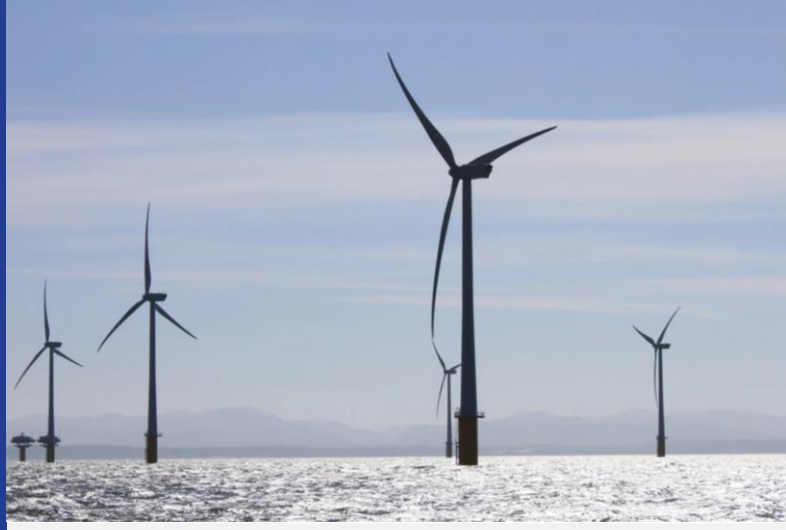
CASE STUDY

360MM LARGE SKID CYLINDERS

Design, build and testing of high-quality large-bore skid cylinders, engineered to perform where scale is needed.

TRUST RUNS DEEP



SCOPE

In October 2019, a major Marine contractor required four large Skid Cylinders, for their 'pile gripper' to support the installation of offshore wind turbine foundations for a large offshore Windfarm in Asia. APH was contracted to design, build and test the large bore cylinders, along with 2 other cylinder sets, within 12 weeks as specified below:

- 360mm Bore
- 1255 mm Stroke
- 250 Bar Operating Pressure
- 1744kN Compressive Hold Force
- Load Holding Valves
- Custom Made Valve Manifolds
- LVDT Positional Feedback
- NORSOK Paint Compliance
- DNV Design Approval

This was a complex design and build project due to the sheer size of the cylinders and also a number of component features required bespoke manufacturing including custom made valve manifolds. The tailored large-scale cylinders weighed approx. 3 ton each and were built and painted in-house at the APH facility in Glasgow.

CHALLENGE

Given the complexity of the project and very tight lead-time, delays were the biggest risk to project delivery. The challenge posed was to reduce any exposure of delay to a minimum. Risks included design approval of a 3rd party assurance, machining of complex components (such as dual counterbalance manifolds) as well as coordinating the procurement of all critical path components.

APH worked hard to align the procurement of all critical path components with expert project management and our wide-ranging manufacturing capability ensured any delays could be recovered.

SOLUTION

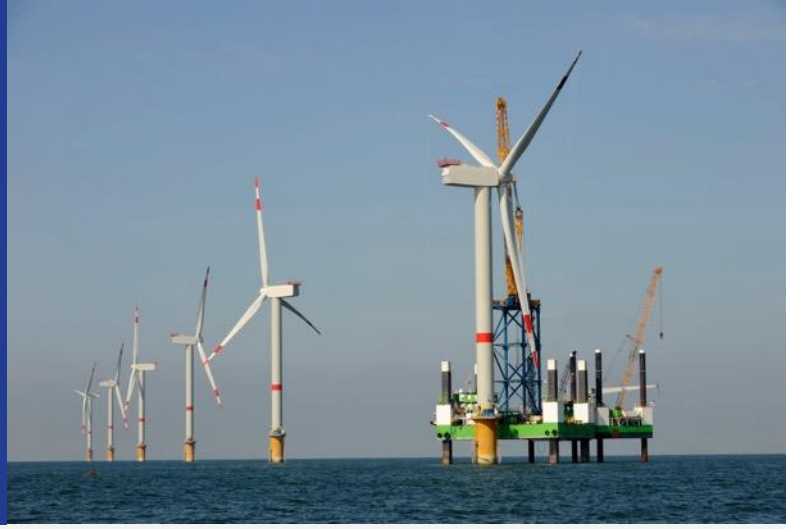
APH have over 40 years' experience in the surface marine sector, with extensive in-house design knowledge and manufacturing capability.

Our in-depth knowledge of surface marine hydraulics, allowed for a great degree of flexibility as the project requirement evolved and changed throughout the design phase.

APH are fully self-sufficient with well-established and trusted network of supply chain relationships, proficient manufacturing capability and in-house NORSOK compliant paint facility. So any unexpected delays were able to be managed without any marked impact on the delivery date.

APH HYDRAULIC ENGINEERING

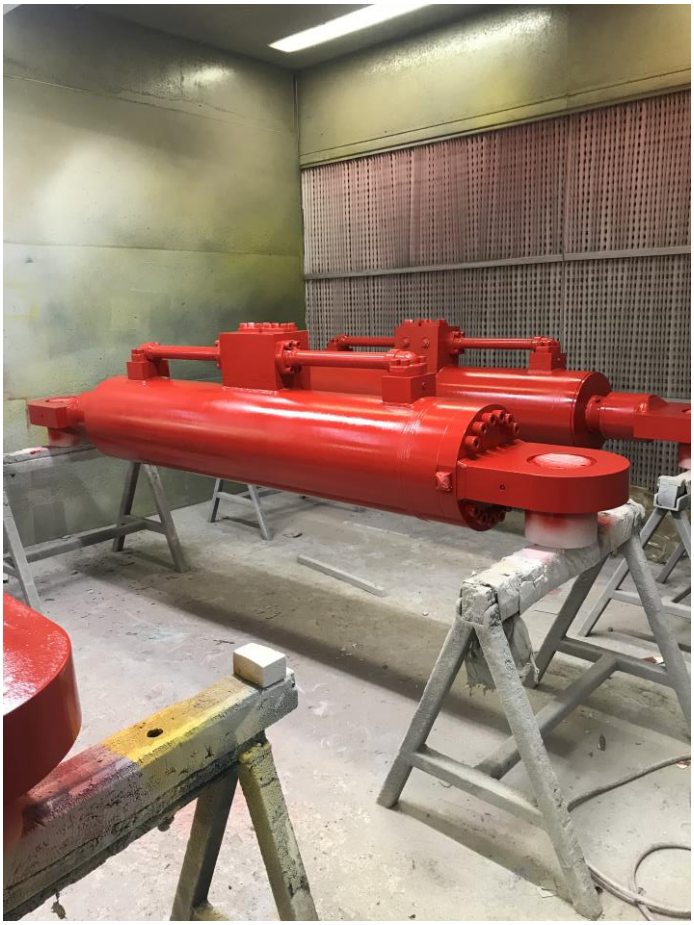
CASE STUDY



RESULTS

APH not only mitigated lead-time risks but delivered the four skid cylinders within the 12-week original project schedule. Any delays were eased by the responsiveness and experience of the APH team.

Regular communications, close project management and client interface allowed for peace of mind and transparency throughout the design and build process.



WANT TO KNOW MORE…

The APH CEPAC PLUS cylinder range has been servicing the needs of the subsea and surface marine markets for over 40 years.

We are proud to offer a well-defined range of larger cylinders, designed to perform where scale is needed.

Our CEPAC Plus cylinders are now deployed across the world to support lifting frames, emergency pipeline repair systems, tensioners and various civil applications.

Available up to 450mm bore, you can trust our CEPAC Plus range to perform when it matters.