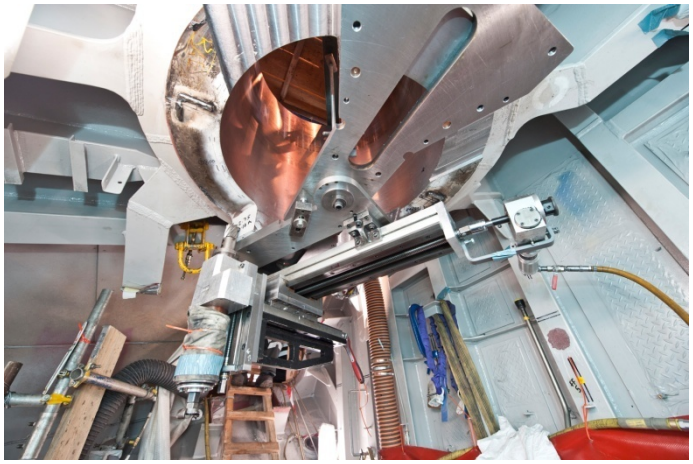
CASE STUDY

Naval Construction – Submarine Manufacture

Overview

A global manufacturer of Naval surface vessels and nuclear submarines required the in-situ machining of the stern, rudder and hydroplane tubes and a 2.5m diameter flange which had a 1.25m diameter tube running through the centre of it.
Machining requirements for the scope of work would include line boring, milling and flange facing.



Scope

Average bore diameter around 800mm x 1000mm long with up to 25mm of material to be removed each side.
A complex milling of angles to be machined in the horizontal and vertical planes. Again a large amount of excess material to be removed from all faces.
Large diameter flange to machine (2.5m diameter) with a central tube and frame running through it.
High surface finish tolerance on all machined faces.

Challenges

The customer was running within a tight time scale for the completion of the project, with the large amount of material to be removed Moss designed a programme of work which best utilised the available work faces and shift patterns while also remaining flexible to react to changing circumstances.

Solution

By modifying standard air driven equipment to run on hydraulics, Moss had a new hydraulic power pack designed and manufactured which was able to run for long periods and be small enough to be shipped into tight access work areas. With the experience of machining high grade alloy steels and working to fine tolerances and surface finish requirements Moss was able to meet and exceed the customer's expectations.

The project was completed ahead of schedule and was QC approved as 100% correct to drawing

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