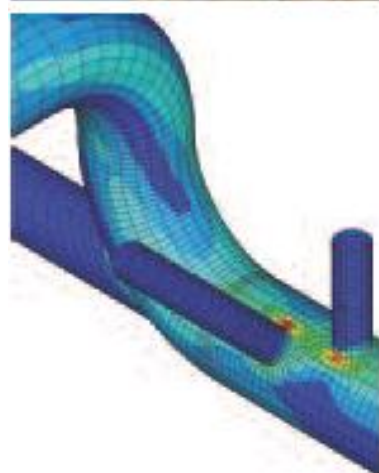
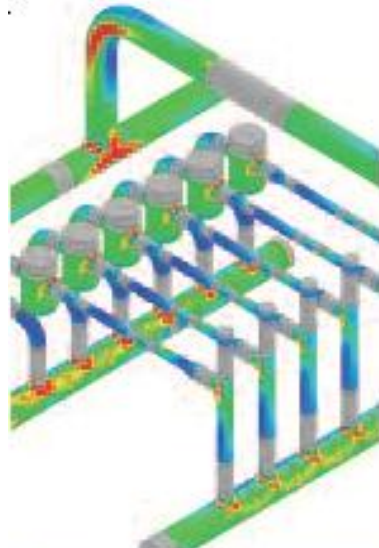


**THE WORLD'S LEADING PLANT
INTEGRITY SPECIALISTS IN
PETROLEUM, CHEMICAL
& PROCESS INDUSTRIES**

The logo for IDEAS engineering features a stylized 'i' with a yellow and orange circular graphic above it. The word 'IDEAS' is in large, bold, white capital letters, and 'engineering' is in smaller, white lowercase letters below it.

IDEAS
engineering



iDEAS engineering

I.D.E.A.S. reputation in industry, hard-won over 25 years, has been gained through providing pro-active and reactive responsive solutions to customers' new and ageing plant integrity issues. Our enviable track record is thanks to our experienced team of multi-disciplinary engineers successfully offering Plant Integrity and Inspection Support, Integrity Monitoring, Design Verification and Problem-Solving Services on the wide range of petroleum, chemical and process plants.

NOBODY OFFERS BETTER INTEGRITY SERVICES

Using industry accepted field Measurement, Modelling, Analysis and Assessment methods, including Stress, FEA, Flow, CFD, Vibration and Fitness for Service technology, we offer a broad range of support services that can be used to 'design out' problems, validate current plant integrity, predict future life and solve problems not just measure or analyse them. We use our *Integri-Tech™* technology to determine Plant Integrity status, find the root cause, offer solutions to system problems or monitor them to mitigate risk. Our service range extends to ensuring your plant integrity is quantified, likelihood of failure is low, and it is Fit For Service. Only I.D.E.A.S. offer services from 'Concept' through to 'End of Plant Life'.

NOBODY OFFERS BETTER DESIGN VERIFICATION

Nothing beats getting it right the first time. We can handle the complex design issues affecting integrity in plant designs that others can't, including multi-variable, combined and interacting loadings. Vibration, Transient fluid flow, Ship loading/Motion, Cavitation, Corrosion, Erosion, Fatigue and Crack Growth are everyday problems to us. Simply put, we work with your team to provide verified design solutions before they become integrity problems during commissioning or operation.

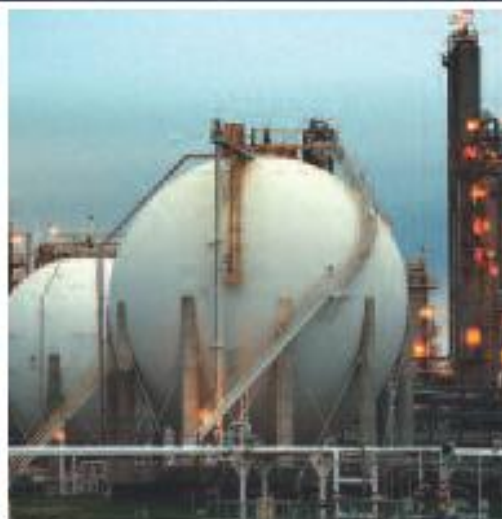
NOTHING MONITORS PLANT LIKE INTEGRI-TECH™

