Case Study

Deformation Measurement

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Laser measurement enables the rapid capture of highly accurate 3D information.

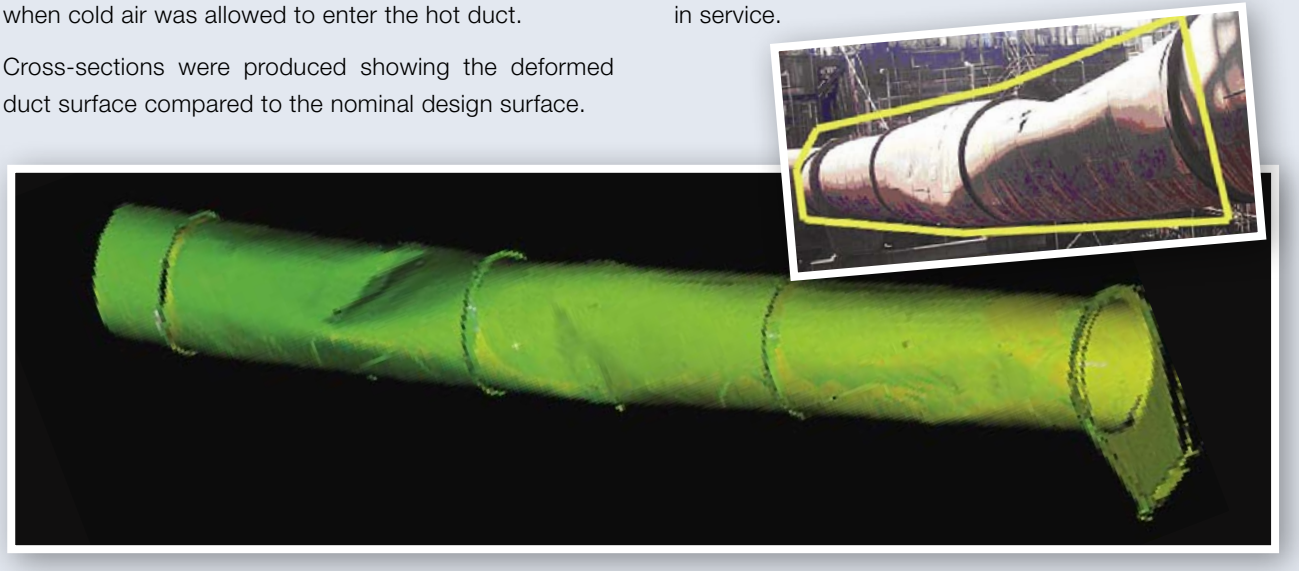
Laser measurement techniques are ideally suited to deformation measurement applications. The high density of 3D points covering the entire surface permits surface-to-surface or surface-to-CAD comparisons.

Case Study 1 – Nickel Production Facility

AAM was engaged to scan and model a portion of an elevated roaster duct. The duct was deformed violently when cold air was allowed to enter the hot duct.

Cross-sections were produced showing the deformed duct surface compared to the nominal design surface.

The cross-sections were used by the client in a critical component analysis to determine if the duct could remain in service.



Case Study 2 – Ore Loader

An urgent mobilisation of a survey party was required to undertake a terrestrial laser scan survey of an ore loader during a scheduled maintenance shutdown. The loader was to be the subject of a finite element analysis study to determine the life expectancy of the boom in its current configuration. The final output of the survey was coloured plots showing offsets of the face of the boom from the centreline of the boom, to modify the 'design' model input into the finite element analysis.