

## PRESS RELEASE

### For Immediate Release

**Swire Pacific Offshore (SPO) celebrates the launch of its 8<sup>th</sup> D-Class vessel,  
*Pacific Dragon* on Good Friday.**

*Leading shipowner and operator has now completed the launching of all eight vessels in its new D-Class series of Anchor Handlers and is well-placed to meet industry demands in this important sector*

**Singapore, 21 April 2014** – Shipowner and operator, Swire Pacific Offshore Operations (Pte) Ltd (SPO) celebrated the launch of its new D-Class vessel, *Pacific Dragon* on Good Friday.

The launch and naming ceremony of *Pacific Dragon* was held at close to midnight on 17 April at ST Marine shipyard. The event was graced by Lady Sponsor, Ms Camille Gribble and attended by more than 160 working partners, employees and family members of ST Marine and SPO. Ms Camille Gribble is the wife of the Finance Director of SPO, Mr Nigel Gribble. The launch of *Pacific Dragon* marked the completion of the eight vessel D-Class series of 240T bollard pull, flexible and environmentally-friendly anchor handling tug supply vessels.

“The D-Class vessels represent a significant investment for SPO, forming a central part of our fleet expansion, re-balance and renewal strategy to meet the growing demand for large, modern, high specification, deep water offshore support vessels. We are very pleased with their range of operational capabilities and safety and technical performance in serving the needs of our customers around the world,” says Managing Director of SPO, Mr Neil Glenn.

Vessels in the D-Class series delivered to date include *Pacific Defiance* (28 February 2013), *Pacific Diligence* (3 April 2013), *Pacific Dolphin* (15 August 2013), *Pacific Dove* (3 January 2014), *Pacific Discovery* (3 March 2014), *Pacific Duchess* (6 March 2014). *Pacific Dispatch* is scheduled to be delivered in mid June 2014. *Pacific Dragon* is the last of a series of six D-Class vessels that are built by ST Marine for SPO and will be delivered by the second half of this year. Please refer to Appendix A for the Specification Sheet of *Pacific Dragon*.

“ST Marine is pleased to be the builder of six of the eight highly sophisticated D-Class AHTS for Swire Pacific Offshore. The journey is a wonderful one for us and we look forward to a continued successful partnership with Swire on their growth story,” says President of ST Marine, Mr Ng Sing Chan.

Page 2/3

Press Release

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The D-Class vessels are well-equipped with advanced technical capabilities to support the latest generation of semi-submersible rigs operating in harsh deep water environments. Built to clean-class SPS 2008 and ice notations, these Havyard-designed vessels are designed to be fuel-efficient, to reduce environmental impact in whichever roles they are deployed to perform and to enhance safety during demanding deck anchor handling operations. They possess large capacity 500 MT RRM Brattvagg winches, latest dynamic positioning technology, enhanced station keeping with independent drop down azimuth thrusters, recovery frame (ARF) and travelling cranes. The vessels also have ample cargo capacity and deck space for a wide range of other offshore applications.

Today, SPO owns and operates a diverse fleet of 85 offshore support vessels, including anchor handling tug supply vessels, platform supply vessels, ice-breaking supply vessels, anchor handling tugs, seismic survey vessels, wind-farm installation vessels, accommodation vessels and multi-purpose offshore vessels. SPO will have a fleet of 100 vessels by the end of 2015.

For pictures of the naming and launch ceremony of *Pacific Dragon*, please visit <http://swire.com.sg/Media/Gallerypage/Naming-Ceremony-Pacific-Dragon.aspx>

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#### **About Swire Pacific Offshore (SPO)**

Swire Pacific Offshore Operations (Pte) Ltd is a leading service provider to the offshore oil and gas industry with a network that spans the globe. Operating for more than 35 years, SPO has become a trusted name in the oil and gas industry. SPO has operated in Singapore since 1975 and moved its headquarters there in 1992. SPO is a fully owned subsidiary of Swire Pacific Limited. In line with its vision, "Excellence in Marine Services", strong emphasis is placed on health and safety, the environment and sustainable development. SPO and its subsidiaries operate vessels in every major oil

Page 3/3

Press Release

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exploration region outside of USA and have offices in Angola, Australia, Azerbaijan, Brazil, Brunei, Cameroon, Denmark, Equatorial Guinea, Ghana, India, Indonesia, Kenya, Malaysia, Newfoundland, New Zealand, Norway, Qatar, The Philippines, Russia, Scotland and the United Arab Emirates

