

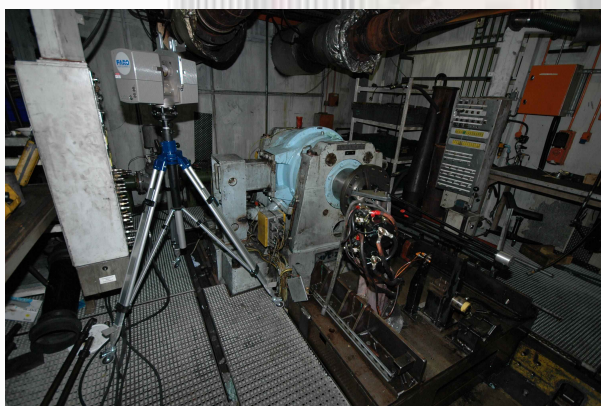


3D Cell Capture

GSS/DJA were approached by Cummins High performance centre in Daventry to carry out a 3D Laser scan of an engine test cell at their plant to assist with their continual improvement 6 Sigma project.

Introduction

With a throughput of some 25 engines per day,



ranging from "small" 8 cylinder units, through to large 16 cylinder engines used to power earth moving machinery, boats and generators, Cummins Daventry is a modern, efficient engineering plant. The 6 Sigma team at the plant continually research new methods to improve the quality and service of the engine test centre and identified large scale laser scanning using the Faro LS880 as a potential technology to produce accurate documentation for the test cells.

Scanning

GSS/DJA spent 6 hours onsite carrying a thorough survey of the site. With careful positioning of the scanner, we were able to capture much of the hidden detail of pipework and structural steelwork, including the detail of coolant pipes behind the cells dynamometer.

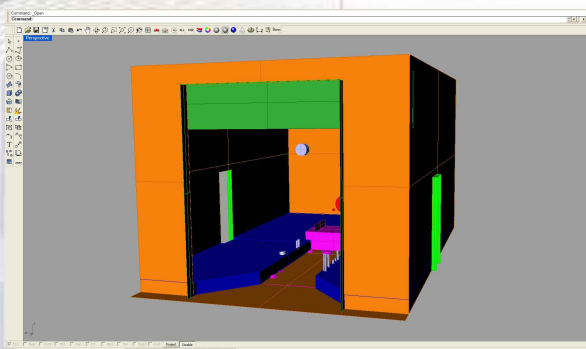
Processing

On return to the office, the LS880 scan files were cleaned and aligned using

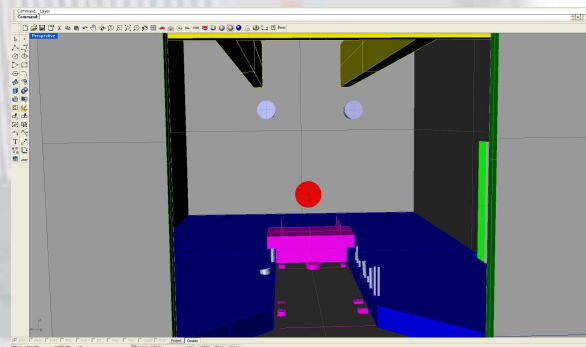


the reference spheres located in the cell and

some basic sections taken to assist in the creation of a simple IGES CAD model of the cell. This model captured the location of the main structures in the cell and acted as a lightweight reference file for the Cummins design engineers to use. Scan files were exported to Navisworks Jetstream to create an interactive 3D model of the cell and a simple



plan view of the cell layout created as a reference for a new technique of using the scan data. Using the high resolution 2D reflection



images captured by the scanner, a Quicktime VR file was generated, giving the illusion of being centred on the scan and acting as a fast reference for the content of a complex set of scans.

For further information on the laser scanning services we can supply, please contact Deri Jones on +44 (0)870 762 0089 or via email at: info@djaweb.co.uk

LS880 - Test Cell Capture

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