



Pipe Support Surveys

A part of the piping system services EASL provide is the survey and assessment of support systems, known as hanger surveys. Whilst our work has focussed historically on pipe support systems within the Civil Nuclear industry, assessing all Advanced Gas Reactors in the UK, this combination of on-site inspection and offsite assessment is something equally applicable to other industries.

Findings from these services provide the client with a clear view on the most cost effective solutions for maintaining pipework support systems in a safe and working condition, minimising repair costs and plant down-time over the life of the plant. Whether it's civil nuclear, power generation, defence, chemical, oil or gas, our highly trained experts can deliver high quality pipe support surveys.

What is a Hanger Survey?

EASL conduct regular health surveys on the pipe support systems for the main steam and feed systems on all AGR nuclear power stations in the UK fleet. We refer to these as “hanger surveys” as the majority of supports are usually formed using long rods, or “hangers”, attached to civil structure steelwork high above the piping systems.

These steam pipelines are often subject to significant thermal expansion and contraction due to the varying temperatures over which the plant operates. To accommodate associated vertical thermal movements, variable spring supports or, where movements are more significant, constant load supports are used.

Maintaining the travel positions of these supports within their working range is essential for their correct function. The surveys undertaken aim to ensure that pipe supports of all types continue to provide effective support maintaining the functionality and safety of their associated piping systems.

The work we do aims to prevent such incidents as happened in 2006 at a reactor power station in the UK, where one hanger failed and subsequently led to cascade failure of a large number of supports on a main steam line. Such incidents can result in costly plant damage and downtime, and in the worst case scenario, threaten industrial or nuclear safety.

EASL's Hanger Survey Services

The work involves plant walkdown to physically inspect the condition of the pipework supports, recording travel positions and examining all load path components, considering potential defects such as:

- end of travel reached – top/bottom
- gagged supports
- potential mechanism blockage due to debris or other objects
- broken or distorted components
- loose or missing nuts, bolts or locknuts
- misalignment
- interference/clashing with adjacent pipelines, supports, steelwork or equipment
- corrosion
- vibration

We review these observations in combination with historical movements, design movements, and where available, theoretical movements from pipework models. We will recommend remedial work to correct any defects or deficiencies we have observed.

EASL's Pipe Support Survey Services

Our surveys ensure that clients are provided with clear advice on maintenance recommendations to ensure continued safety and reliability of the plant, reducing the risk of incidents potentially threatening safety, lost operation time, and higher maintenance or repair costs down the line.



Our longstanding relationship with the operators of the UK's AGR reactor plant and our associated responsibilities for the inspection and support to maintenance of the steam and feed piping systems has given us a wealth of experience to deliver pipework support services to any number of industries.

Other Related Services

Other related services we offer in support of pipework system design, assessment and maintenance include:

- Design of piping systems
- Design of piping support systems
- Pipework system modelling
- Design code and fitness-for-purpose assessment of pipework systems
- Assessment of consequences of out-of-range supports (restriction to travel)
- Single hanger failure assessments (prevention of cascade failure)
- Flow accelerated corrosion (FAC) inspection support and assessment

Related Pipework Services

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For a more detailed look at our pipe support services, please take a look at our case studies below. Or, if you have questions about our hanger survey services, or wish to discuss any work concerning pipe supports and pipe integrity, don't hesitate to contact us.

Related Services

- Inspection and outage support
- Safety Case
- Pipe Stress Analysis