

VIRTUAL  
SEMINAR



**NACE**<sup>®</sup> **Nonmetallics**  
INTERNATIONAL Virtual Seminar

28 September 2020 | 9 a.m. – 2 p.m. AST (GMT+3)

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Composite Solutions Co LTD

## Technical Committee

Dr. Talal Al Nabhani, PDO

Mr. Ramachandrappa Ramanahalli, PDO

Mr. Ihsan Taie, Saudi Aramco

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**Petromaster Ltd. is an Asset Integrity assurance services company registered in UK and headquartered in Al-Khobar, KSA.** We assure the integrity of assets in the Oil & Gas, Refining, Petrochemicals, Chemical, Fertilizers, Power and Water Desalination Industries through development and deployment of state of art technologies, systems, programs, and services.

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## CONFERENCE SCHEDULE

Time	Activity	Speaker
8:45 - 9:00 a.m.	Attendee check-in	
<b>Session 1</b>		
9:00 - 9:15 a.m.	Opening and Welcome Speech	Dr. Gasem Fallatah/ Dr. Talal Nabhani
9:15 - 9:50 a.m.	<b>Keynote Presentation:</b> Challenges and practices in aligning industry standards to achieve technical integrity of non-metallic pipes	Nasser Al Behlani, Materials and Integrity Manager, PDO
9:50 - 10:10 a.m.	Thermoplastic liners in oil and gas industry	Imran Kharusi, Materials and Corrosion Engineer, PDO
10:10 - 10:30 a.m.	Applications, design and qualification of bounded and non-bounded thermoplastic composite pipes	Ramin Moslemian, Principal Specialist and Business Developer for Non-metallics, DNV-GL
10:30 - 10:50 a.m.	A material solution for new frontiers of HPHT applications in oil & gas	Lan de Gans-Li, Evonik Operations GmbH (Smart Materials)
10:50 - 11:10 a.m.	SurFlow™: The future of data transfer in composite structures	Chris Worrall, Consultant, TWI
11:10 - 11:25 a.m.	Q&A	Ramachandrappa Ramanahalli, PDO
11:25 - 11:35 a.m.	Break	
<b>Session 2</b>		
<b><i>Sponsored by Composite Solutions Co Ltd</i></b>		
11:35 - 12:10 p.m.	<b>Keynote Presentation:</b> Evolution of nonmetallic piping in oil and gas industry	Dr. Adel Badghaish, Vice President of Engineering, NOV
12:10 - 12:30 p.m.	Designing high performance polymers to expand operating windows of flexible pipe system	Alexis Geslin, Technical Polymers - Business Development, Arkema
12:30 - 12:50 p.m.	Expanding the service envelope of flexible steel pipe	Andy Ethridge, Director of Technical Services, FlexSteel
12:50 - 1:10 p.m.	The challenges in RTP qualification and quality assurance	Lennert Bakker, Technical Sales Engineer, Soluforce
1:10 - 1:30 p.m.	SC09 nonmetallics standards committee	Michael Yee, Chief Executive Officer, RTConsults
1:30 - 1:45 p.m.	Q&A	Ihsan Taie, Saudi Aramco
1:45 - 1:55 p.m.	Closing Speech	Dr. Gasem Fallatah/ Dr. Talal Nabhani



## KEYNOTE SPEAKERS



### **Nasser Al Behlani**

Materials and Integrity Manager, Petroleum Development Oman

**Presentation: Challenges and practices in aligning industry standards to achieve technical integrity of non-metallic pipes**

Nasser Al Behlani has been leading the Material Integrity Management Group in Petroleum Development Oman since 2005. He is responsible for the full material life cycle from design through technical integrity assurance, and from wells material to gathering & processing facilities and hydrocarbon transmission & loading. He has actively involved in the development, deployment and assessment of nonmetallic materials since the late 80s.

Nasser has vast contributions on many projects by utilizing nonmetallic pipes for exotic applications where these materials become the enablers for strategic capital projects. He has overseen several studies to assess the integrity of nonmetallic pipelines and flowlines that are close to or exceeded their design life and has successfully extended the shelf life for up to 20 years. Part of Nasser's job responsibilities is establishing "fit for purpose" material standards and technical specifications, which is the subject of his presentation today.



### **Dr. Adel Badghaish**

Vice President of Engineering, NOV

**Presentation: Evolution of nonmetallic piping in oil and gas industry**

Dr. Adel Badghaish is the Vice President of Engineering at National Oilwell Varco (NOV). He administers all aspects of the development and enhancement of nonmetallic products to support their customers to overcome operational challenges and enhance their facilities' integrity and reliability.

Dr. Adel holds a PhD in Mechanical Engineering and an MSc. in Engineering Management. He joined NOV in 2018 after 25 years of experience in the oil and gas industry at Saudi Aramco, with an area of expertise that involves deployment strategy, industry standards development, projects construction, operation, maintenance, and inspection of metallic and nonmetallic piping systems.



## OUR SPEAKERS



### **Imran Kharusi**

Materials and Corrosion Engineer,  
Petroleum Development Oman

#### **Presentation: Thermoplastic liners in oil and gas industry**

Imran Kharusi has over 4 years of experience as Materials and Corrosion Engineer in the oil and gas industry.

He is an MSC graduated from Manchester University, experience on the management and the use of various nonmetallic materials including thermoplastics, composites and flexible pipes. Additionally, Imran also has experience on material selection, coatings and failure investigation in upstream facilities in one of the most famous companies on nonmetallic materials, Petroleum Development Oman.



