

Surveying high-energy piping hangers

Using a proprietary camera system to undertake accurate hot and cold hanger surveys

Challenges

Operators of plant containing hanger-supported piping can often experience difficulty in inspecting their hanger assets. Challenges include:

- gaining access to hard-to-reach hangers
- identifying topped- or bottomed-out hangers
- reading data from a distance – such as hanger name plates
- the need to install and then remove expensive scaffolding to enable hanger inspection
- the difficulties in identifying poorly functioning hangers.

Solutions

HRL has developed an imaging device able to capture still and moving pictures of difficult-to-reach objects. The device can be used on a telescopic arm to help overcome inspection challenges by:

- enabling surveys to be undertaken using a standard method
- providing an inspection system that is safe to use
- eliminating the need for scaffolding
- providing video imaging to give visual records of hanger position in hot and/or cold conditions.

Benefits

Using its imaging device, HRL undertakes hanger surveys, under hot and cold conditions that benefit clients by

- identifying hangers that are operating outside their travel limits
- increasing their confidence that their plant's high-energy piping-support system is operating within specification or that out-of-specification hangers are being identified for follow-up action
- reducing the risks of unplanned outages due to pipe cracking
- providing greater inspection access to equipment without the need for scaffolding that can be costly and time-consuming to erect, and can restrict plant access while in place
- increasing inspection operator safety by enabling indicator readings to be from walkways
- enabling readings to be taken at close range and so improving the accuracy of those readings.



An imaging device is used to capture readings from difficult-to-access hangers.

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Case Study

Providing a consistent, accurate, and safe way to check piping hangers

Operators of a large power station suspected that some of their pipe hangers were topping and bottoming, causing stress in their steam pipes.

HRL personnel collected data from design drawings, then undertook on-site hot and cold hanger walk-downs and surveys. The team used a video imaging device on an extendable pole to survey the many difficult-to-reach hangers – avoiding OH&S issues and the cost of scaffolding.

The hot and cold hanger surveys showed many hangers topping and bottoming, causing stresses to the high-energy piping. The survey results led to the decision to undertake a piping flexibility analysis.



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

Need more information? Go to hrl.com.au

The company's NATA Accredited Laboratories number is 561.

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