



## About AWES

The AWES Joint Industry Project brings together oil companies, completion suppliers and equipment suppliers with the aim of improving the reliability of advanced well equipment through the development of published industry standards and recommended practices for the qualification of the relevant completions equipment.

### New Suggested Work Group – Protector clamps (PC)

Protector clamps are used widely in the oil and gas industry, mitigating the risk of damage to other products such as TEC, TEF, control lines and flatpacks. However there is a lack of official standards for protector clamps. Standards for testing and best practice for using protector clamps (selection, installation and through life management) has the potential to mitigate major incidents and influence NPT.

Current test methods vary between suppliers and selection of the most appropriate protector clamp & tubing combination can be complex, particularly when the casing drift is tight.

A possible programme of work leading to the development of a Control Line Protector Clamp RP is outlined below:

- Standard Testing methods including pull testing and loading tests
  - *Harsh environment and cyclic loading*
  - *Qualification testing (e.g. axial / lateral / rotational load, vibration etc..)*
  - *QC and FAT*
- Best practices for installation
  - *Pre-job (e.g. pre-job reviews, pre-job testing, etc...)*
  - *During installation (clearance between casing and protector, installation verification, location etc...)*
  - *Post-installation (intervention considerations etc...)*
- Protector material type as per its working environment
  - *Material selection:*
    - *Cast steel versus pressed steel clamps*
    - *All cast clamps versus cast clamps with steel bands/straps*
  - *Dimensions and tolerances*
- Required Design Features
  - *Who should be “Responsible, Accountable, Consulted, and Informed” for clamps*
  - *Risk assessments for deployment and life of well (incl. interventions)*
  - *Considerations for subsurface equipment*
  - *Consideration when running (in or out) cable*