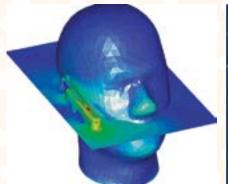
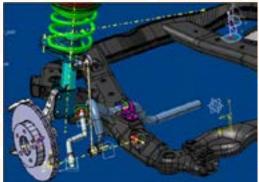


Contact Us For **FFS LEVEL 3**Training

We are a full-service provider of engineering and manufacturing simulation solutions with multiple industry experience and strong technical expertise in FEA, CFD, FSI, EMAG. We provide consulting services related to fitness-for-service (FFS), code-based design and compliance, enablement through customized training, simulation workflow development, and automation.

We also help with FEA and CFD software licensing and training needs.







# FFS & DBA Assessments, Root Cause Analysis

Need help with complex FEA & CFD analysis for assets? VIAS has significant experience in FFS assessment using industry codes & standards and regulations such as API 579-1/ASME FFS-1, BS7910, ASME BPVC Sec. VIII helping minimize unwarranted repairs or replacements of in-service equipment with observed defects but keeping life and environment safe. We also help with code-based design of new/retrofit equipment and replacements using numerical analysis tools. Our simulation, materials, corrosion, and data analytics experts also provide RCA and Expert Witness services.

# **Non-Linear FEA**

Need for a more realistic nonlinear analysis? We have a strong expertise in static/dynamic analysis of a component or an assembly with nonlinear material behavior, large deformation, and constraints between different components along with their contact interactions for various loading scenarios. Our experts use industry leading software solutions (i.e. Abaqus) with multi-scale and multi-physics analyses.

# Computational Fluid Dynamics (Multiphysics)

Worried about noise, vibration, erosion or thermal mixing in your piping system? Our experienced CFD team can solve your engineering challenges using our simulation experience in Flow Induced Acoustic, Flow/ Vortex Induced Vibration (VIV), Fluid Structure Interaction (FSI), Conjugate Heat Transfer (CHT), Multiphase flows, rheology and reacting flows with combustion.

### **EMAG**

Electromagnetic simulation can be used in several areas in oil & gas industries, including i) wired pipe for drill telemetry, ii) RFID for pipe warehouse inventory, downhole pipe accountability, or automated torque curves at coupler, iii) EMI/EMC analysis for EM shielding effects at drill site, and iv) steel casing inspection using Magnetic Flux Leakage.

### **Fatigue and Fracture:**

Fatigue and fracture are the most onerous forces against the life of an asset. Sometimes we need to take a damage tolerant approach or safe-life approach based on severity and consequence of failure and the cost or ability for a repair / replacement. We provide complete suite of analysis capabilities for life assessment – with and without modeling crack geometry, performing low or high cycle fatigue assessment, vibration fatigue, mesh-free methods (xFEM), code compliance. Our materials and corrosion experts complement our analysis experts for these assessments.

### **Reliability and Optimization:**

Worried about not capturing randomness that may affect design assumptions or performance goals or would like to achieve optimized solution? With our experts with strong research backgrounds in these areas and with powerful software tools (i.e. Isight, TOSCA) can help you with innovative and accurate solutions for your problem of

interest. We also employ Machine Learning / Data Analytics tools in this domain.

### **Workflow Automation**

Bored of performing repeated tasks manually or worried about large scale deployment of complicated workflow? They are meant to be done by machines! We can help you increase productivity by automating repeated workflows (i.e. Scripting, isight). We help with seamless integration of process workflows involving various software apps using either generic software codes or tool like Isight.

# **Software Sales & Support**

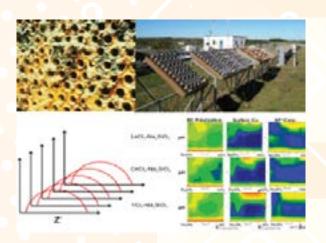
We are a Platinum Value Added Reseller of Dassault Systemes (DS) – covering all software solutions – SIMULIA, CATIA, DELMIA, ENOVIA and the 3DEXPERIENCE platform. SIMULIA includes Abaqus (FEA), fe-safe (Fatigue), TOSCA (Non-parametric Optimization), Isight (DoE & Optimization) CST/Opera (EM), XFLOW/POWERFLOW (CFD), SIMPACK (MBS), Wave6 (Vibro-Acoustics), and others. We help companies with choosing the right software suites and enable them for success through training and support. With our team of ex-SIMULIA employees with strong customer support experience a help is just a call away.

#### **Training**

Know what to do but need to learn how? Our extensive training and enablement program is there to help. We provide online and onsite trainings for topics ranging from software focus (Introductory – i.e. Introduction to Abaqus, Advanced – i.e. Modeling Fracture and Damage) to Industry oriented (i.e. FFS Level 3). If you can not find the course your are looking for, we will be glad to partner with you to develop one just for your specific needs.

# **Materials, Testing & Corrosion**

Who doesn't like a one stop shop? With industry experts in materials, testing, and corrosion VIAS can solve your problem irrespective of the tools and expertise that it may require. We create solutions based on our client's pain point



and not provide an answer that fits selected tools or expertise.

# **R&D**, Regulatory Compliance

We have years of experience in supporting companies with R&D initiatives, regulatory compliance (BSEE, NRC), joint industry programs. We always look for collaboration and partnership for development of new technologies or products. If you are interested in having VIAS as an advanced analysis partner for SBIR/STTR let's discuss. We are for sure can help you succeed.

## **Advanced Engineering Analysis Support**

Looking for any particular analysis or trying to solve a specific industry problem? We most likely can help you with our subject matter experts and our software solutions champions. Composites, Elastomers, & Rubbers, Structural Analysis, Geomechanics/Geotechnics, Biomechanics, Advanced Materials, Additive Manufacturing and much more – areas we can help and much more. So let's have a conversation.

#### **PLM Implementation**

We provide a full range of support and services around various PLM solutions such as strategic value assessment and planning for success, solution architecture, project management, implementation, data migrations, integrations and customizations. As a result of our dedication to detail and sensitivity to customers' requirements we are confident that we have one of the most satisfied customer bases in the business. We achieve our goals by seeking a certain balance--it works just as hard at keeping its customers happy as it does ensure that it is on the leading edge in technological



# Contact us for Software Sales, Consulting, Training & PLM Implementation Services

