



MEPEC

MIDDLE EAST PROCESS ENGINEERING
CONFERENCE & EXHIBITION



**WPC
DOWNSTREAM
CONFERENCE**

Integration, strategy and leadership

TRANSFORMING PROCESS ENGINEERING THROUGH INNOVATION

14 -16 October 2019

Bahrain International Exhibition & Convention Centre

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Parallel Event



LEWAS
Leadership Excellence
for Women Awards & Symposium

Main Supporting Organization



Organized by



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Day 1 - Monday, 14 Oct 2019

Kingdom of Saudi Arabia

09:30 - 09:40 **Opening Remarks**

📍 Palm Hall

09:40 - 10:00 **Keynote Speech**

📍 Palm Hall

Adapting to the Shifting Dynamics of the Global Energy Landscape

10:00 - 10:50 **WPC Downstream, Global Leadership Panel - The Future of Refining and Petrochemicals**

📍 Palm Hall

10:50 - 11:10 **Coffee Break**

📍 Exhibition Hall

11:10 - 12:30 **Technical Sessions- 3**

Debottlenecking: Exploiting Opportunities to Boost Performance 📍 Al Seef	Energy Efficiency and Sustainability 📍 Al Fanar	Digital Transformation 📍 Palm Hall
<i>Optimizing Value Through Converting Residuum Into Clean Fuels or Petrochemicals</i>	<i>Conceptual Design and Energy Analysis of Integrated Gasification and Reforming Technologies for Syngas Production</i>	<i>The Role of Process in the Digital Transformation</i>
<i>Constant Feed Composition and Performance Analysis Increases Pygas Run Length</i>	<i>Toward Optimum Design of Industrial Steam and Power Systems</i>	<i>Process Manufacturing Digital Twin to Achieve Operations Excellence</i>
<i>Modeling and Optimization of Pressure Distillation to Achieve Pharma Grade Tetrahydrofuran Product From Tetrahydrofuran Water Mixture</i>	<i>Improvements in Residue Gasification Increase Feed Flexibility for Virtually Bottomless Refineries</i>	<i>Sustaining Crude Quality Specifications by Leveraging IR 4.0 Solution in Midstream Processing</i>

12:30 - 13:30 **Lunch Break**

📍 Exhibition Hall

13:30 - 14:50 **Technical Sessions- 3**

Revolutionary Technology 📍 Al Seef	Debottlenecking: Exploiting Opportunities to Boost Performance 📍 Al Fanar	Energy Efficiency and Sustainability 📍 Palm Hall
<i>Novel Catalytic Cracking Technologies for Producing More Low Carbon Olefins and Light Aromatics</i>	<i>Mitigation of Hydrate Formation in Module 5 De-Ethanizer Overhead System at Yanbu NGL Fractionation Department</i>	<i>Utility Steam System Energy Optimization Best Practices at Khurais Crude Processing Facilities</i>
		<i>Energy Performance Indices (EPIs) –</i>

<i>Digital Transformation - Using Simulation and Engineering Data with Analytical Sciences to, not only turn Data into Information, but also to Drive the Process</i>	<i>Optimal Process Design Approaches for Diesel Hydrotreater Unit Revamps</i>	<i>Self-Benchmarking for Continual Improvement; a Statistical Approach</i>
<i>Innovations in Catalysts and Processes for Refining Applications</i>	<i>Unlocking Potential of a Resid Hydroprocessing Unit Through Reactor Internals – A Case Study</i>	<i>Energy Efficiency Improvement Initiatives in KNPC MAA Refinery</i>

15:00 - 16:20 **Technical Sessions- 3**

Debottlenecking: Exploiting Opportunities to Boost Performance 📍 Al Seef	Energy Efficiency and Sustainability 📍 Al Fanar	Digital Transformation 📍 Palm Hall
<i>De-Butanizer Tower Bypass Facility</i>	<i>Energy Optimization in Air Separation Units (ASU) Using Advanced Process Control (APC)</i>	<i>SAMREF FCC DMC Controller Revamp</i>
<i>Ethylene Unit Reboiler Fouling Improvements</i>	<i>Solid Slurry Stream Processing and Recovery Using Thin Film Evaporator Technology</i>	<i>Combining the Power of Digital Twins With Cloud-Based Collaboration</i>
<i>An Innovative Approach in Re-energizing Internal Profit Improvement Programs (PIP)</i>	<i>Energy Real-Time Optimizer - Steam & Condensate Balance</i>	<i>Improving Distillate Products Quality Using IR 4.0 Digital Solutions</i>

