

REVISION OF THE POF RECOMMENDED PRACTICE FOR ILI FIELD VERIFICATION

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Abstract

The Pipeline Operators Forum (POF) maintains a number of standards and recommended practices related to ILI.

The recommended practice for ILI Field Verification (POF 310) was first published in 2012 and concentrated on location of pipe joints in the field and verification measurements of metal loss features.

During 2022, a POF working group, with input from member operating companies and ILI & NDT contractors, has begun a revision of the document to reflect advances in the ILI & NDT industry, including recommendations for verification of a wider range of anomaly types (e.g. cracks) and high level guidance for verification of ILI findings in subsea pipelines.

The paper summarises the proposed revisions to the content of the POF recommended practice and invites stakeholders to contribute relevant materials.

Introduction

The Pipeline Operators Forum (POF) is an association of 29 pipeline operating companies with the ultimate purpose of improving the quality of pipeline integrity management at every level, hence protecting people, the environment and operational integrity of pipelines globally.

One of POF's objectives is "support of the international pipeline community with technical guidelines and specifications for pipeline inspection equipment, inspection procedures, inspection guidelines and any relevant information that may contribute to pipeline inspection and/or integrity".

In line with this objective, POF maintains several standards, recommended practices and technical reports that are freely available to the pipeline industry via www.pipelineoperators.org/documents.

In 2021, POF introduced a document numbering scheme and republished all POF documents in a consistent format, for example the well-known *Specifications and requirements for in-line inspection of pipelines* is now referenced as POF 100 [1], and the previously titled *Guidance on Field Verification Procedures for In-Line Inspection (December 2012)* is now a recommended practice with document number POF 310 [2].

As part of this exercise, it was identified that POF 310 had not been updated for 10 years and is in need of revision, and subsequently a working group of POF member companies was established to manage the revision process.

Scope of POF 310 *Field verification procedures for in-line inspection*

The existing POF guidance document for ILI field verification, published in 2012 and reissued in 2021 with the new title POF 310 *Field verification procedures for in-line inspection*, addresses the field activities involved in safely locating, exposing, and inspecting anomalies reported by ILI, including basic descriptions of applicable field non-destructive examination (NDE) methods.

The NDE results produced by the procedures described in POF 310 can subsequently be used for verification of overall ILI system performance, as described in e.g. API 1163 [3], but this is beyond the scope of the POF document.

The guidance included in the 2012 version covers only a small number of anomaly types, namely metal loss and cracks, and is implicitly applicable to buried onshore pipelines only.

Areas requiring update

The POF working group tasked with updating POF 310 identified a number of general areas requiring update.

Some of these were editorial, for example:

- Inclusion of standard POF document sections (i.e. Foreword, Introduction, Definitions & abbreviations);
- Reordering of technical content for better flow;
- Use of appropriate verbal forms for a recommended practice (i.e. “should” not “shall”);
- Consistency of terminology with POF 100 (e.g. “anomaly” not “defect”);
- Removal of the included *ILI field verification feedback form* from Appendix A to become a separate document (numbered as POF 311 [4]).

Areas identified as requiring technical update included:

- Use of GPS for initial location of dig sites;
- Inclusion of the full range of anomaly types specified in the latest (2021) version of POF 100 (e.g. dents, wrinkles, hard spots);
- Review of applicable NDE methods and inclusion of new technology;
- Addition of high-level recommendations for subsea feature verification.

Update process

The working group reviewed the typical guidance provided by ILI contractors to their clients, by studying a number of ILI final reports contributed by POF members. From this, it was evident both that some ILI contractor material had been used in the preparation of the 2012 POF guidance, and that this guidance has been further developed and adapted by individual ILI contractors in their standard report templates. Based on these observations, a small number of ILI contractors were approached individually for more detailed discussion of the available guidance. This yielded more detailed information on lessons learned from previous experience of locating ILI features in the field, and on up-to-date NDE methods for the range of potential anomalies reported by ILI.

Current status & next steps

A first draft update of the document was reviewed by WG members in the summer of 2022. This initial review identified that some technical gaps remained in the draft document, including typical performance of NDE methods, and NDE methods applicable to subsea pipelines.

POF plans to approach NDE providers for further information before producing an updated draft document around January/February 2023. A number of POF member companies are also members of PRCI and have identified potential areas of information exchange with PRCI projects related to NDE.

Following internal review of the final draft, POF will circulate the document for comments from a wider group of ILI contractors before planned publication in 3Q 2023.

Any NDE/ILI contractors, or operators who are not members of POF, who wish to contribute or comment are welcome to contact POF via the website www.pipelineoperators.org or by email to documents@pipelineoperators.org.

Conclusion

The Pipeline Operators Forum maintains a number of industry standards/recommended practices including POF 310 Field verification procedures for ILI.

This document is currently being updated to include a wider range of ILI anomaly types with associated recommendations for field NDE.

Interested parties are invited to contact POF with comments, suggestions and input.

References

- [1] POF 100, Specifications and requirements for in-line inspection of pipelines, November 2021
- [2] POF 310, Field verification procedures for in-line inspection, November 2021
- [3] API Std 1163, In-line Inspection Systems Qualification, Third Edition, September 2021
- [4] POF 311, ILI field verification feedback form, November 2021

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