

## Refloating high-energy piping

*Adjustment of pipe systems to design specification*

### Challenges

Operators of plant containing high-energy piping, such as that used in power stations, can face challenges in keeping the hangers that support such piping in optimum condition. Coal-fired power station, heat-recovery steam generator and combined-cycle power station operators need to ensure the continued integrity of their steam piping. An important element is ensuring hangers are adjusted correctly so undue stresses are not exerted on the piping system. Typically, under thermal load hangers can top or bottom out, or hangers and hanger rods can fail.

### Solutions

HRL provides a range of expert services to help plant operators determine the condition of the hangers supporting high-energy piping within their plant. Services include undertaking surveys of hangers supporting pipes in hot and cold conditions, and analysing pipe flexibility. HRL also manages pipe hanger refloating programs to return systems to optimum condition. A third service area is assisting operators in developing and managing hanger databases to help ensure effective and efficient ongoing maintenance.

### Benefits

HRL's expert high-energy piping and piping hanger services help plant operators to:

- reduce their cost of asset ownership
- increase the life and reliability of their assets
- minimise stresses in their high-energy pipe systems
- reduce their risk of unplanned outages due to a pipe system failure
- restore their pipe systems to those system's 'as designed' specifications
- identify and correct improperly loaded hangers and load distribution.



Operators of power stations need to ensure the continued integrity of their steam piping

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## Case Study

### Improving the integrity of hangers supporting high-energy piping

Operators of a large power station in Western Australia found many of the hangers supporting their high-energy piping system were topping or bottoming out in hot or cold conditions.

HRL undertook hot and cold hanger surveys, a drawing and document review, a pipe flexibility analysis, and project-managed a refloat of the power station's high energy piping.

The work has given the power station a fully functional piping system that complies with AS/NZS 3788 Pressure equipment – In-service inspection. The work has also minimised maintenance while assisting with the plant's continued safe operation.



Operators of plant containing high-energy piping face challenges in keeping it in optimal condition.

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The company's NATA Accredited Laboratories number is 561.

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