

STATEMENT OF FEASIBILITY

No. 2017-185191

This is to state that the technology designated

Mobile Automated Spiral Interlocking Pipe (MASIP)

as detailed in /1/ has been assessed with basis in DNV-RP-A203 /2/ for its designated use. DNV GL considers the technology feasible as defined in /3/ and therefore suited for further development and qualification.

Owner: **Sustainable Pipeline Systems Ltd**

Description: Pipeline technology for both gas transmission or distribution pipe and crude oil or gas production flowlines or gathering lines using mobile automated spiral interlocking pipe (MASIP). The technology is offered for use as an alternate to conventional onshore high pressure pipelines in the 8 – 36inch diameter range. MASIP offers a mobile continuous in-field automated construction methodology.

Advantageous benefits include:

- light weight
- flexible pipeline, reduced jointing
- logistics flexibility
- construction cost reduction
- build / schedule efficiencies
- reduced environmental impact, low carbon footprint
- increased resistance to third party interference
- improved quality control

as further detailed in /1/.

Designated use: Flexible pipeline in onshore applications for both gas transmission or distribution pipe and crude oil or gas production flowlines or gathering lines, suitable for all geographical regions and terrains, as detailed in /1/.

Main uncertainties: Subsequent qualification activities should address the MASIP (metallic armor component and polymer liner) in pressure containment including long term performance, interaction between metallic armor and polymer liner as detailed in /4/; application and long term adhesion of external accredited coating system as detailed in /4/; Fitting and connection long term pressure containment, end load resistance and sealing /4/.

Involvement: DNV GL has been involved in the qualification process in accordance with /2/ and has facilitated and documented the technology qualification process as explained in /3/.

Qualification and verification: Technology qualification can proceed with a threat assessment to identify the causes and mechanisms of failure to be considered. Following a complete technology qualification in accordance with /2/, products can be verified per validated requirements arising from the technology qualification.

Reference documents:

- /1/ Technology Qualification Basis, Technology Qualification of Mobile Automated Spiral Interlocking Pipe (MASIP), DNV GL Report PP-185191, Rev0.1, 2017-06-01.
- /2/ DNV-RP-A203, Technology Qualification, July 2013
- /3/ DNVGL-SE-0160, Technology qualification management and verification, 2015
- /4/ Technology Qualification Assessment, Technology Qualification of Mobile Automated Spiral Interlocking Pipe (MASIP), DNV GL Report PP-185191, Rev0.1, 2017-06-01.

The technology qualification is in progress and new sources of uncertainty might be discovered as qualification progresses. Attention is drawn to the iterative nature of the technology qualification process /2/.

UK, 01.06.2017
for DNV GL Oil & Gas,



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