Phillips (S-Chem)</p>	<p>Moderator <b>Dr. Gopal Juttu</b> Engineering Consultant, P&amp;CSD, Aramco</p>	<p>Moderator <b>Nihar Gulwadi</b> Regional Head - MENA, Ingenero Inc</p>	<p>Moderator <b>Hashem Al-Hashem</b> Leader, GAS &amp; ARRAZI Project, SABIC</p>
<p><i>Correlation for Condensed Hydrocarbon Fraction Provides Better Water Dew Point Estimation in Column Overhead Systems</i></p>	<p><i>Techno-Economic Analysis of Ammonia for Power Generation Application in the Middle East Region</i></p>	<p><i>Artificial Intelligence Associated Drones Solutions for Waste Disposal Management in the Process Industries</i></p>	<p><i>Improving Air Separation Plant Energy Intensity By Optimizing Its Operation</i></p>
<p>Speakers <b>Fatima Janahi</b> Associate - Senior Process Engineer, Bapco Refining <b>Velmurugan Venkatesan</b> Superintendent RHC and Projects, Bapco Refining</p>	<p>Speaker <b>Mohammed Dayili</b> Project Engineer, Aramco</p>	<p>Speaker <b>Burri Harsha Vardhan Reddy</b> Senior Data Consultant, Artificial Intelligence Global Company (AIGC)</p>	<p>Speaker <b>Mohammed Almutawa</b> Process Engineer, SABIC</p>
<p><i>Impact of Dynamic Flare Analysis on Cost, Safety and Environment</i></p>	<p><i>Experimental Study of Methane Pyrolysis for Hydrogen Production</i></p>	<p><i>Refinery Advisory Hub- a Conceptual Promising Use Case of Large Language Models (LLM)</i></p>	<p><i>Pinch Analysis, a Retrofit Approach for Process and Energy Optimization in Crude Oil Refinery and Downstream Processes. Opportunity for Reduction in Emissions and Opex.</i></p>
<p>Speaker <b>Taseer Seer</b> Senior Applications Engineer, Siemens</p>	<p>Speaker <b>Omar Behar</b> Post Doctoral, King Abdullah University of Science and Technology (KAUST)</p>	<p>Speaker <b>Arun Kumar Thalondan Poyithaya</b>, Aramco</p>	<p>Speaker <b>Syed Abbas Raza</b> Lead Process Engineer, Muscat Engineering Consultancy Ltd.</p>
<p><i>Turnaround Cycle Optimization a Trade-Off between Production Loss and Catalyst Lifetime Abstract</i></p>	<p><i>Energy Optimizing of Amine Unit through Advanced Process Control</i></p>	<p><i>Surrogate Based Mixed Integer Linear Programming Model for Decarbonization of an Integrated Gas-Oil Separation Network</i></p>	<p><i>Improve CDU Corrosion Mitigation Strategy through Cloud-Based Ionic Modelling</i></p>
<p>Speaker <b>Mahmoud Elsayed</b> Lead Process Engineer, SABIC</p>	<p>Speaker <b>Eliot Robin Bruce</b> Lead Process Engineer, Kuwait Energy Basra LLC</p>	<p>Speaker <b>Abdullah Bahamdan</b>, Imperial College London</p>	<p>Speaker <b>Cristian Spica</b> Senior Application Engineer, OLI Systems Inc.</p>

15:30 - 16:30 **Technical Session VI**

Process Excellence VI 📍 Session Room A	Decarbonization & Energy Transition IV 📍 Session Room B	Digitalization VI 📍 Session Room C	Process Excellence XIII 📍 Session Room D
<p>Moderator <b>Claudia Janse van Rensburg</b> Regional Marketing Manager, FCC, EMEA, W.R. Grace &amp; Co</p>	<p>Moderator <b>Dr. Gopal Juttu</b> Engineering Consultant, P&amp;CSD, Aramco</p>	<p>Moderator <b>Dr. Rohit Patwardhan</b> Sr. Engineering Consultant, P&amp;CSD, Aramco</p>	<p>Moderator <b>Faisal Ahmad Raza</b> Technical Expert - Process, SLB Saudi Arabia</p>
	<p><i>Evaluating the Risks and</i></p>	<p><i>Real Time Economic</i></p>	<p><i>Aramco Way of Managing</i></p>



