

KEPPEL FELS DELIVERS SEADRILL'S 5TH KFELS B CLASS JACKUP RIG

**POWERED BY CAT® ENGINES,
SEADRILL'S WEST CALLISTO ASSIGNED TO WORK IN INDONESIA**



West Callisto – the 32nd KFELS B Class jackup rig to enter the market

Based on our rich experience and good track record with Keppel FELS, Tractors Singapore Limited (authorised Cat Dealer for Singapore, Christmas Island (Indian Ocean) and Maldives), was awarded a contract in July 2008 to supply the power train for this project.

Powered by 5 sets of the proven and reliable Cat® 3516 BHD Diesel generator sets as main and 1 set of 3508 B as emergency; the attested combination has been used in many installations over for drilling applications and won the admiration from rig owners worldwide for its robustness and low life cycle cost. The Cat 3516 BHD series is also known for its advanced and innovative combustion technology.

The West Callisto is the fifth addition to a modern fleet of offshore drilling rigs built by Keppel FELS for Seadrill. When West Juno is completed, Keppel-built rigs will make up 35% of Seadrill's premium fleet.

These rigs are built to the KFELS B Class design which holds the promise of being highly efficient drilling platforms. With its proven track record of global operations, this design continues to be the driller's choice for modern-day jack up as it is maintenance-friendly with excellent safety features and is well suited for both exploration and development drilling as well as workover operations. The West Callisto has the capability of operating in water depths of up to 400 ft, has a drilling depth of 30,000 ft and can accommodate 112 men.

West Callisto will work in Indonesian waters on a 9-month development drilling contract from the third quarter of 2010.

A Winning Combination

Rental and Ownership of Cat® machinery

Like his unique twining of business, cold hard civil engineering and fragile horticulture.....Mr Lim Kim Lee, Managing Director of 32-year old Horti-Flora Services Pte Ltd, believes in a combination of owning and rental of reliable Caterpillar equipment.



A Cat 312 hydraulic excavator from The Cat Rental Store® at work on civil engineering projects.



A newly purchased Cat 320D all geared to work



Horti-Flora's landscaping at Nanyang Polytechnic

If you land at Changi Airport's Terminal 3 and feel you are already in the Garden City without stepping out – that would be thanks to Horti-Flora's gold award winning T3 Greenwall project which features a S\$6 million installation of lushly cultivated creepers and climber plants 15m high and 300m wide. Bringing in more of nature into Terminal 3 are other Horti-Flora's masterpieces like the Water Feature & Koi Pond Works and the Butterfly Garden. Around Singapore, nature lovers will welcome Horti-Flora's lovely landscaping along the hangi Eastern Coastal Boardwalk, Fort Canning Park and the Alexandra Park Connectors –commissioned by the Government bodies. Even futuristic Nanyang Polytechnic bears testimony to Horti-Flora's fine workmanship to soften the harshness of a technology center with multiple sky/balcony gardens around the three interconnected buildings with its water features, greewall and external works.

Horti-Flora is engaged in civil engineering works for the proposed Environmental Improvement Works at Punggol Point as well the coastal walkway for the Eastern Coastline and upgrading of the Promenade at Changi Creek.

Before these settings come to fruition, the ground work needs to be laid and this is where the reliable Cat equipment 312 is required. The Cat Rental Store's medium hydraulic excavators (hex) model are used for the smaller scaled jobs whilst Horti-Flora's newly purchased pair of Cat 320D hexes handle the major civil engineering works.

Horti-Flora's Managing Director, Mr Lim Kim Lee attests he has found the service provided by both David Leng and team of The Cat Rental Store and Samuel Sum of its Equipment Department of Tractors Singapore Limited

(authorized Cat dealer for Singapore, Christmas Island (Indian Ocean) and Maldives) to be more than his expectations. He appreciates that they know their products well, responds to technical calls/rectifies them without delay and are able to make sound recommendations.

Satisfied customer, Mr Lim Kim Lee knows he has made the right decision to use premium Cat products for the premium projects awarded to Horti-Flora Services Pte Ltd.

CAT® ENGINES' PERFORMANCE EXCEED EXPECTATIONS!

***JM BAYU AND JM SEPOI
(70M ANCHOR HANDLING TUGS/ SUPPLY VESSELS)
POWERED BY CAT C280-12***



AHT JM Bayu powered by Cat C280-12

Muhibbah Engineering (M) Berhad is a public listed company on the Main board of the Kuala Lumpur Stock Exchange (KLSE). It is also the first company in Malaysia to achieve ISO9002 certification in the construction sector and is renowned for being a leader in marine construction business in Malaysia

Muhibbah Marine Engineering Sdn Bhd (MME), a subsidiary of Muhibbah Engineering (M) Berhad, set up in 1996, operates as a shipyard in Klang, Selangor. Strategically located between Pulau Indah (West Port) and South Port, MME offers services that include shipbuilding, ship repair, ship conversion, ship supplies, engineering and offshore fabrication services that meet classification societies requirements.

To date, MME has built and delivered more than 70 vessels for both local and overseas clients. These include offshore supply vessels, Anchor Handling Tugs/Supply vessels and offshore well support vessels with Dynamic Positioning 2(DP2) capabilities.

Authorised Cat Dealer for Peninsular/East Malaysia and Brunei, Sime Darby Industrial's Power Systems Division recently supplied and commissioned six (6) units each of Cat engines onboard two (2) X 70m Anchor Handling Tug Supply Vessels built by MME.

