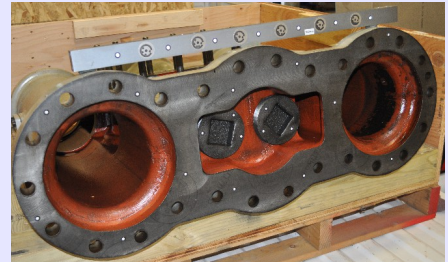


Photogrammetry in a Pinch

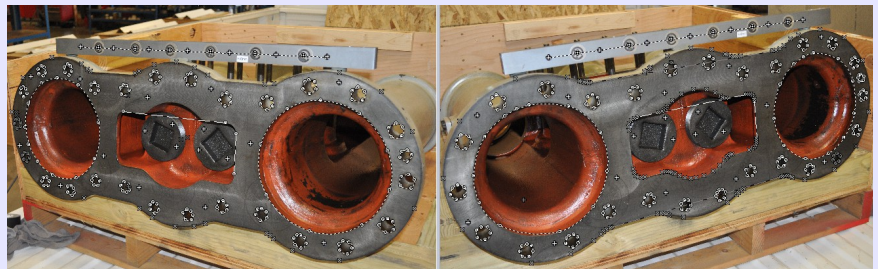
Background

Shutting down large scale power plants and industrial operations is costly business. One hour out of operation may be worth thousands of dollars in lost revenue. When our client was tasked with making replacement parts for a custom manifold assembly, they only had a short window of time to accurately measure the current parts while the existing parts were removed for maintenance, and needed to know that their replacement would fit correctly the first time.

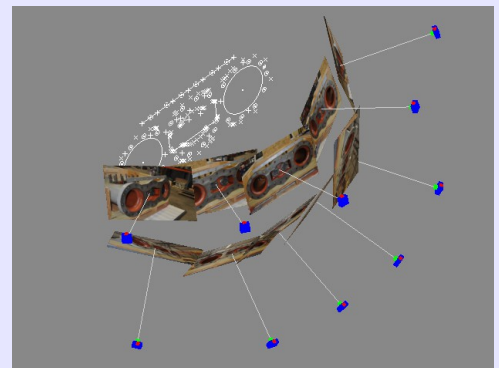


Our process

The manifold profile was relatively simple, and the shape and accuracy requirements made this project a good fit for photogrammetry.



We first applied a series of retroreflective targets to the manifold surface, which would provide accurate center points for our 2D capture. A scale bar was placed near the manifold to provide ensure that the resulting capture was measured accurately. We then made a series of 2D image captures using a calibrated camera and processed the data into a set of 3D profile curves representing the manifold mounting surface.



The results



Photogrammetry is an accurate and robust method capture critical dimensions at any scale. It also performs great in difficult or dirty environments. We captured all the data we needed to make an accurate 3D model of the base before the customer could unload the manifold from the truck. And when time is of the essence, fast scans save big money.