

NEW LNG TERMINAL TUGS BEGIN INDIAN OPERATIONS

One of India's largest tug owners, Ocean Sparkle, has added two more tugboats to its fleet to assist in one of the nation's new gas import terminals. *Ocean Leader* and *Ocean Legacy* were built in 2017 by Cheoy Lee Shipyards in Hong Kong from a design that provides high bollard pull and fast speeds with stability performance and more than 300 m³ tank capacity.

These 32 m tugs were built to a RAMPARTS 3200 CL design produced by Robert Allan and modified for this project by Cheoy Lee. They started operating at a liquefied natural gas (LNG) terminal in Dahej, India, in December and increased the Ocean Sparkle tugboat fleet to 71.

They were constructed to Lloyd's Register requirements with notation 100A1Tug for seagoing service and efficient anchoring and mooring equipment. They also have LMC Lloyd's Machinery Certificates and notations for fire-fighting and unrestricted service.

Ocean Leader and *Ocean Legacy* have moulded beams of 12.4 m and maximum draughts of 5.3 m. During sea trials they both exceeded all performance expectations, said Robert Allan,

delivering 72 tonnes of bollard pull and free running speeds of 13 knots.

Their main propulsion includes a pair of Niigata 6L28HX diesel engines, each rated at 1,838 kW at 750 rpm. These each drive a Niigata ZP-41 fixed pitch propeller with a high grade nozzle Z-drive unit. These are installed in an azimuthing stern drive configuration.

The electrical plant comprises two diesel generator sets, each with a power output of 120 kWe. *Ocean Leader* and *Ocean Legacy* also each have a 50 kWe generator set for operations when in harbour. They each have a FiFi1 rated fire-fighting system with a dedicated engine below deck and monitors located on the aft side of the deckhouse.

Ocean Leader and *Ocean Legacy* have a series of ship-handling and vessel protecting fenders. At their bows, there are two rows of 800 mm by 400 mm cylindrical fenders at the main deck level and a W-shaped fender of 480 mm by 300 mm below deck. There is a W block type fender of 500 mm by 450 mm at the stern. Along the main deck sheer line and along the knuckle there is a hollow D-shaped fender of 300 mm by 300 mm. According to AIS data, both tugs are operating at the LNG terminal

Ocean Sparkle has added two Cheoy Lee-built and Robert Allan-designed tugs to its fleet for handling LNG carriers at a terminal in Dahej, India

at Dahej.

There are four LNG terminals in India, these are:

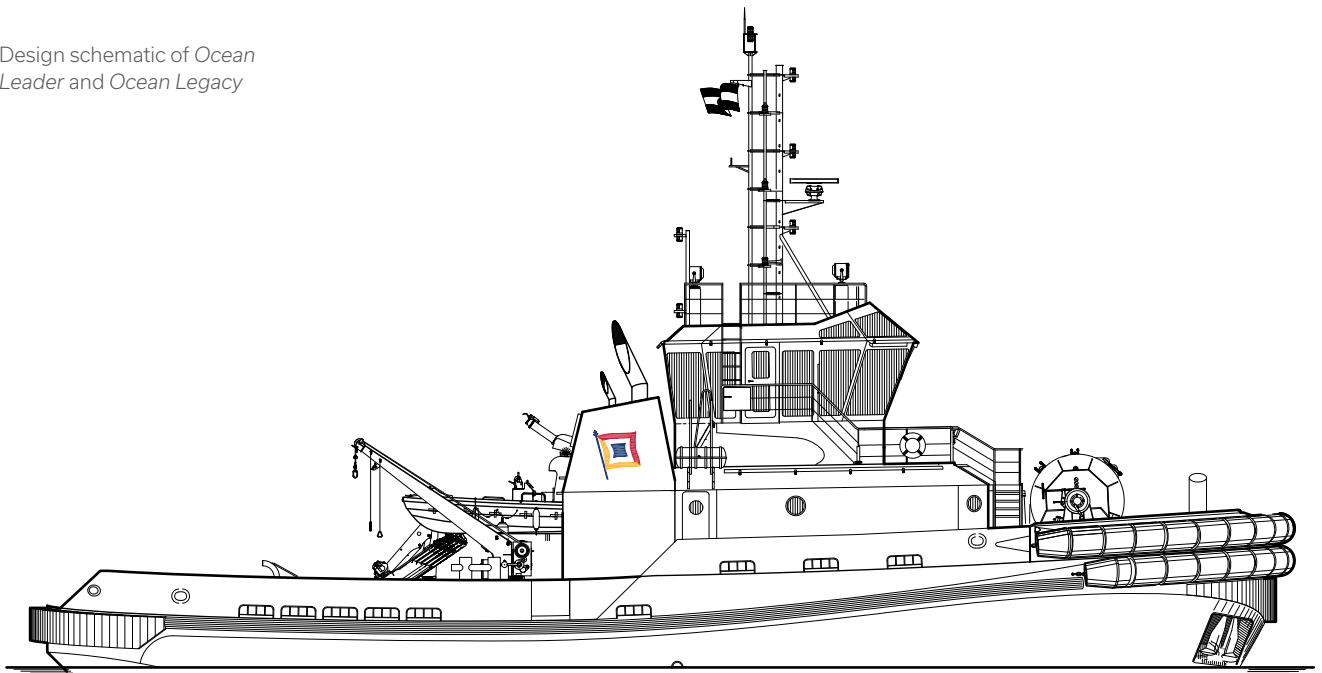
- Dahej and Hazira (both in Gujarat state)
- Dabhol (Maharashtra) and
- Kochi (Kerala).