<p><i>System Reliability and Sustainability Improvement in DSG at Ethylene Plant</i></p> <p>Speaker <b>Mohammad Imran Khan</b> Senior Production Engineer - Ethylene Cracker, Saudi Chevron Phillips (S-Chem)</p>	<p><i>Framework for Hydrogen Fuel Road Transportation in Bahrain</i></p> <p>Speaker <b>Bassam Alhamad</b> Professor, University of Bahrain</p>	<p><i>Performance System</i></p> <p>Speakers <b>Shashikant Ramsangar</b> Senior Engineer, Aramco <b>Parandhama Gudapati</b> Lead Business System Analyst, Aramco</p>	<p><i>Advanced Process Control Portfolio</i></p> <p>Speaker <b>Ali Altayeb</b> APC Engineer, Aramco</p>
<p><i>Proactive Detection Methodology of Line Break Condition of the Pipeline. (US Filed Patent: 18/081,455)</i></p> <p>Speaker <b>Mazen Alzahrani</b>, Aramco (invited)</p>	<p><i>Transition to Lower Carbon Fuels</i></p> <p>Speakers <b>Romain Roux</b> Decarbonization and Consulting Vice President, Axens <b>Joseph Ibrahim</b> Managing Director, Axens (invited)</p>	<p><i>Forecasting Process Faults Using Machine Learning in a Reactive Absorption Case Study</i></p> <p>Speaker <b>Yasser Al-Goufily</b> Scientist, SABIC</p>	<p><i>Troubleshooting Vertical Reboiler Performance in a Stabilizer Plant By Leveraging Digital Aspen HYSYS Simulation</i></p> <p>Speaker <b>Majed A. Al-Jeshi</b> Process Engineer, Aramco</p>
<p><i>Fix Combustion Control Malfunction</i></p> <p>Speaker <b>Emad Fallatah</b> Staff Engineer, Advanced Process Control, SABIC ARRAZI</p>	<p><i>Carbon Emissions Management and Decision Support Made Easy By Digital Solution</i></p> <p>Speaker <b>Saifuddin Sheikh</b> Sr. Director – Solution Consulting, AspenTech</p>	<p><i>Anomaly Detection and Time Series Analysis in Steam Methane Reforming System Using Isolation Forest</i></p> <p>Speaker <b>Helmi Qosim</b> Reliability Engineer, PT Pupuk Indonesia (Persero)</p>	<p><i>Optimization of ULSD Vacuum Drying and Thus Reducing Equipment Counts/Sizes; Saving Steam Consumption and Energy Resulting Reducing Carbon Foot Print</i></p> <p>Speakers <b>Rajib Talukder</b> Lead Engineer, Aramco <b>Prabhas Mandal</b> Operations Engineer Specialist, Aramco</p>

16:30 - 18:00 **AICHe Middle East Regional Chem-E-Car Competition®**

# Day 3 - Wednesday, 08 May 2024

Kingdom of Saudi Arabia

- 07:30 -

Registration
- 08:00 - 08:30

VIPs & Guests Arrival
- 09:00 - 09:30

Keynote Session: Commitment to Innovation and Process Excellence since 1949

📍 Plenary Hall

Keynote Speaker

Dr. Ali Abdullah Al-Meshari Senior Vice President, Technology Oversight and Coordination, Aramco
- 09:30 - 10:00

Keynote Session

📍 Plenary Hall

Keynote Speaker

Norinao Sato President and CEO - Saudi & President and CEO - Middle East and Africa, Yokogawa
- 10:00 - 10:30

Coffee Break & Exhibition Networking
- 10:30 - 11:30

Strategic Panel: Hydrocarbon Plant of the Future

📍 Plenary Hall

What does the next generation of refineries/chemical plants look like, what do they produce, where will they be, how will they decarbonize, etc?

