



BREDFORD DOLPHIN UPGRADE PROJECT

Customer: Dolphin AS / Maritime Systems AS (Norway)
Location: Worldwide
Application: Emergency generator package for offshore drilling rig
Year: 2006
Delivery: CAT 3512B engine with SR4B generator (1700 kVA; 440V, 60Hz; 1800 rpm) under DNV classification. Package performance tested under a permanent tilt angle of 25 degrees.



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HALFDAN BC PLATFORM



Customer: Maersk Olie og Gas AS
Location: Halfdan Field (Danish sector of the North Sea)
Application: Emergency power generators
Year: 2006
Delivery: Two CAT diesel-engine-driven generator sets. Each offers 1100kVA, 880Ekw, 400V, and 50Hz. Delivery included control panels for engine and generator protections, and synchronising facilities. For each generator, a titanium radiator cooler has been supplied to cool the engines.

NRPOD TAPTI EXPANSION PROJECT



Customer: BG Exploration & Production India Ltd.
Location: Mid Tapti Field (India)
Application: Emergency power generator
Year: 2006
Delivery: One CAT 3512B diesel-engine-driven generator set. It offers 1250kVA, 1000kW, 415V, and 50Hz. The generator set is completely packaged in sound & weather tight enclosure, including radiator cooler, fuel tank, electric & hydraulic start unit and CO₂ fire & gas system. A control panel for engine & generator protections and synchronising facilities has been delivered 'shipped-loose' for remote installation.



OIL & GAS NEWSFLASH



Blackford Dolphin Rig, Fred Olson Energy ASA

FOREWORD



Welcome to the second issue of the Pon Power Oil & Gas Newsflash, packed with all the latest news on our products and partners.

It's been a very busy time here at Pon Power Oil & Gas, as we've just moved into our own dedicated headquarters at the Pon Power site in Papendrecht. This will not only boost our visibility as a separate company, but also enable smoother communication across the entire team. I'm certain that our new location will provide us with the perfect platform from which to build on the phenomenal success of last year.

Also on the home front, we've been putting a lot of effort into raising the already high standards of our internal processes, ensuring that everything we do is reliable and traceable. This should further enhance our ability to design, produce and deliver the power solutions that our clients demand.

But we haven't just been looking inwards: we've also been working closely with our clients, external suppliers and other Pon companies to achieve effective process alignment. As a result, we're now in a position to enhance the entire workflow process, and meet and exceed international quality and safety standards. You can read more about projects we've completed with some of our partner companies in this Newsflash.

Rob Heukelom
 Managing Director

EXCELLENCE THROUGH PARTNERSHIP

PON POWER OIL & GAS AND TOPEC

One of Pon Power Oil & Gas's most successful business relationships is with drive and energy-systems specialists Topec. Together, they build the tailor-made power solutions for which Pon Power Oil & Gas is renowned. Rob Heukelom (Managing Director, Pon Power Oil & Gas) and Peter van Geloven (Business Unit Director, Topec Electrical Engineering) explain how the partnership works.

Growth through partnership
 "Our partnership is incredibly successful and already extends beyond the areas of design, manufacturing and testing, right through into sales," says Rob. "But to continue Pon Power Oil & Gas's rapid growth, it's vital that the two companies continue to develop, improve and advance together. That way, we'll ensure future prosperity all around."

Trusted partner

Topec is a single-source supplier for Pon Power Oil & Gas. "Here at Topec, our role is to manufacture the mechanical packaging, the electrical controls and the energy distribution systems required for the power module," says Peter. "For example, we can develop the base frame, the exhaust and cooling systems, sound attenuated enclosure and the operation controls necessary for a particular project. We even have state-of-the-art, in-house testing facilities for the projects we work on together."

Expert knowledge

"We've worked with Topec for a long time now," says Rob "and experience tells us that they always apply their expertise to develop the tailor-made solutions we want." By using Topec's materials and components knowledge, he says, Pon Power Oil & Gas is able to provide its clients with exactly the power solutions they require.



