



Summary



Industry:	Other
Application:	Process pumps
Actual Saving:	£50k +
Payback Period:	not advised



Reverse Engineered Process Pump from ERIKS

In-house technical know-how provides the solution

ISSUE

The Client has a fixed base of industrial process pumps, these units are now obsolete and any parts that are still available are on substantial lead times.

The Customer was also experiencing corrosion problems with the specification of materials used in the original construction.

Replacing these units was deemed to be impractical due to certain site related restrictions, and there being no modern equivalent that would be dimensionally interchangeable. Certain components had previously been weld repaired several times and the resulting distortion was causing further issues.

SOLUTION

ERIKS utilised a 7 axis portable coordinate measuring machine with a laser head. This process was used to scan the components to create a 3D image of each part. Once all of the parts had been scanned, the process allowed the operator to "virtually" assemble the pump and accurately measure the levels of distortion, which in this case were found to deviate by up to 2mm.

The next stage was to modify the images in order to remove this distortion, and then compile a full set of working drawings. Patterns and castings were then produced, these components were then finish machined and assembled into complete pumps. Following inspection and assembly the pumps were fully tested on our performance rig.

ERIKS were able to reverse engineer new complete pumps along with a full material upgrade, with all of the distortion issues engineered out.

OTHER BENEFITS

- Pumps and spares are now fully interchangeable with the existing units
- The customer has complete flexibility over material specifications
- It is no longer necessary to carry out extensive plant modifications to accommodate new pumps

FURTHER COMMENTS...

The measured cost saving against new pumping plant was estimated to be in excess of £50K with additional benefits in a reduction of down time relating to the deteriorating condition of the existing pumps.

MORE INFORMATION

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