16:20 - 16:40 **Coffee Break**

📍 Exhibition Hall

16:40 - 17:30 **Opening Ministerial Session**

📍 Palm Hall

17:30 - 18:20 **WPC Downstream, Panel Discussion - Digital Transformation Strategies in Downstream**

📍 Palm Hall

18:20 - 18:30 **Coffee Break**

📍 Exhibition Hall

18:30 - 19:15 **Exhibition Inauguration**

📍 Hall 1

20:00 - **Gala Dinner**

📍 Gulf Hotel

Day 2 - Tuesday, 15 Oct 2019

Kingdom of Saudi Arabia

09:00 - 10:30 **WPC Downstream - Keynote Session**

📍 Palm Hall 1

Shaping the Future for Industrial Gas Customers

Developing Future Innovative Workforce to Sustain Reliable Operational Excellence and Value Creation

Inventing the Future – Chevron’s Commitment to Innovation

Ethical Practice is Foundational to Great Safety

10:30 - 10:40 **Coffee Break**

📍 Exhibition Hall

10:40 - 12:00 **Technical Sessions- 3**

Revolutionary Technology 📍 Al Fanar	Debottlenecking: Exploiting Opportunities to Boost Performance 📍 Al Seef	Energy Efficiency and Sustainability 📍 Palm Hall 2
<i>Simultaneous Production of Benzene and Gasoline From C-6 Heart Cut of FCC Gasoline</i>	<i>Modifying Aging Assets With Advanced Condition Monitoring Solution to Increase Availability, Reliability and Profitability by Optimizing Operation and Reducing Maintenance Costs</i>	<i>Advanced Process Control in Aromatics Plant</i>
<i>Incremental Value From FCC Catalyst Innovation</i>	<i>Optimal Temperature Control of a Batch Tank Equipped With a Steam Heating Coil System</i>	<i>Technology of Refinery Off-Gas Recovery by Cold Oil Absorption</i>
<i>Reactor and Catalyst for the Direct Conversion of Crude Oil to Chemicals</i>	<i>Capacity Stretch Evaluation Study and Implementation for Polyolefin Plant</i>	<i>Identifying Energy Saving Opportunities in Fluid Networks via Hydraulic Modeling Techniques</i>

12:00 - 13:00 **Lunch Break**

📍 Exhibition Hall

13:10 - 14:30 **Technical Sessions- 3**

Digital Transformation 📍 Al Fanar	Debottlenecking: Exploiting Opportunities to Boost Performance 📍 Al Seef	Energy Efficiency and Sustainability 📍 Palm Hall 2

<i>The Digital Refinery: Using Artificial Intelligence to Optimise Utilities Planning</i>	<i>Synergizing De-foamer and Demulsifier Chemicals for Improved Crude Desalting</i>	<i>A Quantitative Approach for Assessing Automatic Tank Overfilling Protection Systems (AOPS) Requirements</i>
<i>Digital Technologies to Support Plant Operations for Profitability</i>	<i>Improving Refinery, Petrochemical and Upstream Margins by Closing the Gaps Between Planning, Scheduling and Advanced Process Control</i>	<i>Advanced Digital Twin Solution for CDU Column With Preheat Train Optimization</i>
<i>Advanced Analytics for Smart Positioner Monitoring and Diagnostics</i>	<i>Optimising Chemical Injection Performance & Reducing Cost</i>	<i>Flare System – Design Optimization Using Reboiler Pinch</i>

14:30 - 15:00 **Coffee Break**
📍 Exhibition Hall

15:00 - 15:40 **WPC Downstream, Special Session -The Permian Success Story and the Resurgence of the U.S. Refining Sector**
📍 Palm Hall 1

