



KINECTRICS

Stress-Free Structural Integrity

Cost-effective Engineering Solutions



Kinectrics offers **advanced engineering consultancy** specialising in providing cost-effective solutions to structural integrity problems.



With our expertise in design, analysis and assessment, we make structural integrity easy and reliable, delivering solutions that are tailored to our clients' challenges and goals.

We have a long history of combined experience in structural integrity; our diverse team of engineers share our trusted knowledge and collaborate with clients across various sectors.

Our philosophy is to go beyond expectations to ensure that we solve our client's toughest problems.

Delivering Sustainable and Lasting Results



Understanding client needs

- Clear Specification
- Customer Driven Focus
- Understanding Context
- Engaging Stakeholders



Own the problem

- Establishing Efficient Solutions
- Open and Honest Responses
- Working in Partnership
- Shared Goals



Quality

- Graded Approach to QA
- Risk Based Assessment
- Relevant Engineer Selection



Delivery

- Flexible Approach
- Programme Planning
- Responsive to Change
- Work Management System

Our Solutions

We have expert capabilities and capacity to define, as well as complete multifaceted tasks and projects to an extremely high standard.

Analysis

- 3D CAD modelling
- Production of CAD drawings
- Plant layout & pipework design/analysis
- Structural design/stress analysis
- Finite element analysis (FEA)
- Fracture mechanics
- Peer review
- Seismic, blast, impact and dynamic analysis
- Linear and nonlinear finite element stress analysis using ANSYS/AB- AQUUS
- Steady state and transient thermal analysis
- Preparation of design and engineering work packs
- Provision of design, draughting and CAD drawing services

Assessment

- Design code compliance assessment
- Surveys of plant, facilities and services
- Radiation
- Expert knowledge applied on forces that act on certain structures such as seismic assessment
- Risk assessment
- FE modelling and analysis of complex structure/components under complex cyclic loading conditions
- Seismic safety case definition and seismic assessment of structures, systems and components
- Piping design code assessment

Degradation

- Corrosion
- Computational Fluid Dynamics (CFD)
- Creep-fatigue crack growth and creep rupture assessment
- Creep-fatigue initiation assessment
- Fatigue
- Fatigue and creep-fatigue assessment at high temperature using R5 code
- Fracture mechanics

Design

- Civil engineering
- Conceptual and detailed design
- Computer aided design and analysis
- Project management – advising on factors that may affect the project costs
- Design code assessment
- Design support from initial concept through to construction
- Seismic, impact and blast design
- Lifecycle management
- Steady state and transient review as part of plant life cycle management



Let's work together!

Contact us to learn more about our solutions to structural integrity problems.



www.kinectrics.com

Head Office

800 Kipling Ave. Unit 2
Toronto, ON M8Z 5G5
Canada
416-207-6000

Canada

393 University Ave. 4th Floor
Toronto, ON M5G 1E6

USA

2135 City Gate Lane, Suite 100
Naperville, IL 60563

United Kingdom

2 Edward Court
George Richards Way
Altrincham, Cheshire
WA14 5GL

Germany

Hertha-Lindner-Strasse 10-12
01067 Dresden

USA

ArcWear (PPE Shipments)
2701 Constant Comment Place
Louisville, KY 40299

Romania

59 Grigore Alexandrescu Street,
2nd Floor Bucharest 010623

India

Sy No. 125,
Bandan Mailaram Village
Mulugu Mandal, Siddipet District
Telangana – 502 336