Peter van Geloven, Business Unit Director, Topec Electrical Engineering



Edwin den Breejen, William Zomerdiik

PARTNERS IN SUCCESS NOBLE AND PON POWER OIL & GAS ENSURE IMO CERTIFICATION FOR MECHANICAL ENGINE

Like many companies, Noble Corporation faced the challenge of ensuring all engines manufactured after January 2000 complied with strict emission limits imposed by Annex VI of the International Maritime Organization (IMO). William Zomerdiik (Mechanical Superintendent for Noble's European Division) and Edwin den Breejen (Pon Power Oil & Gas Service Manager) explain how the two companies found a solution to this challenge.

The challenge

A global inventory of Noble's platform engines revealed that two diesel engines from their Piet van Ede platform exceeded new limits for nitrogen oxide (NOx) emissions. "We had until April 2007 to ensure full compliance," says William. "Replacing the engines wasn't an option, as it would disrupt operations for far too long. But adapting them wasn't going to be easy: no one had an off-the-shelf solution. So, together with a team from Pon Power Oil & Gas, we set out to explore how we could minimize emissions from the existing engines."

Testing, testing...

In fact, the objective was threefold: to meet the NOx requirements, to limit any negative impact on performance, and to avoid increasing related emissions, (e.g., CO₂ emissions). "We began with a test in which we retarded the engine's timing," says Edwin. "Although that did reduce emissions, when tested on the Piet van Ede engines the results weren't good enough." The team carried out a second test at another platform with the same engines. "This time, we set out to lower the air temperature by splitting up the cooling system, so that the aftercooler used colder water from a separate circuit, rather than from the engine." Although splitting the system wasn't easy, the results were very promising. "We therefore decided to use the larger aftercooler of the new 3516 type engine

combined with a separate cooling water system. This had an additional benefit: the new aftercooler was an exact fit, making the conversion relatively simple."

Outstanding performance

"Of course, you can't be certain that you'll meet the requirements until the new system has been officially tested," says William. "Whether the investment made by Noble and Pon Power Oil & Gas was going to pay off remained to be seen. We worked closely with Det Norske Veritas and SGS to convert the engines, before carrying out our own tests. To reduce the impact on operations, we needed to have the official assessment carried out on the platform itself. Fortunately, DNV was tremendously flexible and helped us set up the required laboratory conditions at sea. The results were great: as well as cutting NOx emissions by 37%, fuel consumption also fell, as did CO, CO₂, C₃H₈ and CH₄ emissions!" The partners chose to have a type inspection carried out at the same time so as to allow Noble and Pon Power Oil & Gas to apply the solution to all 3516 engines of the same series for certification purposes. The engines passed with flying colors. "The project was a huge success," concludes William, "thanks to the outstanding performance of everyone involved."



Piet van Ede platform, Noble Corporation

C32 ENGINE NOW AVAILABLE TO OIL AND GAS MARKET TRIED, TESTED AND VERSATILE

Pon Power Oil & Gas is proud to introduce another member of CAT's 'C' family of engines: the C32. Originally designed to provide marine propulsion, the C32 has now been specially adapted for use in the oil and gas industry. This tried-and-tested engine offers excellent power-to-weight operating ratios and an operating speed of between 1400 and 2100 rpm – all within an exceptionally small and light package.



Made to order

The C32 is incredibly versatile and can be configured in various ways. Whether you're looking for hydraulic power (e.g., for crane driving) or pump applications (e.g., for oil pumping or fire-fighting), the C32 is flexible enough to meet your requirements. And depending on the configuration you choose, the C32 can even come equipped with ACERT technology, which lowers both fuel consumption and emissions.

