



## Client / project history

- ALSTEC
- Areva JSPM
- AVIO
- BAE Land Systems
- Baker Hughes
- BP
- Camozzi
- Carbon Trust
- Carlsberg
- Centro Ricerche Fiat
- Ceres Power
- Chevron
- Claverham
- EADS
- ESA
- European Commission
- Freudenberg
- Geodynamics
- Goodrich Actuation Systems
- Infineum
- James Walker
- John Crane
- KW
- Liebherr Aerospace
- Lloyds Register
- KM Rustfri
- MCS Kenny
- Pall Europe
- Petronas
- StatoilHydro
- Sundyne HMD/Kontro Pumps
- Tekniker
- Trelleborg
- Total
- TRW Automotive
- Wood Group

## Committee membership

- BSI MCE/11 Fluid Seals and Their Housings
- BFPA Seals committee
- International Fluid Sealing conference committee

# Kevin Monaghan

BEng (Hons), CEng MIMechE

## Senior Project Engineer

### Technical Experience

- In house expert on materials, fluid structure interaction and stress analysis providing consultancy, project management and research in these areas, including the provision of computational modelling.
- Numerous consultancy projects on sealing technology, containment, emissions and leakage control involving multiple industry sectors including oil and gas, aerospace and renewable energy.
- Mechanical failure analysis on equipment such as wellheads, export gas compressors, Christmas tree structures, flexible risers, sub-surface safety valves, blowout preventers, and pumps all operating under HP/HT conditions.
- Development of nanocomposite coatings for wear resistance and mitigation of failure with application to pipelines, landing gear sliding tubes, valve seats and stems and bearing surfaces.
- Computational material modelling of frictional instabilities in sliding contact systems and nonlinear sliding wear in high pressure systems.
- Thermomechanical finite element analysis which includes multiple contact systems with application to fuel cell and nuclear equipment.

### Management and commercial experience

- Project manager of EC funded SME project entitled AquaGen. This involves the design, analysis and prototype development of a novel wave energy power take off device.
- Project manager of BHR contribution and a work package leader within an EC funded FP7 project entitled AddNano involving 15 contractors. This involves the development of a bespoke engine test rig to develop new engine and transmission lubricants incorporating nanoscale extreme pressure (EP) antiwear additives.
- Project manager of BHR contribution to an EC funded FP6 project entitled Kristal working with 22 contractors. This involved the modelling and testing of oil lubricated reciprocating seals for aircraft landing gear aiming to reduce friction, wear and leakage and improve tribological performance characteristics of the shock absorbers.
- Project managed a joint industry project (JIP) on the modelling of decompression in elastomeric systems (MODES). This project developed numerical design tools for the prediction of Rapid gas decompression (RGD) in high pressure dry gas environments for selection of polymer components involving major oil and gas operators.

### Publications

- Over 10 publications in the areas of sealing technology, computational material modelling and emissions and leakage control

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