Ships' Names: JM BAYU and JM SEPOI
Hull numbers: H20076 and H20084
Owner: JASA MERIN MALAYSIA SDN BHD

Upon commissioning both these vessels, the Cat engines were able to meet and exceed the contractual power requirement specified by MME.



Demonstrating power which exceeds customer's expectations

Performance	Contractual Requirement	Actual
Speed Trial	13.5 knots	16.0 knots
Bollard Pull	120 tonnes	150 tonnes

Mr.KC Ooi, General Manager of MME was impressed by the performance of the CAT engines in providing more than what was promised. He further commented "I had no doubt that Cat engines could deliver the specified power but to exceed our expectation- that is a real bonus."

En.Zainal Abidin –Assistant Manager, Marine Sales, PSD in charge of this project was equally happy with the outcome . "The Cat/SDI-PSD partnership gives us the edge over competition along with quality products and reliable after sales support – these factors allow us to exceed customer's expectation. It is this value proposition that differentiates us from our competitors as we continue to remain as our customers' preferred engine supplier."

PROJECT INFORMATION

Project : 70M DP2 ANCHOR HANDLING TUG / SUPPLY VESSEL
Classification : Bureau Veritas (BV)
Class Notation : 1+ Hull + Mach, Tug – Supply Vessel – Fire Fighting Ship 1, Special Service – Anchor Handling / Offshore Support Vessel, Unlimited Navigation DYNAPOS AM / AT R
Designer : Conan Wu & Associates (CWA)
Contractual : Speed - 13.5 Knots at a Mean Draft (4.0 M)
Bollard Pull - 120 Tonnes @ 100% MCR

Principal Particulars

- a) Length O.A. : 70.20 M
- b) Length B.L. : 64.10 M
- c) Beam MLD : 16.00 M
- d) Depth MLD : 8.50 M
- e) Draft Designed / Max : 5.50 M / 5.80 M
- f) Complement : 42 Men

Main Equipment

- a) Main Propulsion Engine : 2 x Caterpillar C280-12TA @ 5444bhp / 1000rpm
- b) Main Generator Set : 2 x Caterpillar C18 DITA @ 450ekW / 415V / 50Hz
- c) Bow Thruster Engine : 1 x Caterpillar C32 ACERT @ 1000BHP / 1800RPM
- d) Emergency Generator Set : 1 x Caterpillar C4.4 TA @ 82ekW / 415V / 50Hz
- e) Gearbox : 2 x Reintjes LAF 4566 - Ratio 6.091:1
- f) Propulsion : 2 x Berg CPP - BCP 950, Dia. 3600mm, 19A nozzle
- g) Bow Thruster : a) 1 x Retractable HRP 5111RT - 746kW @ 13T (FP) b) 1 x Transverse HRP 5008TT - 736kW@ 10T (CP)
- h) Stern Thruster : 1 x HRP 5008 TT - 736kW @ 10 T (CP)
- i) Steering Gear : 2 x Wagner / Summer LA2 7.1-45-CB2
- j) Shaft Alternator : 2 x Stamford PM 734F @ 1250kW / 415V / 50Hz

KEEPING COMMUNICATION NETWORKS OPEN WITH CAT® POWER

The China Engineers Ltd. and Hainan Telecom Seal Deal



The Cat C175 on its way to its new home in Hainan Telecom's power room

In June 2010, The China Engineers Ltd (CEL), authorized Cat dealer for Hong Kong, Macau and Southern China, delivered 2 units of Cat C175 (2400 KW) to Hainan Telecom as contracted to secure the standby power operation in the communication center. This was not the first deal CEL has with Hainan Telecom. This repeat order came about as a result of proven Cat quality and the dedicated support provided by CEL.

Hainan Telecom Company Limited is a wholly-owned subsidiary of China Telecom Corporation Ltd. It covers domestic wire line telecommunication networks and facilities (including wireless local loops) in Hainan and a wide range of services based on wire line networks, like voice, data, video and multimedia information services. Hainan Telecom is also engaged in the settlement of international telecommunication services and other telecom-related activities such as system integration, research and development, technical services, information consulting, advertisement, manufacturing and selling communication equipment, designing and construction.

When the power requirements were publicized by Hainan Telecom, CEL put the customer's critical requirements in priority and recommended C175 as the match for the project. With the highest cost performance, C175 also represents immense power in a small package. Its design offers larger unit rating, higher power density, lower emissions and reduced installation costs. The installation and commissioning took two weeks during which time teething issues were resolved to our customer's satisfaction.

It was a win-win situation for both CEL and Hainan Telecom and bodes well for future projects.



Cat C175, commissioned and ready to work at Hainan Telecom

Upcoming Events

- **Visit The China Engineers' booth at the China Import and Export Fair (Canton Fair) from 15 to 19 October 2010 at Import & Export Fair Pazhou Complex in Guangzhou, China!**
- **Look out for The China Engineers at International Maritime Expo-China 2010, which will be held from 8 to 10 December 2010 at Import & Export Fair Pazhou Complex in Guangzhou, China.**
- **Tractors Singapore is participating in Sea Asia 2011 at the Marina Bay Sands from 12 to 14 April 2011!**



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Tractors Singapore Limited

26 Benoi Sector, Singapore 629858 Tel: (65) 6261 2222 Email: rental@tractors.simedarby.com.sg



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