Rougher & Deeper
SUBSEA 7’S NEW CONSTRUCTOR

Jack to the Future
NEW INSTALLATION CONCEPT

Ilhabela in Brazil
GLOBAL FABRICATION CHALLENGES
Jack-Up Barge had an unusual challenge: a Jackup platform that dynamically positions itself onsite, without tug support, yet avoids the class requirements of self-propelled units. Plus, the propulsion had to be modular and portable. In February, Offshore Industry went on board the JB 118 to see Veth Propulsion’s solution, which brought together the company’s thruster technology with its experience as a DP system integrator.

"Individually there’s nothing new in the lead contractor Veth Propulsion accepted the challenge presented by Jack-Up Barge and set about developing a propulsion system that represents an evolutionary step for offshore installation using self-elevating platforms. In February Veth Propulsion completed installation and commissioning of the DP2 diesel-electric thruster package. Walter Clausing, Project Manager at Veth Propulsion, led the commissioning at the Keppel Verolme yard in Rotterdam.

Words by Ben Littler & John Gauldie
system,” he explained. “But integrating this as a standalone DPS-2 system for a large self-elevating platform is quite special. Not to mention engineering it up to offshore standards. It’s also a portable solution that can be mounted on other jackups in the fleet.”

**System Integrator**
The company fabricated four enclosed, retractable 900kW L-drive azimuthing thrusters at its plant in Papendrecht, the Netherlands. Each unit is designed for truck transport. After arriving at Keppel Verolme, the JB 118’s main crane lifted each thruster unit into place near each leg of the jackup platform. The thrusters’ motors draw power from four dedicated and independent generator sets. Veth Propulsion delivered the four independent power containers on deck – each run with a Caterpillar C32 engine and backed up by a SisuDiesel-powered auxiliary generator set. And finally, Veth Propulsion integrated the power and automation systems, Kongsberg DP systems and CyScan system in a dedicated control room container – including Veth Propulsion’s own control panels and levers. This container serves as the platform’s ‘wheelhouse’ whilst the propulsion system is in operation.

**A Class of Its Own**
Developing the system required a strong cooperation between Jack-Up Barge, Veth Propulsion and class society ABS, as Mr Clausing explained. “This is still a platform; it’s not becoming a ship. It’s not self-propelled, at least from the perspective that it still requires an element of towing. It can hold station independently, but it has to be towed to the offshore location.”

ABS, the global market leader in jackups, is providing classification for the system. The recently appointed Country Manager for ABS in the Netherlands, Dick Pronk, was closely involved in the project. “It’s certainly unusual,” he told Offshore Industry. “But the DP notation requirements are clear. This is not a self-propelled vessel so it doesn’t need the machinery notation or require extra equipment or personnel on board. It’s been a matter of working closely with Jack-Up Barge and Veth Propulsion to make sure this system safely and reliably achieves its goals, and meets class requirements.”

**Picking up the Gauntlet**
The project was appropriate for Veth Propulsion; their experience to date includes both portable barge propulsion and DP installations. For the Netherlands-based propulsion specialists, the project also caps
a rapid rise within the offshore industry, explained Martin van der Jagt, Sales Manager at Veth Propulsion. The company has catered for inland shipping propulsion needs since 1951; notably as inventor of the now-ubiquitous Veth-Jet channel bow thruster used extensively in Rhine shipping and cruising.

“A few years ago we took a decision to diversify and develop other markets,” Mr Van der Jagt said, noting the current troubled state of inland shipping. Two new markets are tugs and dredgers – both have since developed into successful sectors for Veth Propulsion. Plus, he confirmed, the company has successfully won orders for vessels operating in oil and gas as well as wind.

“The offshore market also has huge opportunities for us. We’ve developed some strong references in offshore now – it’s developed very quickly. Over the last year we’ve opened agencies in Russia, Brazil, India and Australia. Internationally, we’ve created quite a big network, there’s a lot of potential.”

Offshore Talent
The new system received a warm reception when Veth Propulsion showcased it at Marintec in Shanghai in December last year. “There was a lot of interest,” Mr Van der Jagt noted. “The JB 118 was built in China so there were many people keen to see what innovative solution we had come up with.” To keep up with global demand, Veth Propulsion is also expanding their production facilities in the Netherlands. Building on this quick rise to offshore prominence, the innovative nature of the Jack-Up Barge project has provided Veth Propulsion with the opportunity to demonstrate their talent for complex projects.

“Building these four thrusters has had a huge impact on our organisation. They’re not the biggest thrusters we’ve built, but they represent a challenging combination of factors. Everything about this job was big.” Mr Van der Jagt continued: “We’re relatively new to the offshore industry, but this project has definitely illustrated our capabilities.”

Integrating this as a standalone DPS-2 system... is quite special.