Less space, lower cost, more power

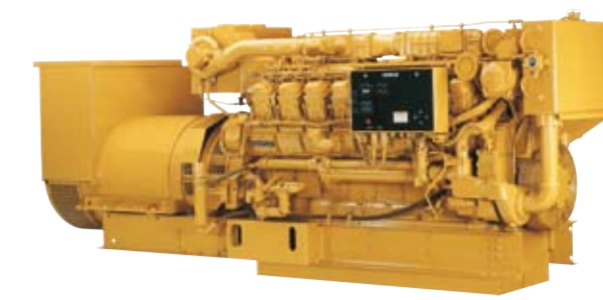
Although the C32 is incredibly powerful, it's actually smaller and lighter than the engines it replaces (e.g., CAT's 3412 and 3508). This is great news for our clients: the resulting space and weight gains mean smaller engine rooms, smaller platforms and considerable cost-savings.

Ensuring high standards

The C32 – like all CAT engines – has undergone rigorous industry testing. This guarantees not only reliability and durability, but also superior product performance. What's more, the C32 is designed to meet strict safety standards, ensuring its suitability for challenging offshore environments.

Let the C32 work for you

To find out what the C32 can do for your business, e-mail jan.van.nieuwenhuijzen@ponpoweroilandgas.com



UPGRADING THE BLACKFORD DOLPHIN RIG ENSURING SAFETY AND EFFICIENCY IN CHALLENGING ENVIRONMENTS

Operating a semi-submersible drilling rig is incredibly complex – especially in challenging deepwater environments. So when the Fred Olsen Energy ASA owned company, Blackford Dolphin Pte. Ltd., decided to upgrade their Blackford Dolphin rig, they knew they would need the best power solution available. That's why they chose Pon Power Oil & Gas to supply the rig's power generation and distribution units. Blackford Dolphin is set to take to the seas again later this year.

Tried and tested

One of the key reasons Pon Power Oil & Gas was chosen to provide the power solution for Blackford Dolphin was its proven track record. In addition to being industry experts, Pon Power Oil & Gas had also been involved in the successful upgrade of another Fred Olsen Energy related rig in 1998.

Providing the power

The Blackford Dolphin rig will be equipped with five of Pon Power Oil & Gas's marine-vehicle CAT engines. Powering the rig's drilling operation are four CAT 3612 diesel generators, each delivering an output of 3,600 kW. The fifth engine, a CAT 3516B generator, delivers 1,825kW of emergency power and is capable of operating at a tilt angle of 25 degrees. Together, these engines ensure Blackford Dolphin's drilling operations can be carried out safely and efficiently.

Working together

Throughout the project, Pon Power Oil & Gas worked closely with a number of partners, including vessel conversion and modification specialists Keppel Verolme, and engine packaging company Topec. In fact, thanks to the high level of cooperation between Pon Power Oil & Gas and Topec, the entire installation and testing phase was completed within just twelve weeks.



Blackford Dolphin Rig, Fred Olson Energy ASA

RULING THE WAVES CATERPILLAR 3516 AT THE HEART OF HILOAD DP

Pon Power Oil & Gas has been chosen to provide the power solution for a new kind of oil-loading vessel – HiLoad DP. Developed jointly with Remora ASA, HiLoad is safer and more cost-effective than any other oil-loading method, and it's set to become a favorite of oil companies worldwide when the first vessel takes to the seas in 2008.

HiLoad DP

During an oil-loading operation, the L-shaped HiLoad DP first transfers the loading hose from the storage tanker to the shuttle tanker. Once at the shuttle tanker, HiLoad DP connects to the hull – much like a forklift picking up a pallet – and uses a high-capacity friction attachment for stabilization. What's particularly special about HiLoad DP is its dynamic positioning (DP) system. This system relies on CAT engines, allowing the tanker to weathervane 360 degrees and respond flexibly to changing weather conditions.

Big CATs

HiLoad DP's thrusters and DP system are powered by three Pon Power Oil & Gas CAT 3516 diesel engines. Each provides a massive 2350kW of energy. What's more, in addition to powering propulsion, the engines' shaft generators can each supply an extra 550kW of electrical power for use on the HiLoad DP itself. The fourth engine is a CAT 3406 diesel generator, which can provide 320kW of emergency power. Together, Pon Power Oil & Gas's CAT engines form the heart of HiLoad DP and enable safe, efficient and cost-effective oil loading.