Moderator

Shakeel Kadri Executive Director & CEO, CCPS

Speakers

Dr. Rajesh Gattupalli VP - Energy & Sustainability, Solutions (ESS), Honeywell UOP

Menahi Al Utaibi Vice President of Manufacturing, Saudi Aramco Jubail Refinery Company (SASREF)

Mariano Delpozo VP, Engineering & Technical Services, SATORP

Fabien Lundy EMEA Commercial VP, Axens
- 11:30 - 12:30

Prayers, Lunch & Exhibition Networking
- 12:30 - 13:30

Technical Session VII

Process Excellence VII 📍 Session Room A	Decarbonization & Energy Transition V 📍 Session Room B	Process Excellence VIII 📍 Session Room C	New Energies III 📍 Session Room D
<div>Moderator</div> <div>Thabet Abdullah AlGahtani Sr. Manager, MFG Efficiency, Center of Excellence, SABIC</div>	<div>Moderator</div> <div>Dr. Ranjit Kulkarni Global Director – Business Development, Honeywell UOP</div>	<div>Moderator</div> <div>Shakeel Kadri Executive Director &amp; CEO, CCPS</div>	<div>Moderator</div> <div>Dr. Anas F. Alkhani Engineering Specialist, New Energies Engineering Division, Aramco</div>
Management of Organization Change Versus Process Safety. Still Going Wrong.	Using Low Carbon Hydrogen for Olefins Decarbonization: Operational and Economic	Novel Approach for Increasing Gas Production and Enhancing Controllability for Upstream Degassing Tanks Toward Process Excellence	Photocatalytic Hydrogen Generation from Seawater Using High Performance Polymeric Materials

<p>Speaker <b>Hesham Alsubait</b> Engineering Specialist, Aramco</p> <hr/> <p><i>Towards Sustainable Desalination: Optimizing Operational Parameters for Enhanced Efficiency, Reduced Power Consumption, and Minimized CO2 Emissions at Ras Alkhir Desalination Plant</i></p> <hr/> <p>Speaker <b>Ahmad Al Ghamdi</b>, SWCC</p> <hr/> <p><i>Consequence Modeling for Hazardous Scenarios Evaluation</i></p> <hr/> <p>Speaker <b>Omar Marghalani</b> Lead Process Safety Engineer, SABIC</p>	<p><i>Considerations</i></p> <hr/> <p>Speaker <b>Ibrahim Sedie</b> Olefins Process Engineer, SABIC</p> <hr/> <p><i>Process Results and Operational Experience from the Dmx™ Demonstrator Installed at Arcelormittal's Steel Mill at Dunkirk, France</i></p> <hr/> <p>Speaker <b>Peggy Chan</b> Technology Engineer, Axens</p> <hr/> <p><i>TC2C™ - More Carbon-Effective Conversion of Crude Oil into Chemicals</i></p> <hr/> <p>Speakers <b>Derek Jones</b> Principal Technology Specialist, Lummus Technology <b>Mazin Tamimi</b> Lab Scientist, Aramco</p>	<p>Speaker <b>Hussain Abualsaud</b>, Aramco</p> <hr/> <p><i>Design and Operation of Various Gas-Liquid Distributors for Trickle Bed Reactors</i></p> <hr/> <p>Speaker <b>Pradyut Kumar Dhar</b> Senior Engineer - Research and Analytical Services Department, Aramco</p> <hr/> <p><i>Plant Optimization – Begins with Right Concept and Effective Detailed Design</i></p> <hr/> <p>Speaker <b>Saravanavel Muthiah</b> <b>Ponnusamy</b> Process Engineering Manager, SLB</p>	<p>Speaker <b>Ghalya Alabdulla</b> Chemical Engineer, Texas A&amp;M University at Qatar</p> <hr/> <p><i>Potential of Lcaf As a Complementary Tool for Decarbonizing the Aviation Industry</i></p> <hr/> <p>Speaker <b>Dr. Nasiru M. Tukur</b> Engineering Consultant, P&amp;CSD, Aramco</p> <hr/> <p><i>Accelerating Scale up of the Hydrogen Economy with Systems-Level Strategic Evaluation</i></p> <hr/> <p>Speaker <b>Faisal Baksh</b> Solution Consulting, AspenTech</p>
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13:30 - 14:00 **Coffee Break & Exhibition Networking**

