

# Energy From Waste (EfW) Services

Frazer-Nash Consultancy has more than 20 years experience in providing high quality design, numerical modelling, analysis and resourcing support to the power generation industry.

Our core capabilities have been developed to support our clients' needs for power plant efficiency, reliability, availability, flexibility and legislative compliance.

## DRIVING FORCE

Frazer-Nash Consultancy employs a large team of skilled engineers, data analysts and business experts. Our motivation and business strategy is to support our clients gain competitive advantage through a minimised risk approach.

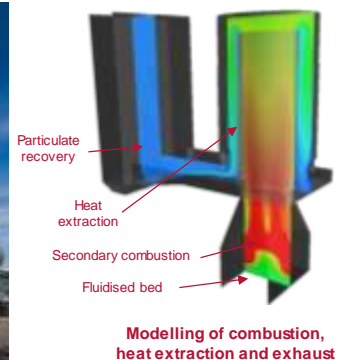
For our EfW clients, this requires a core understanding and capability in power plant design, installation, commissioning and operation coupled with expertise in environmental, incineration and power generation legislation.

Working closely with our clients, this capability enables us to identify the technical challenges that will alleviate operational and business constraints, improving plant performance and profitability.

## SERVICES

Frazer-Nash has developed a number of services specifically tailored for our clients in the EfW sector. These include:

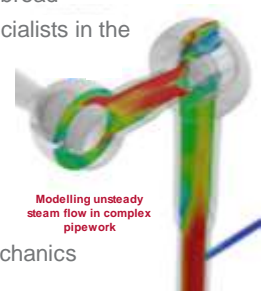
- Combustion modelling in fluidised bed and grate furnaces.
- Fouling and deposition modelling of boiler tubes, after-treatment, lubrication and rotating plant hardware.
- Water chemistry monitoring and control system specification and design.
- Optimisation of fuel (waste) and combustion by-product logistics.
- Design peer review.
- Technical justification and safety cases for maintenance deferral and revision of operational constraints.
- Structural, fluid and electrical (EC&I) system design, simulation and optimisation.
- New plant permitting support analytics.
- System underwriting requirement support.



## TECHNICAL EXPERTISE

To support our industry services, we have a broad engineering base with carefully selected specialists in the right technical fields. These include:

- ▶ Mechanical and hydraulic design
- ▶ Turbomachinery design
- ▶ Combustion and emission modelling
- ▶ High temperature materials
- ▶ Structural performance and fracture mechanics
- ▶ Fluids, thermals and thermodynamics
- ▶ Sustainable design
- ▶ Environmental permitting
- ▶ Reliability
- ▶ Electronic Controls and Instrumentation (EC&I)
- ▶ Erosion, corrosion and fouling
- ▶ Water chemistry
- ▶ Noise Vibration and Harshness (NVH)
- ▶ Tribology
- ▶ Fire Modelling
- ▶ ATEX and DSEAR



Fire Modelling in an Industrial Plant

## CHOOSING FRAZER-NASH

Frazer-Nash Consultancy strive to provide an approach that offers the greatest benefit to our clients, while encouraging our engineers to work efficiently and be proactive in developing innovative and cost-effective solutions.

The culture at Frazer-Nash is to own a clients problem and to provide solutions using the most suitable tools and techniques applicable to the problem under consideration.

It is only through our high calibre staff and desire to develop strong lasting relationships with our clients that we have been able to grow year on year in challenging market conditions.

For more information please contact Dr Peter Woollen (p.woollen@fnc.co.uk)

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