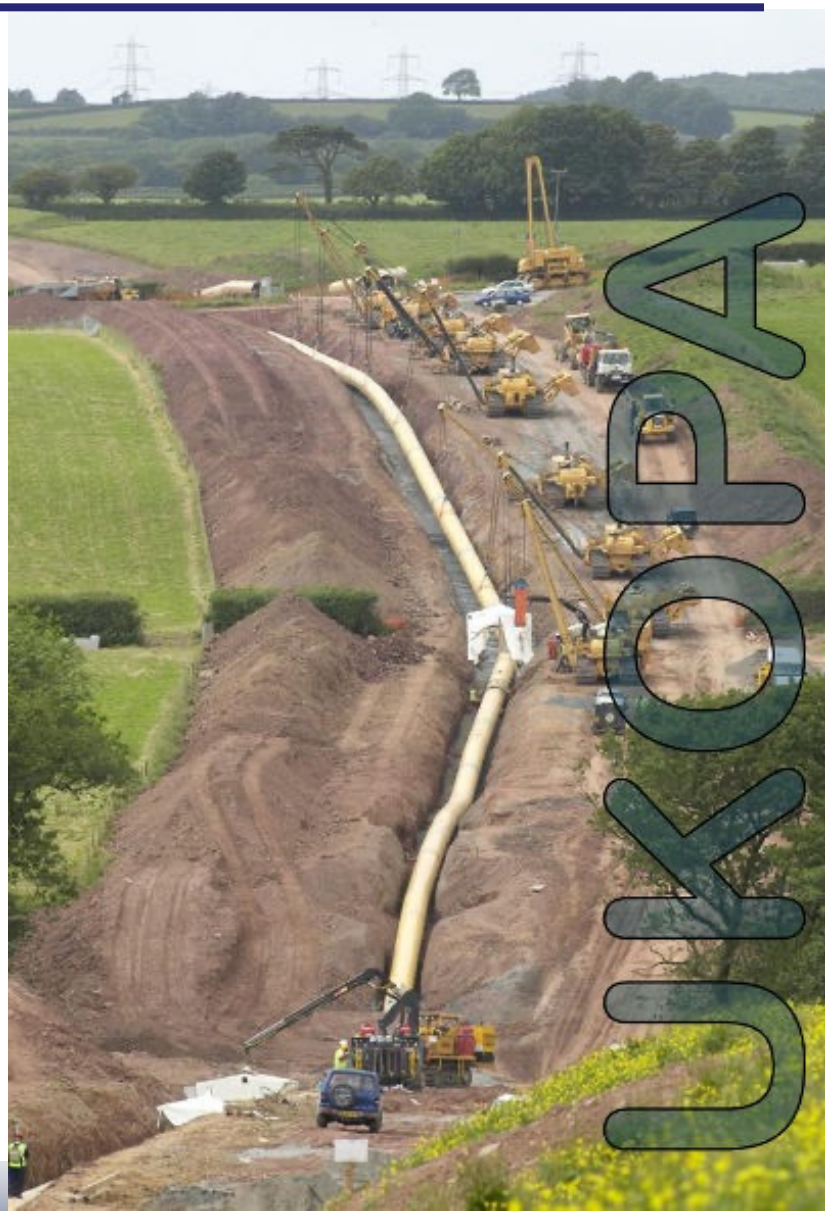
UKOPA

United Kingdom Onshore Pipeline Operators' Association

PIWG October 2023 Members' Meeting Update

Tim Rudd



2023 Document Updates

GPG 001: Managing Pipelines with Reduced Depth of Cover
- With governance/publishing

GPG 005: Managing pipeline sleeves
- PIE updating with data from Sleeve project; plan for final review in Jan 2024