For more details, visit <http://www.swire.com.sg/>

### **About Singapore Technologies Marine Ltd (ST Marine)**

Singapore Technologies Marine Ltd (ST Marine), the marine arm of ST Engineering, provides turnkey building, repair and conversion services for a wide spectrum of naval and commercial vessels. In shipbuilding, it has the proven capabilities to provide turnkey solutions from concept definition to detailed design, construction, on-board system installation and integration, testing, commissioning to through-life support. It has also established a track record in providing high engineering content shiprepair and ship conversion services for a worldwide clientele. ST Marine also provides a suite of sustainable environmental engineering solutions via its environmental engineering subsidiaries led by STSE Engineering Services Pte Ltd (STSE).

For more details, visit <http://www.stengg.com>



## M/V Pacific Dragon

- ▶ **Bollard Pull** 220-245 tonnes
- ▶ **Brake Horsepower** 17,864 BHP
- ▶ **Clear Deck Space** 650 m<sup>2</sup>
- ▶ **Winch Line Pull** 500 tonnes

# M/V Pacific Dragon

Bollard Pull	220-245 tonnes	Brake Horsepower	17,864 BHP
Clear Deck Space	650 m <sup>2</sup>	Winch Line Pull	500 tonnes

## General Information

Built	Under construction - ST Marine (Singapore), Delivery 2014
Flag	Singapore
Call Sign	9VFW7
IMO No	9457062
Classification	ABS +A1, Towing vessel, Ice Class C0, FIFI 1, Offshore support vessel, SPS, ES, +AMS, +ACCU, +DPS-2, Enviro, GP

## Dimensions

Length, overall	92 metres
Length, BP	79.8 metres
Breadth, moulded	22 metres
Depth, main deck	9 metres
Design draft	5.5 metres
Maximum draft midship	7.5 metres
GRT	6605 Tonnes
NRT	1981 Tonnes

## Capacities

Deadweight (maximum)	4300 t
Clear Deck Area	36 m x 18 m = 650 m <sup>2</sup>
Deck Strength	10 t/m <sup>2</sup>
Deck Cargo	1500 t (C.G. at 0.9 m above deck)
Fuel	1485 m <sup>3</sup> (dedicated)
	1940 m <sup>3</sup> (including combination Base Oil tanks)
Potable Water	1350 m <sup>3</sup>
Ballast Water / Drill Water	2965 m <sup>3</sup>
Brine / DMA / Glycol / Liquid Mud	860 m <sup>3</sup> - s.g. of 2.5 t/m <sup>3</sup>
Dry Bulk	236 m <sup>3</sup> (8334 cubic feet) (in 4 tanks)
Ship's Stores	Freezer (-25 degrees Celsius) - 25 m <sup>3</sup>
	Cold Room (+4 degrees Celsius) - 25 m <sup>3</sup>
	Provisions store - 90 m <sup>3</sup>

## Machinery

Main Engines	4 x 4466 BHP = 17,864 BHP, TIER II compliant
Propulsion	4 x MAN 9L 27/38 GO alphasonic CPP propellers in MAN nozzles (Reintjes twin in single out reduction gearbox)
Azimuth Thruster	1 x 883 kW (1200 BHP) Azimuth drop-down thruster, 15.0 t thrust
Bow Thrusters	2 x 883 kW (1200 BHP) Brunvoll tunnel thruster, 13.0 t thrust
Stern Thrusters	2 x 883 kW (1200 BHP) Brunvoll tunnel thruster, 13.0 t thrust
Shaft Generators	2 x AEM, 2800 kW, 3500 kVA each, 440V, 60 Hz
Auxiliary Generators	1 x Caterpillar diesel generator, 1425 kW, 440V, 60 Hz capable of driving FiFi pump, Azimuth drop-down thruster, TIER II compliant

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Emergency Generators 1 x Caterpillar diesel generator, 350 kW, 440V, 60 Hz (Emergency / Harbour Generator), TIER II compliant