### **Chris Worrall**

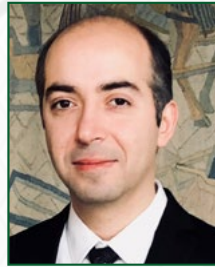
Consultant, TWI

#### **Presentation: SurFlow™: The future of data transfer in composite structures**

Chris Worrall is a Consultant at TWI, responsible for providing composites joining, manufacture, processing and testing services to both members and through

public funded projects. His 30 years of composites expertise covers; composite-metal joining, thermoplastic composite welding, microstructure characterization, mechanical testing of composite materials (including impact, fracture and toughness), finite element analysis (FEA) of composites, design of composite structures, manufacturing technology for composite materials.

Chris holds a PhD in the field of impact of composite sandwich structures in addition to a BSc in metallurgy and materials science, and was a participating member of the Marinetech NorthWest multi-sponsor program on Cost-effective use of Fibre Reinforced Composites Offshore. Furthermore, Chris had significant involvement in developing an innovative material and manufacturing system for a thermoplastic composite for use in the automotive sector, with input from initial material characterization through to patent application. Recently, Chris was part of the SurFlow™ team at TWI that won a Composites UK Innovation award.



### **Ramin Moslemian**

Principal Specialist and  
Business Developer for Non-  
metallics, DNV-GL

#### **Presentation: Applications, design and qualification of bounded and non-bounded thermoplastic composite pipes**

Ramin Moslemian is a Principal Specialist and Business Developer for nonmetallics at DNV GL with more than 10 years of experience across the value chain of high-performance composite material solutions for Renewables, Oil and Gas, Maritime and Hydrogen. He is the Subject Matter Expert at DNV GL for polymers and composites and has been one of the key specialists at DNV GL behind the standards for thermoset and thermoplastic composites such as DNVGL-ST-C501 and DNVGL-ST-F119. He has a PhD degree from the Technical University of Denmark (DTU) in Wind Energy.



### **Lennert Bakker**

Technical Sales Engineer,  
Soluforce

#### **Presentation: The challenges in RTP qualification and quality assurance**

Lennert Bakker graduated as Bachelor of Applied Science in Process Engineering in Leeuwarden, The Netherlands. In the

position of Technical Sales Manager, he advises customers and engineering companies how to engineer a pipeline project using nonmetallic pipe products and find solutions to problems customers encountered in their daily operations.

Besides the role of Technical Sales Manager, Lennert is also Project Manager on behalf of SoluForce for the development of a new range of RTP's in collaboration with TWI and Aramco in the Non-Metallic Innovation Centre (NIC).

In the 13 years of working in the SoluForce business unit, he started in the R&D department, moved to Installation Supervisor and Trainer and grew into the position of Technical Sales Manager and Project Manager.



## OUR SPEAKERS



**Michael Yee**  
Chief Executive Officer,  
RTConsults

**Presentation: SC09 nonmetallics standards committee**

Michael Yee is the founder of RTConsults and NMC Contracting LLC, a nonmetallic engineering and third-party inspection company for the FRP, thermoplastics, refractory, and nonmetallic lining industry. He has over 15 years of experience in the nonmetallic industry and is a NACE Certified Coating Inspector Level III with a background in chemical engineering and construction management. He actively involves in the nonmetallic technical committees at NACE and is the NACE SC09 Chairman for nonmetallics.

Michael is an avid presenter for a number of professional organizations over the years who continues to strive for excellence in providing technical services and support for many leading petrochemical companies in the chlorine, sulfuric acid, and water treatment industry, in addition to the offshore oil industry.



**Andy Ethridge**  
Director of Technical Services,  
FlexSteel

**Presentation: Expanding the service envelope of flexible steel pipe**

Andy Ethridge is Director of Technical Services at FlexSteel and has over 25 years of experience in the design and development of flexible pipe systems. He is a BS in Materials Engineering from the University of Alabama at Birmingham.

Andy is a Past Chair of API SC15, Subcommittee on Fiberglass and Plastic Tubulars and member of the API Committee on Standardization of Oilfield Equipment and Materials (CSOEM). Currently, he is the Chair of the API 15S working group which published API SPEC 15S to establish requirements for spoolable composite pipelines.

He is a NACE member and the past Chair of the NACE Florida Panhandle Chapter. He is also a member of the American Society for Testing and Materials (ASTM) and subcommittees ASTM F17.68 for Energy Piping Systems and F 17.11 Composite Piping Systems.



**Lan de Gans-Li**  
Evonik Operations GmbH  
(Smart Materials)

**Presentation: A material solution for new frontiers of HPHT applications in oil & gas**

Lan de Gans-Li studied mechanical engineering and holds a Master's degree in Polymer and Composite Engineering from the Catholic University of Leuven (Belgium). During her PhD, she worked on lithium ion batteries, within the framework of a joint project of the Max Planck Institute for Polymer Research in Mainz (Germany) and the Institute for Polymer Processing of the RWTH University of Aachen. She obtained her PhD in 2004.

After a postdoctoral stay at the technical university Eindhoven, working on ultra-high strength polyolefin fibers, she started a career in automotive industry. She held various management positions and was responsible for polymer compound development, setting-up of laboratories and qualification of materials for new applications.

In 2017, Lan joined Evonik Operations (previously Resource Efficiency GmbH). She is responsible for application technology of Evonik's high performance polymers in the oil & gas industry. Focused topics include polymer properties under service condition and lifetime, as well as materials qualification.



**Alexis Geslin**  
Technical Polymers - Business  
Development, Arkema

**Presentation: Designing high performance polymers to expand operating windows of flexible pipe systems**

Alexis Geslin is the Research and Development Manager for oil & gas activities at Arkema, in charge of the development of new technical polymer solutions to answer key market issues such as corrosion or cost. He holds a Master of Science in Materials Science from Ecole Polytechnique, France.