GPG 006: Impact Protection Slabs
- With governance/publishing

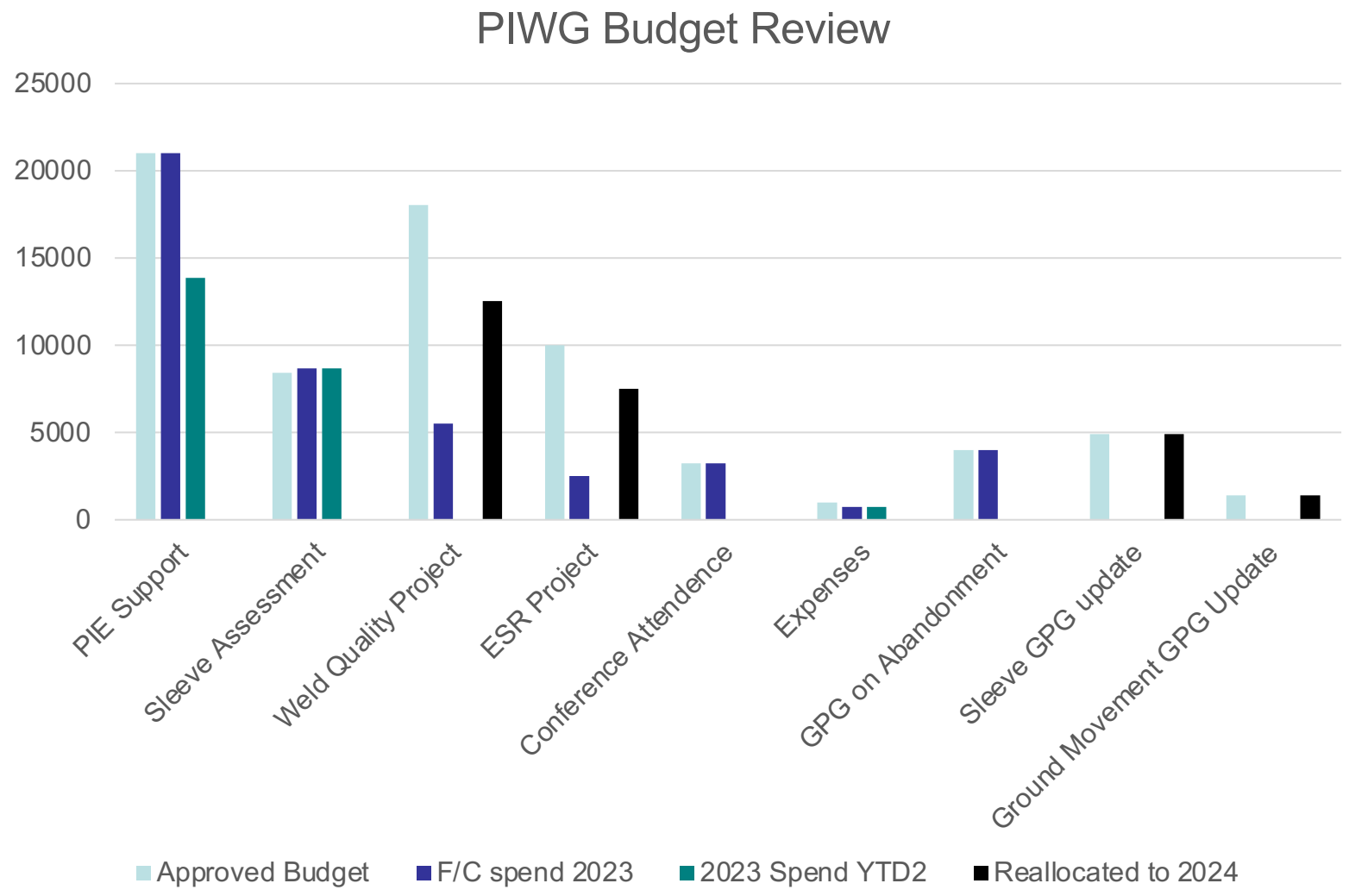
GPG 017: Line Walking Surveys
- Chris Rogerson/PIE conducted review and update vs. current standards.
- Document ready to be pushed to governance for issue Q4 2023

GPG 033: Epoxy Shell Repairs guidance
- Some movement in last PIWG – changing focus to address Wet layup composites

GPG 038: Decommissioning & Abandonment of Pipelines
- With governance/publishing

Weld Quality TBN's
- Weld quality report updated, and separate TBN's issued for ATCO, Swansea and Strathclyde research

2023 Budget Review



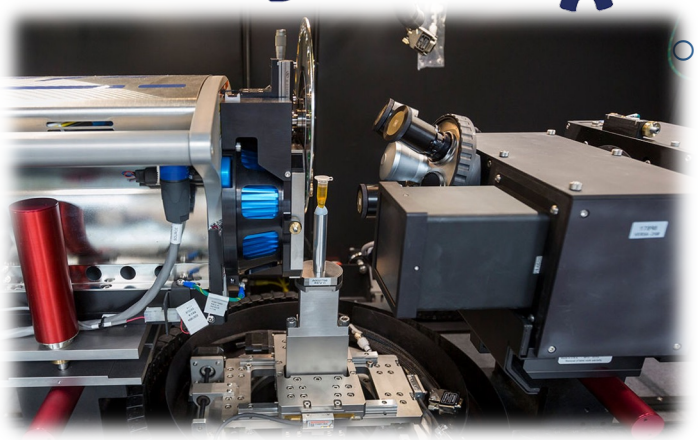
Current projects underway

- Pig Trap inspection
  - Remember – Pig Traps (and other vessels) can fall within scope of PSSR's (Pressure Systems Safety Regulations)
  - Subgroup working to discuss standards/policies and potential to develop a WSE template that can be used as a starting point for PSSR compliance
  - Engineering review may be required to confirm design basis/suitability of pig traps if original documentation no longer present
  - Aim is to issue as a TBN
- Sleeve Project
  - Completed initial and secondary analysis on ILI data received from operators
    - Further statistical analysis by PII focused on quantification of differential corrosion rates inside/outside sleeves, and broke down further by coating age and type.
  - Key findings:
    - No statistically significant difference evident in corrosion rates beneath or near sleeves vs. bulk pipe
    - Full presentation with all the detail available on PIWG Members Area (thanks to Chris Lyons)

