##### E-mail Communication from TWI

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| **From:** | Stuart Bond stuart.bond@twi.co.uk  |
| **Date:** | 25 January 2012 |
| **Reference:** | 21782-Jan-2012 |

**Re: Polymer lined steel pipe for hydrocarbon production duties**

**State-of-the-Art review of Industry concerns and perceptions, and Workshop 9 March 2012**

**Background**

TWI has received interest from its Industrial Members’ regarding alternative product forms to substitute for corrosion resistant alloy (CRA) solid or clad line pipe, where inhibition is not viable for the use of carbon steel line pipe for flowlines, risers and pipelines. Two meetings have been held with representatives from industry and the consensus is that there is need to ascertain the system integrity which can be derived from polymer lined carbon steel line pipe encompassing issues of materials degradation (metallic and polymer), occluded environment generation in the annular region between the liner and the steel pipe, interaction of materials of construction and long term integrity of end termination designs for the polymer and metallic components. Additional issues such as utilisation in dynamic risers and inspection / integrity assurance have also been tabled.

However, there is a need to prioritise the primary issues restricting uptake of this technology for hydrocarbon production despite confidence in water injection duties and data on polymer permeation performance. Hence this questionnaire seeks to collate such concerns to allow review.

**Report and Workshop**

TWI was requested to gather more information from engineering and operating companies to allow review in a State‑of‑the‑Art (SotA) report and to facilitate a workshop to disseminate and discuss the findings.

**The workshop will be held in Houston on Friday 9 March 2012 at TWI North America’s office, with participation at the meeting in person or via web/teleconference from TWI UK or your own office. Please return the short questionnaire to** **stuart.bond@twi.co.uk** **by 31 January 2012 for further details of the meeting.**

**Questionnaire**

Please answer the following short series of questions by completion of this document in WORD or OpenOffice formats. Feel free to expand your answers where you so desire and to append additional information you are willing to share with TWI. There is room at the end of the questions to add comments to augment your feedback.

If you require your response to be retained as confidential then please indicate this and TWI will use the information in the SotA but not ascribe the replies to the company providing the information.

We very much hope you can spare few minutes to complete this form and return by e-mail, and look forward to your participation.

Other TWI personnel involved in this programme include Shiladitya Paul and Aurelie Tolton.

Thank you for your valuable input.

**Stuart Bond**

**Section Manager FER & Technology Manager - Corrosion**

**TWI, Cambridge UK.**

**stuart.bond@twi.co.uk**

1. **Please check this box if you require your information to be reported without reference to your company name** [ ]
2. **Your details**
	1. Name:Click here to enter text.
	2. Position: Click here to enter text.
	3. Company: Click here to enter text.
	4. Address: Click here to enter text.
	5. E-mail address: Click here to enter text.
	6. Telephone number: Click here to enter text.
	7. Company business in the context of polymer lined steel pipe (Manufacturer of polymer, steel producer, pipe mill, supplier of lined pipelining service, pipeline/riser design engineering, installation contractor, operator etc.): Click here to enter text.
3. **Have you used polymer lined pipe in water injection or similar non-hydrocarbon duty?** Choose an item.
	1. If Yes:
		1. Provide description of application(s), installation date, design life, new construction/retrofit, pipe diameter and length of pipeline, polymer used, comments upon success or issues arising in operation.

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| *Enter information here (box will expand)*: Click here to enter text. |

* 1. If No:
		1. Please advise why you have not used this product form to date?

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| *Enter information here (box will expand)*: Click here to enter text. |

* 1. Do you expect to use (more) polymer lined pipe in non-hydrocarbon duty in future? Choose an item. Reasons for your response:

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| *Enter information here (box will expand)*: Click here to enter text. |

1. **Have you used polymer lined pipe in hydrocarbon production duty**? Choose an item.
	1. If Yes:
		1. Provide description of application(s), installation date, design life, service duty/operating conditions, new construction/retrofit, pipe diameter and length of pipeline, polymer used, comments upon success or issues arising in operation.

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| *Enter information here (box will expand)*: Click here to enter text. |

* 1. If No:
		1. Please advise why you have not used this product form to date?

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| *Enter information here (box will expand)*: Click here to enter text. |

* 1. Do you expect to use (more) polymer lined pipe in hydrocarbon duty in future? Choose an item. Reasons for your response:

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| *Enter information here (box will expand)*: Click here to enter text. |

1. **What concerns do you / your colleagues have regarding the use of polymer lined steel pipe for flowlines and pipelines in hydrocarbon production duties?**

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| *Enter information here (box will expand)*: Click here to enter text. |

1. **What information or data do you require in order to gain confidence in the specification and application of polymer lined pipe, for example in:**
	1. **Sweet corrosive production environments?**
	2. **Mild sour corrosive production environments?**
	3. **Highly sour corrosive production environments?**
	4. **For dynamic riser applications?**

Please describe your concerns and prioritise your response with the most critical aspects listed first, below.

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1. Please advise any additional comments in the context of polymer lined steel pipe and whether your organisation would have potential interest in supporting work to address the concerns of industry elicited via this SotA via a JIP?

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| *Enter information here (box will expand)*: Click here to enter text. |

Many thanks for your considered response and support of this initiative.

Kind regards

Stuart Bond

Please return to stuart.bond@twi.co.uk