

About ETD Consulting

ETD Consulting

Plant Integrity &
Life Assessment
Worldwide

Power & Process Plant • Plant Integrity • Plant Services • Training • R&D

Who We Are

ETD Consulting is an independent company registered in England but operating worldwide. We are a leader in the fields of Plant Integrity and Life Assessment. Our expertise includes probabilistic life assessment, cost and performance analysis and substantial experience of P91 and P92 steels. We offer consulting and on-site support services to clients in high temperature industries such as power, petrochemical, process and waste incineration plants and renewable and small scale energy systems.

What We Do

ETD is an industry leader in:

- Power and process plant inspection.
- Integrity/life and defect/ crack assessment.
- Cost analysis (operation, maintenance etc) for both base load and cyclic power plant operation.
- Root-cause failure analysis.
- Weld performance analysis.
- Finite element analysis.
- Materials properties and evaluation.
- Advice on run/ repair/ replacement decisions.
- Risk based maintenance.
- Plant performance benchmarking.
- Plant efficiency improvement and more.

We also provide on-site NDE, metallographic replication and hardness testing services.



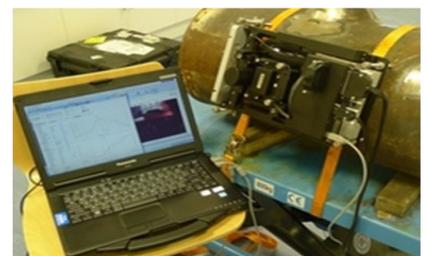
ETD's Collaborative R&D Work

With international industry means that we are at the forefront of advancements in technologies and methodologies in Plant Integrity and Life Assessment. The services and tools we offer are therefore amongst the most advanced available to industry. Two ground breaking technologies are offered exclusively by ETD:

1. The **EDSE** (Electrical Discharge Sampling Equipment) is a quantum leap forward in non-destructive 'boat sampling'. It can cut out small slices between 1 to 20 mm thick and approximately up to 40mm² leaving cavities with round edges that usually do not require repair.
2. The **SFM** (Scanning Force Microscope) has been developed for early stage nano and micro level damage detection such as creep cavitation (especially in high performance steels like ASME P91 and P92 which may not be found using traditional replication techniques. It can be used directly on components on-site during outages, with a connecting laptop giving real-time micrographs & data for analysis.



On the left, is a picture of the EDSE cutting out a small slice of a pipe and on the right is a picture of the SFM detecting for any creep damage.



For more information about ETD, Please turn over.

European Technology Development Limited
Fountain House, Cleeve Road, Leatherhead, Surrey, KT22 7LX United Kingdom
Tel: +44 1372 363111 Fax: +44 1372 363222
www.etd-consulting.com enquiries@etd-consulting.com



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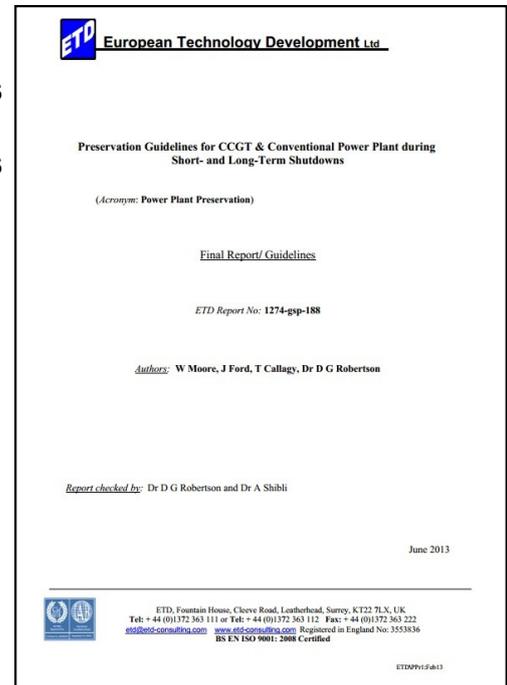
Industry Guidelines, Procedures & Innovative Software Packages

ETD also offers a range of industry guidelines, procedures and innovative software packages, many developed in collaboration with international partners to answer key issues within industry. [See our Guidelines & Reports + CrackFit flyers for more information.](#)

Multi-Client or Group Sponsored Projects (GSPs)

ETD regularly launch new GSPs for participation by organisations from around the world. The benefit of joining these GSPs, in which costs are shared, is that each participant gains the results of the whole project for a fraction of the full cost, while ETD and its experts carry out all the work. ETD has carried out several successful GSPs, producing significant Guidelines & Reports such as: 'Preservation Guidelines for CCGT & Conventional Power Plant during Short and Long Term Shutdowns' which has featured in the Combined Cyclic Journal, USA. To find more information about our GSPs visit:

www.etd-consulting.com/group-sponsored-projects



Here is one of our many examples of a report.

Training & Technology Transfer

ETD offers specialist training courses in a variety of areas, including:

- Plant Life Assessment & Management
- Gas Turbines
- Steam Turbines
- New Advanced Materials (T23/24, P91, P92, Nickel based alloys, etc.)
- HRSG Integrity
- Plant Cycling (conventional steam plants, CCGT and HRSG)
- Weld Repair & Assessment
- Risk Based Maintenance & Inspection etc.

[By training with ETD you can be confident that you are learning from top industry and academic experts; see our Training & Seminars flyer for more information.](#)



Here is a picture of delegates attending one of our many training courses.

Bespoke courses are also provided to suit client specific needs and can be held at your site anywhere in the world or at our premises near London. Alternatively, our state of the art videoconferencing suite enables delegates to remotely participate in our courses, saving time and money.

If you would like to know more about any of our products or services please contact us using the details shown below. We welcome enquiries and look forward to working with you in the future. Please check our website for references from our industry clients around the world at:

www.etd-consulting.com

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