Further projects

- ESR Project
  - Gained new momentum in September PIWG meeting
  - Project aims to make users “Intelligent Customers” – i.e. how do you know you are getting a suitable design?
    - What standards should you design/assess to?
    - What information does designer need to produce a suitable design?
    - What should you specify (life in years, cycles etc.)
  - Members have agreed to provide historical ESR design packs to allow “back calculation” of factors to prove that the scoping tool works
    - If you have ESR design packs you are willing to share please send to me/Nikki
  - Methodology also being revised to work with wet lay-up composites
- Loading assessment tool
  - New project for 2024
  - Project scope is to help evaluate pipeline loadings at crossings etc.
  - Are load protection slabs needed? (vs. impact protection)
  - In some circumstances, is temporary (non-invasive) protection safer?

Weld Quality Project



- Weld quality documents updated and published to members area
  - **UKOPA_RPT_003** Weld Quality Project Discussion of Findings & Recommendations Issue 2
  - **UKOPA RPT_23_004** Weld Quality Investigation of Pre 1972 Girth Welds Carried Out by ATCO Rev A
  - **UKOPA RPT_23_005** Swansea University Fatigue Study for the UKOPA Weld Quality Project Rev A
  - **UKOPA_RPT_23_0006** University of Strathclyde Fatigue Study for the UKOPA Weld Quality Project Rev A
- Mechanical properties of vintage Seam Welds
  - MSc Student (1-2 yrs) started this month at Swansea
  - £4500 (+ VAT) approx. cost
  - Student is a Materials Science & Engineering graduate
- Fatigue performance of pre-stressed vintage Girth Welds
  - Have gained Board approval for a PhD Student (3-4 yrs)
    - Project scope too complex for a Masters student
    - Total project spend circa £19k/yr for 3 years
  - Plan to recruit in Q4 2023 for a Q1 2024 intake
  - Fatigue testing of pre-stressed samples will help evaluate behaviour in dents

Field repairs – safety moment

2024 Document workplan

GPG 005: Managing Pipeline Sleeves
- Carryover from 2023 project
- PIE updates and PIWG review Q1, aim to publish Q2

GPG 019: Seismic Screening Assessment
- To be passed to external consultants for external review (minor changes/update only anticipated)
- Aim for consultant review Q1 2024, PIWG review Q2 2024, publishing Q3 2024

GPG 020: Managing pipelines subject to ground movement
- Review and discussion process will start in Q1 2024
- PIE to assist in re-draft of document

GPG 033: Epoxy Shell Repairs guidance
- Continuation from 2023
- Aim to finalise scope in Q1 2024, review Q2/Q3 and publish Q4 2024.

GPG 036: Verification of features identified by ILI
- Review and discussion process will start in Q1 2024

GPG XXX: Managing river erosion
- Subgroup met in Sept 2023 to develop high-level scope. PIWG reminder – please share any documents with Nikki/Chris by end of October
- Plan is for document framework to be developed Q4 2023, initial PIWG review and drafting Q1/Q2 2024, final review and publishing Q3/Q4

GPG YYY: Managing Piling near Pipelines
- New document to set out suggestions on safe vibration limits and distances for when piling around pipelines
- Scoping to start Q1 2024

New GPG on Piling

- What limits does your industry use?
  - E.g. 25 mm/s?
  - Do you specify a minimum distance?
  - Do you require continuous monitoring?
  - Does this vary with product?
  - Does this vary with diameter?
- Where do these numbers come from?
- Are they conservative enough?

- New GPG aimed to represent Good Practise in monitoring and assessing potential impact on piling works
- Looking to set out calculation methodology or approved minimum distances that operators can rely on
- Requesting existing company standards/docs for evaluation prior to drafting
  - Thanks to those from PIWG who have already agreed to provide these
- Scope still to be finalised, but may work with IWG on managing infringement risks
  - Minimum safe distances to avoid physical strikes etc.

How are we addressing output of 2022 Members' meeting?

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- Sleeves – **GPG 005 update and Sleeve corrosion project**
  - Expansion of current project
  - Degredation of grouting on existing sleeves
  - How to determine life of a sleeve?
- Temporary repairs (composites) – **UKOPA GPG 034, Temporary Life of Repairs**
  - How to support use in gas networks, life of repairs, life of resin in repair shells, welded repairs
- Loading Assessment – **New tool to be developed in 2024**
  - Tool to calculate whether slabbing needed, protection levels etc. Potentially guidance on ground loading, boreholes, washout etc.
- Piling/Vibration calculations – **New GPG development underway**
  - Guidance on different piling/drilling methods, safe distances, vibration limits, how to calculate PPV, best practise in monitoring
- H2 Defects – **Update to Fault database to allow tracking of pipelines in H_2 service**
  - Weld quality – are allowable defects in H2 service different to current service?
- Piping vibration
  - Smallbore piping in AGI's – how to manage vibration
- Inspection guidance
  - How to assess a defect, what qualifications to use, process to follow etc.