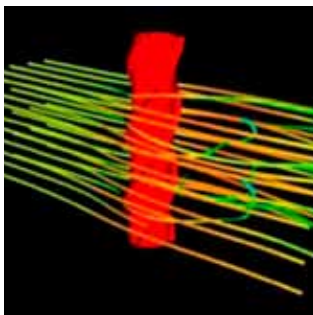


Span assessment and monitoring

Capability statement



Left: Modelling of VIV suppression
Below: Jee's span monitoring kit



Spans are unsupported lengths of pipe which under certain environmental conditions can fail by fatigue due to vortex-induced vibrations (VIV). Analysis can be carried out to determine the likely lifespan and optimum remediation method.

Skills and hardware

Experienced engineers at Jee use both finite element analysis (FEA) and computational fluid dynamics (CFD) to investigate, predict, design and solve potential and existing spanning issues.

The most effective and accurate analysis of motion of a span and subsequent damage can be achieved by actually monitoring motion and environmental conditions over a period of time. Jee can supply, fit and analyse a unique monitoring system to do this, our span monitoring kit.

Our capabilities include:

- ✦ FE static and dynamic stress analysis under self weight, thermal and environmental loading
- ✦ CFD analysis of flow around pipes, structures and components to determine hydrodynamic loadings
- ✦ Assessment of VIV (inline and cross-flow) accounting for actual as-constructed environmental and operational conditions
- ✦ Fatigue analysis based on DNV RP F105
- ✦ Technically backed-up advice on acceptable span parameters for the planned route
- ✦ Assessment to prevent snagging of trawl gear during fishing interaction
- ✦ Remedial expertise to prevent spans and reduce their effects:
 - ✦ Design of VIV suppression systems: helical strakes, shrouds and fairings
 - ✦ Support design
 - ✦ Excavation advice to remove features
- ✦ Monitoring hardware to measure vibration and environmental conditions

Proven track record

- ✦ Chevron 2008 – Span monitoring and assessment, Gulf of Thailand
- ✦ NAM 2008 – Support design and stability for spans and riser span fatigue assessment
- ✦ CUEL 2007 – Span monitoring, Gulf of Thailand
- ✦ CNR 2007 – Span assessment and remediation, Baobab, West Africa

I've been delighted with Jee's speedy response and technical excellence in regards to the urgent assistance we required on a buoyant free-span issue.

Keith Tucker, Verification and Integrity Engineer, Perenco UK

List of related services

- ✦ Specifications for inspection and remedial works
- ✦ Pipeline integrity management systems (PIMS)
- ✦ Management of intelligent pigging programmes
- ✦ Defect assessment
- ✦ Fitness for purpose
- ✦ Corrosion health checks
- ✦ Troubleshooting - dents, stuck pigs
- ✦ Decommissioning

For more information

To find out how Jee can help manage and implement your engineering projects, please call us on +44 (0) 1732 371 371 or email info@jee.co.uk.



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