

Potential JIP Participants

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**Date:** 2017-03-25  
**Our reference:** DNV Doc. No:1-127NW40-OAPUS211-3

### **JIP on Connected Pipelines-Phase I**

#### **Sub: Intent to Join JIP on Connected Pipelines**

DNV GL greatly appreciates your interest in the JIP on Connected Pipelines. Through your support, we intend to develop a guideline document for connected pipeline systems. Details of the JIP plan are enclosed alongside this letter.

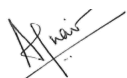
A formal proposal with the JIP terms and conditions shall follow for your review and agreement. It is understood that review of the terms and conditions may possibly take 2-3 months or more. Since the plan is to have the 1<sup>st</sup> phase completed in a quick turnaround time frame (2017), we are looking forward to initiating the JIP based on your Intent to Join. With this intent we shall be at a position to conduct the launch meeting, gather supplier data and perform pre-work required for the subsequent workshops in the JIP. The launch meeting shall be conducted once we receive the minimum required participants (ref. enclosure) with the intent to join.

The intent to Join is requested in good faith, and do not limit your participation in case the terms and conditions are not agreeable. We shall have the supplier workshops and subsequent activities in the JIP only after the minimum required agreements are in place.

If you intend to join the JIP, I would appreciate if you would kindly fill the details on the next page and revert to me.

Once again, we greatly appreciate your support and look forward to working with you.

Sincerely  
for Det Norske Veritas (U.S.A.), Inc.

  
(ARAVIND NAIR)

03-31-2017

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**INTENT TO JOIN JIP: CONNECTED PIPELINES**

Based on the information provided to us in the letter (DNV Doc. No:1-127NW40-OAPUS211-3) from Mr. Aravind Nair, Proposed Project Manager – Connected Pipelines JIP, we hereby would like to confirm our intent to Join the JIP.

**We understand that our signature below indicates our intent to join the JIP in good faith. This is to facilitate the JIP initiation while the review of terms and conditions are in progress. We also understand that this does not bind us in any way to participate in the event the terms and conditions are not mutually agreeable.**

<b><u>Signature</u></b>	<b><u>DATE:</u></b>	
<b><u>Name (Authorized Representative)</u></b>		
<b><u>COMPANY (Legal Name)</u></b>		
<b><u>Contact Information</u></b>	<b><u>Email</u></b>	
	<b><u>Phone:</u></b>	

## Mechanically Connected Pipelines- Joint Industry Project (JIP)

Technology Qualification using DNV-RP-A203 is proposed to improve practice, and thereby reducing cost related to mechanical connector application in deep-water developments. Results of the JIP shall be used for the development of a guideline document for connected pipeline systems.

### Benefits:

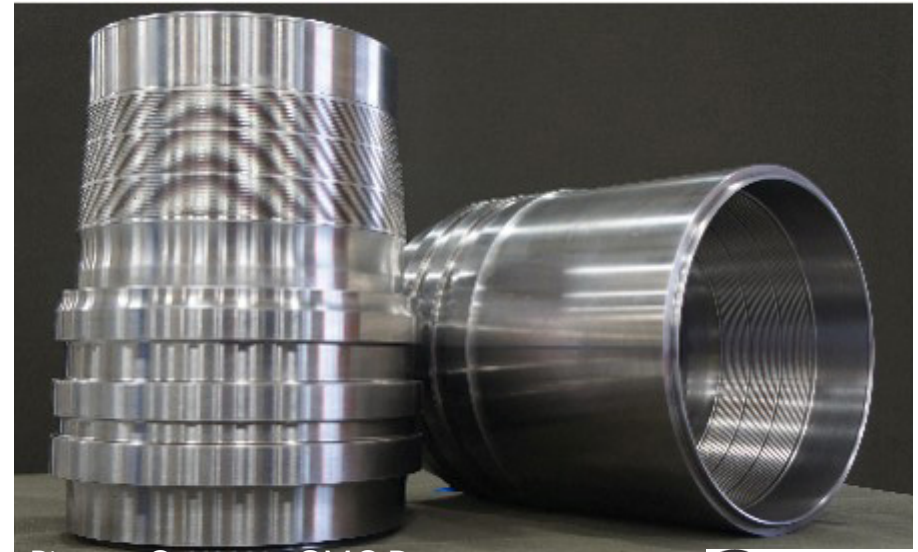
- Reduced offshore installation time
- Installation with smaller installation vessels
- Standardize connected pipeline systems
- On-shore pre-fabricated joints for better project control
- Increased fatigue resistant joints
- Recoverable, re-usable and repairable systems
- Simplified installation for large diameter clad lined and nonclad pipelines

### Project Attributes:

- Evaluate multiple supplier/ manufacturing technologies, generate Qualification Basis and prepare Supplier Technology Status Report.
- Conduct Technology Qualification program
- JIP Final Deliverable: Connected Pipeline Guideline

### Contact

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Picture Courtesy GMC Deepwater



### Value Delivered:

- Reduce CAPEX expenditure with lower contract lead times, faster installation and the possibility for utilizing locally sourced contractors with smaller installation vessels
- Evaluate multiple supplier technologies and their status for deep water development needs
- Faster Project schedule with standardized on-shore pre-fabricated joints
- Increase feasibility of large export line projects with simplified installation of large diameter pipelines; feasibility of deep-water projects with faster installation while maximizing the available weather window

# JIP ROAD MAP

## Phase-I

**Overall Scope:** Phase I may be treated as a design competition where suppliers are invited to participate

- Workshops- connector suppliers/ manufacturers, EPCI firms and operators
- Provide status, history, application data & any existing qualification data/ FMECA (suppliers/ manufacturers)
- Determine preliminary criteria for evaluation (DNV GL with operators and EPCI firms)
- Develop & issue Qualification Basis (DNV GL with operator approval)
- Invite suppliers to submit Design and documentation supporting the Qualification Basis
- DNV GL to perform screening study & develop Supplier Technology Status Report.

**Deliverable:**

- Qualification Basis (for all participants)
- Supplier Technology Status Report (to operators/ EPCI & respective Suppliers only)
- Selected Supplier for JIP Phase II (based on operator Steering Committee input)

**Fee:**

- \$35,000 USD per operator
- \$15,000 USD per supplier/ manufacturers/ EPCI firm

**Minimum 3 operators & 4 Suppliers considered**

## Subsequent Phases

### Phase II

- Activity according to TQ Plan developed in Phase I for selected suppliers.

### Phase III:

- Update acceptance criteria- design through installation; Develop JIP deliverable- Connected Pipeline Guideline