14:00 - 15:00 **Technical Session VIII**

Process Excellence IX 📍 Session Room A	Decarbonization & Energy Transition VI 📍 Session Room B	Process Excellence X 📍 Session Room C	Digitalization VIII 📍 Session Room D
<p>Moderator <b>Faisal Ahmad Raza</b> Technical Expert - Process, SLB Saudi Arabia</p> <hr/> <p><i>Best Practices in Design, Operation and Data Interpretation of Fixed Bed Pilot Scale Units to Overcome Scale-up Challenges for Hydroprocessing Catalysts</i></p> <hr/> <p>Speaker <b>Pradyut Kumar Dhar</b> Senior Engineer - Research and Analytical Services Department, Aramco</p> <hr/> <p><i>Tackling the Dual Challenge with Embedded AI</i></p>	<p>Moderator <b>Dr. Ranjit Kulkarni</b> Global Director – Business Development, Honeywell UOP</p> <hr/> <p><i>Low Carbon Ammonia Technology optimization – moving projects forward to achieve Net Zero targets</i></p> <hr/> <p>Speaker <b>Tim Ballai</b> Senior Offering Manager, Honeywell H2 &amp; CO2 Solutions , Honeywell UOP</p> <hr/> <p><i>Use of Spiral Tube Heat Exchangers in Hydroprocessing Units</i></p> <hr/> <p>Speaker <b>Jan Reneteau</b> Managing</p>	<p>Moderator <b>Dr. Mohamed Bin Shams</b> Chair and Associate Professor, Department of Chemical Engineering, University of Bahrain</p> <hr/> <p><i>Techno-Economic Assessment of Crude Oil/Water Emulsion Separation Efficiency</i></p> <hr/> <p>Speaker <b>Mashhor Aljabrine</b> Senior Engineer, Aramco</p> <hr/> <p><i>The Deployment of New Technologies and Initiatives in Samref's Sru</i></p> <hr/> <p>Speaker <b>Khalid Ghazal</b> Technical Process Engineering</p>	<p>Moderator <b>Dr. Rohit Patwardhan</b> Sr. Engineering Consultant, P&amp;CSD, Aramco</p> <hr/> <p><i>Sru Incinerator Fuel Gas Intelligence Optimizer</i></p> <hr/> <p>Speaker <b>Mohammed Aldossary</b> Process Engineer, Aramco</p> <hr/> <p><i>Harnessing Machine Learning for Precise Prediction of Fuel Gas Consumption</i></p> <hr/> <p>Speaker <b>Abdulmohsen Alnafeea</b> Associate Engineer, Aramco</p>

<p>Speaker <b>Nooh Isa Mualem</b> Principal Solution Consultant, AspenTech</p> <hr/> <p><i>Trays in Amine Sweetening Contactor- Process Excellence in Debottlenecking with the Right Approach</i></p> <p>Speaker <b>Mohamed Moinuddin,</b> SLB</p>	<p>Director, NECTIS</p> <hr/> <p><i>Forced Periodic Feed- Composition Switching to Address Methane Dehydroaromatization Catalyst Deactivation Challenge</i></p> <p>Speaker <b>Mamoun Al-Rawashdeh</b> Assistant Professor, Texas A&amp;M University at Qatar</p>	<p>(Sulfur &amp; Amine Specialist), Saudi Aramco Mobil Refinery Company Ltd. (SAMREF) <i>(invited)</i></p> <hr/> <p><i>Enrich Your Sulfur Plant Two Case Studies with High Level Oxygen Enrichment Implemented in Sulfur Recovery Unit Revamps</i></p> <p>Speaker <b>Debopam Chaudhuri</b> Principal Process Specialist, Fluor Daniel India</p>	<p><i>A Data-Driven Framework for Monitoring the Operation of Chemical Plants: Application to Monitor a Bench-Scale Fischer Tropsch Process</i></p> <p>Speaker <b>Nour Basha</b> PhD Student, Texas A &amp; M University</p>
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15:00 - 15:30 **Closing Ceremony**

Produced 25 April 2024

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