When integrity problems occur on existing plant threatening safety and operation, then rapidly identifying the problem, quantifying it and implementing a robust quantified solution are key to restoring plant integrity and getting it back on-line with confidence and assurance. I.D.E.A.S. make field measurements and feed the results direct to their *Integri-Tech™* technology to analyse and quantify the Integrity to determine the true effects of these threats. It's *Integri-Tech™*'s ability to integrate field measurement and complex analysis that provide I.D.E.A.S. with their unique Integrity service to restoring and maintaining plant integrity. Our *Integri-Tech™* services provide true Remote Monitoring of your plant to ensure risk mitigation and this puts you in control of Integrity.

NOBODY SUPPORTS YOU BETTER

I.D.E.A.S. Services from 'Concept' through to 'End of Plant Life'
include, Design Verification, Plant Integrity Quantification,
Measurements & Compliance, Problem Solving and Remote
Integrity Monitoring

- ☐ Integrity Design Verification & Specialist Services
- ☐ Fitness for Service Assessment, **FFS**
- ☐ Ageing Plant Integrity and Remaining Life Assessments, **RLA**
- ☐ Plant Life Extension **PLE** & Life Cycle Analysis, **LCA**
- ☐ Plant Integrity Assessment/Compliance through Monitoring, Health Checks and Audits
- ☐ Plant Integrity/Health & Fitness for Service (FFS) Monitoring, **PHM**
- ☐ Structural Integrity/Health Monitoring, **SHM**
- ☐ API 579 & BS 7910 **FFS Level** 1, 2 and 3 Assessments
- ☐ Vibration & Fatigue Monitoring & **FFS**
- ☐ Piping and Small Bore Branch (**SBB**) Vibration & Fatigue Life Assessment
- ☐ Corrosion & Erosion **FFS** & **RLA** Assessment on Piping, Risers, Tanks and Pressure Vessels
- ☐ Plant Integrity Problem Solving
- ☐ Damage, Defect, Fracture, Fatigue, Fitness for Service & Life Assessments
- ☐ Vibration and Modal Analysis
- ☐ Vibration, Temperature, Static & Dynamic Flow Analysis and Measurements/Monitoring
- ☐ Flow, Transients, Slugging, Pulsation Measurements & Monitoring & **FFS**
- ☐ Gas Compression System Acoustic Pulsation, Flow and Vibration Monitoring
- ☐ Column, Tank & Sphere Assessments, Monitoring & Automated **FFS**
- ☐ Ground Settlement Effects Monitoring & Automated **FFS** on Tanks & Pipelines
- ☐ Storage Tank and Pipeline **FFS** Assessments and Monitoring
- ☐ Displacement, Load, Strain, Motion Monitoring
- ☐ Spring Hanger Weighing & Monitoring
- ☐ High Energy Piping **FFS** Assessments and Monitoring
- ☐ Fire & Explosion Assessment & Damage Assessments
- ☐ Stress, Finite Element, Structural Analysis and Integrity Assessments
- ☐ Design & Operational Compliance Assessments of Piping, Pressure Vessels and structures
- ☐ Gas Compression Systems API 618 and Design/Analysis assessments
- ☐ Engineering Stress, Flow & Vibration Analysis
- ☐ Heat transfer and Thermal Assessments
- ☐ Computational Fluid Dynamics - Steady state and Transient Flow Analysis
- ☐ Acoustic Pulsation Studies and Analysis
- ☐ Acoustic Fatigue Studies and Analysis



iDEAS engineering

Maintaining Plant Integrity through Design, Inspection, Fitness for Service & Monitoring

More Quantification

More Confidence

More Speed

More Support

=

More Value + Less Risk

11 Marine Crescent, Glasgow G51 1HD United Kingdom

Tel: +44 (0) 141 429 7727 Fax: +44 (0) 141 429 3269

Email: sales@ideas-eng.com

www.ideas-eng.com

www.integri-tech.com



International Design Engineering and Services Limited