15:40 - 17:00 **Technical Sessions- 3**

Revolutionary Technology 📍 Al Fanar	Debottlenecking: Exploiting Opportunities to Boost Performance 📍 Al Seef	Energy Efficiency and Sustainability 📍 Palm Hall 2
<i>Carbon Utilization & Petrochemical Integration: Capturing Value via Residue to Chemicals Projects</i>	<i>Advanced Thermodynamic Model for Predicting Hydrochloride Salt Formation and Corrosivity in Crude Distillation Overheads</i>	<i>The Circular Economy in Saudi Aramco: Unlocking New Potential for Supply Chains</i>
<i>Spray – Drying as an Efficient Method for the Preparation of Catalysts for the Direct Conversion of Crude Oil to Chemicals</i>	<i>SAMREF Sulfur Recovery Unit Retrofits Uplift Performance Sulfur Quality Enhancement</i>	<i>Energy Efficiency Enhancement Project for Methanol Plant - Exceeding the Expectations</i>
<i>K-SAAT – A Break-through Solid Acid Alkylation Technology</i>	<i>Flare Gas Recovery System Challenges</i>	<i>Modeling and Optimization of Microalgae-Based Lead Removal Process Using Response Surface Methodology Articulated With Crow Search Algorithm</i>

17:00 - 17:50 **WPC Downstream, Expert Panel Session - Future Feedstocks, and Refinery Integration**
📍 Palm Hall 1

17:30 - 18:45 **AIChE Regional Chem-e-Car Competition**
📍 Hall 1

Day 3 - Wednesday, 16 Oct 2019

Kingdom of Saudi Arabia

09:00 - 10:30 **Keynote Session**

📍 Palm Hall 1

Creating Value Through Operational Excellence

Modern Refinery Config for R&P Integration

Strategic Imperatives for the Middle East's Refiners

10:40 - 12:00 **Technical Sessions- 3**

Digital Transformation 📍 Al Fanar	Debottlenecking: Exploiting Opportunities to Boost Performance 📍 Al Seef	Energy Efficiency and Sustainability 📍 Palm Hall 2
<i>Depropanizer Column Troubleshooting Using AspenTech ProMV</i>	<i>Upgrading the Hydrogen Plant for New Requirements</i>	<i>Gasification in the Era of Crude to Chemicals (CTC)</i>
<i>Process Analyzers Management System "AMS"</i>	<i>Gasoline Hydrogenation Unit 2nd Stage Reactor Performance Improvement</i>	<i>Optimization of Multi-Effect Evaporators to Minimize Steam Consumption</i>
<i>Predictive Maintenance and Asset Management by Combining High-Fidelity and Data-Driven Models</i>	<i>CDU Revamp: Optimising Cost and Implementation</i>	<i>Opportunities for the Use of First Flush Systems for Water Recovery</i>

12:00 - 13:00 **Lunch Break**

📍 Exhibition Hall

13:00 - 14:20 **Technical Sessions- 3**

Digital Transformation 📍 Al Fanar	Debottlenecking: Exploiting Opportunities to Boost Performance 📍 Al Seef	Energy Efficiency and Sustainability 📍 Palm Hall 2
<i>Digital Transformation Journey "Production Planning, Sustainability & Energy and Process KPIS Dashboards in the Distributed Control System"</i>	<i>Quench System Successful Revamp and Operation Cycle</i>	<i>NGL Fractionation Process Optimization Through Heat Exchanger Load Shifting</i>
<i>High Fidelity Digital Twin of Hydrocracker Units</i>	<i>Enhancing Ethylene Recovery in Binary Refrigeration Systems by Purging H2 and Further Increase Through Expander Re-Compressor System Modifications</i>	<i>Chemical Modeling of Carbon Capture and Storage Capabilities From Combustion Gases</i>
<i>Real-Time Predictive Analytics in</i>	<i>Deployment of Digital Modelling for</i>	<i>Furnace Convection Section Rating for Increased Thermal Efficiency: A</i>

Enhancing Base Layer Control Loops

*Cracking Furnace Online Yield
Optimization*

Techno-Economic Analysis

14:20 - 14:30

Coffee Break

📍 Exhibition Hall

14:30 - 16:00

Panel Discussion - Process Intensification

📍 Palm Hall 1

16:00 - 16:30

Closing Ceremony and Raffle Draw

📍 Palm Hall 1

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