### Towing and Anchor Handling

Bollard Pull	220 - 240 ton without Azimuth thruster
Main Winch	Rolls Royce Brattvaag waterfall type winch, 3 drums (1 x SL500WX and 2 x BSL400WX), all drums provided with remote controlled spooling gears
Load Capacity	1 x 500 t and 2 x 400 t
Brake Capacity	600 ton drum's 1st layer
Tow Drum Dimension	2800 x 5000 mm diameter / 5500 mm length Socket comp 2800 x 5000 mm diameter / 900 mm length with 700 mm split opening
Tow Drum Wire Capacity	13,600 m of 76 mm wire / 9800 m of 87 mm wire / 1900 m of 8" rope Load capacity - 1st layer 500 t @ 15 mtr/min
AH Drum Dimension	AH Drum SB 1500 x 3750 mm diameter / 2500 mm length Load capacity - 1st layer 400 t @ 20.1 mtr/min AH Drum PS 1500 x 3750 mm diameter / 2000 mm length with socket compartment 1500 x 3750 mm diameter / 900 mm length Load capacity - 1st layer 400 t @ 20.1 mtr/min
AH Drum Wire Capacity	AH Drum SB 4100 m of 76 mm wire / 3100 m of 87 mm wire AH Drum PS 3200 m of 76 mm wire / 2450 m of 87 mm wire
Secondary Winch Dimension	1500 x 4500 mm diameter / 4500 mm length plus 1100 mm length socket comp.
Secondary Winch Capacity	1600 mtr of 8" rope
Chain Gypsy Cable Lifter	2 x 84 mm, 2 x 76 mm
Rig Chain Locker	624 m <sup>3</sup> chain capacity (in 4 lockers of 156 m <sup>3</sup> each)
Stern Roller	Rolls Royce double stern roller, 2 x 3 m length x 4.5 m diameter, SWL 750 t (Environmental friendly grease lubricated). Anchor Recovery Frame: Odim, Max. Dynamic Forces: Wire Tension 300 t Transversal Load 75 t Deployment Speed 80 seconds
Tow Pins / Guide Pins	Karmoy 2 sets of combined Towing Pin and Karm Forks, each unit comprises one pair of tow pins and one fork, SWL 650 t. Stop Pins (Norman Pins) with wire stopper, roller: SWL @ bottom 230 t, SWL @ top 100 t
Wire Chain Stopper	2 x 650 t
Popup Pins	2 x hydraulic SWL top 100 t, SWL bottom 230 t
Spare Reel Capacity	1500 mtr of 76 mm wire

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### Deck Machinery

Tuggers	RRM, 2 x 24 t, capacity 600 m of 76 mm wire each; Locally, remote, portable-wireless control. RRM, 1 x 17t, capacity 200 m of 25 mm wire each; Locally, remote, portable-wireless control.
Capstans	RRM, 2 x 15 t with warping head and drum; Drum capacity 45 m x 20 mm wire; Locally, remote, portable-wireless control.
Windlass	RRM combined windlass / mooring winch Duty on warping ends, 13 t @ 0-15 m/min, light line 0-48 m/min. Duty on cable lifters, nom pull 13.6 t @ 0-12.2 m/min, max pull 20.4 t @ 0-11.3 m/min. Duty on mooring drums, two de-clutchable mooring drums, diameter drum 640 x 1200 x 1000 length, stowing capacity 230 m of 60 mm rope, duty on mooring drums 19 t @ 0-12 m/min, 2 t @ 0-41 m/min, lowering 0-43 m/min.
Bow Mooring	See Windlass
Smit Towing Bracket	1 x 300 t
Crane Capacity	RRM 2 x cargo rail double jib crane max. working radius 14.3 m, min. working radius 3.2 m SWL of 3 t @ 10 - 14.3 m SWL of 5 t @ 3.2 - 10 m 1 x provisions crane, knuckle type, capacity 5 t @ 15 m radius. Winch hook travel of up to 1000 m

### Electronics

Main Radar	Furuno FAR 2137 S Band 10 cm ARPA, 21"
Auxiliary Rada	Furuno FAR 2117 X Band 3 cm ARPA, 21"
Auto Pilot	Tokimec PR 6114-ZZ
Gyro Compass	Tokimec TG 8000
Magnetic Compass	Tokimec Reflector Magnetic Compass
Echo Sounder	Skipper GDS 102, dual frequency 50 kHz and 200 kHz
DGPS	Furuno GP-150
Anemometer	Gill Windobserver, ultra sonic
Speed Log	Furuno DS-80 Doppler Speed log
Communications	Radio Plant Furuno RC-1800T 250 W GMDSS Dual C with SSAS & LRIT compliance
Weather Fax	Furuno FAX-408
AIS	Furuno FA-150
Voyage Data Recorder(VDR)	Furuno VR-3000 VDR
VHF	Furuno FM 8800S semi duplex marine VHF, Furuno FM 8800D full duplex marine VHF

### Discharge Pumps

Fuel Oil	1 x 150 m <sup>3</sup> /hr - 9 bar (90 m head)
Base Oil	1 x 150 m <sup>3</sup> /hr - 9 bar (90 m head)
Dirty Oil	1 x 9 m <sup>3</sup> /hr - 2 bar
Potable Water	1 x 150 m <sup>3</sup> /hr - 9 bar (90 m head)

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Ballast / Drill Water	1 x 150 m <sup>3</sup> /hr - 9 bar (90 m head)
Liquid Mud	1 x 75 m <sup>3</sup> /hr - 18 bar
Brine / Mud	1 x 75 m <sup>3</sup> /hr - 18 bar
Dry Bulk	50-80 t per hour
Cargo Flow Meters	Fuel Oil, base oil and fresh water
Hose Connections	All systems have 5" female camlock couplings with all liquid cargo discharge points installed capable of fitting "Avery Hardoll Dry Break Couplings".

### Performance

Speed / Fuel Consumption	<ul style="list-style-type: none"> <li>a) Economical (4 engines), 9.8 knots (50% propeller pitch) - 21.2 m<sup>3</sup>/day</li> <li>b) Economical (4 engines), 13.2 knots (50% MCR) - 35 m<sup>3</sup>/day</li> <li>c) Economical (2 engines), 13.5 knots (100% MCR) - 36.7 m<sup>3</sup>/day</li> <li>d) Max speed (4 engines), 17.5 knots (100% MCR) - 72 m<sup>3</sup>/day (under towing conditions)</li> </ul>
In Port	Approx. 1-2 t/day

### Dynamic Positioning

Type	Duplex C series from Converteam
Reference Systems	Guidance Navigation RadaScan Veripos DGPS HPR prepared
Control Modes	Joystick manual/auto heading, Mixed axis mode, Auto pilot mode, Ship Follow, ROV follow, Auto Track mode, Auto Sail mode, Simulation, Model Control, Dynamic Positioning
Joystick	Independent Joystick Converteam

### External Fire Fighting

Capacity	2400 m <sup>3</sup> /hr, independent from propulsion engines
Monitors	2 x 1200 m <sup>3</sup> /hr
Throw Length	120 m
Throw Height	50 m
Drenching System	Installed

### Standby Rescue Equipment

- 1 x MOB boat MP-660 Springer with 230 HP inboard engine and water jet propulsion. Max. speed including crew 32-34 knots, with boat davit for quick launch & recovery.
- Rescue zone on both Port and starboard side Main Deck.

### Environmental Features

- All mud tanks of free flowing design with external stiffening and sloped floors. Mud tanks have their own recirculating system with internal spray nozzles.
- Oily water separator with 15 ppm monitor but can operate below 5 ppm according to IMO MEPC 107(49).



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3. Sewage Treatment Plant according IMO MEPC 159(55).
4. Cargo loading & discharge station provided with save all to inboard tank.
5. Stern Roller fitted with environmental friendly grease system.
6. Galley macerator

### Accommodation

Berths	29 x 1 man (single) cabins 4 x 2 man (double) cabins 37 persons (Total) 1 x Client's office 1 x Messroom 1 x Dayroom 1 x Conference room 1 x Hospital
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### Ice Capability

1. ICE Class C0

### Anti-Pollution

Dispersant Tank	17 m <sup>3</sup>
Spray Booms	Fixed installed spray nozzles for neat and dilute, PS and SB.

### Miscellaneous

1. Deck strengthened for heavy cargoes 10 t/m<sup>2</sup>.
2. Pneumatic bulk handling system, capable of discharging 2 type of dry bulk simultaneously.
3. Provided with 3 Xenon 2000 watt search lights.
4. Wood sheated main deck except for aft area which is steel plated for anchor handling activities.
5. Provided with anchor recovery frame suitable to launch and recover torpedo anchors.
6. CCTV monitoring system for winches and deck.
7. ROV Garage - available space to facilitate ROV equipment (L x W x H: 9 x 5 x 5.5 m)