Ocean Sparkle owns India's largest fleet of harbour tugs and operates in the majority of that nation's major ports and terminals and in Sri Lanka. Its fleet is spread across a total of 28 ports and terminals, including liquefied natural gas (LNG) terminals, oil terminals, refineries and chemical ports.

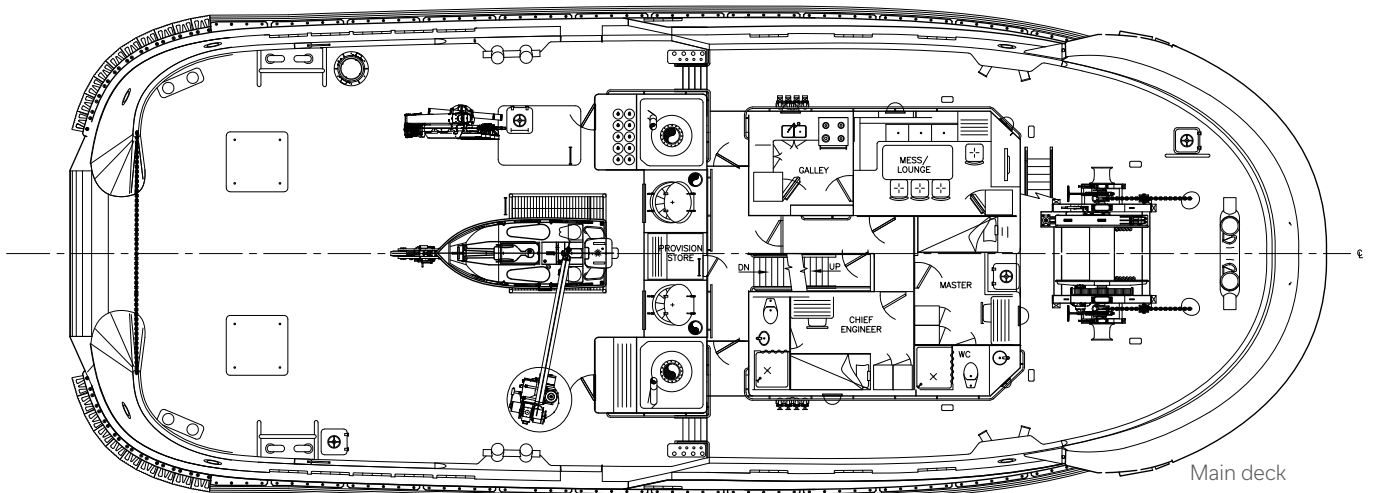
They include Mumbai, Chennai, Mormugao in Goa, Pipavav in Gujarat, Ennore in Tamil Nadu, Jawaharlal Nehru and Cochin. Ocean Sparkle also provides support services to Reliance Port and Terminals in Jamnagar and Gujarat and operates in the Sri Lankan ports of Colombo and Hambantota.

This Hyderabad-headquartered company also maintains navigation aids, provides radio communication and oil spill recovery services. It conducts port dredging and supports ship-to-ship (STS) transfer operations, and floating production storage and offloading systems. Some of these, along with harbour support operations, are conducted in partnership with

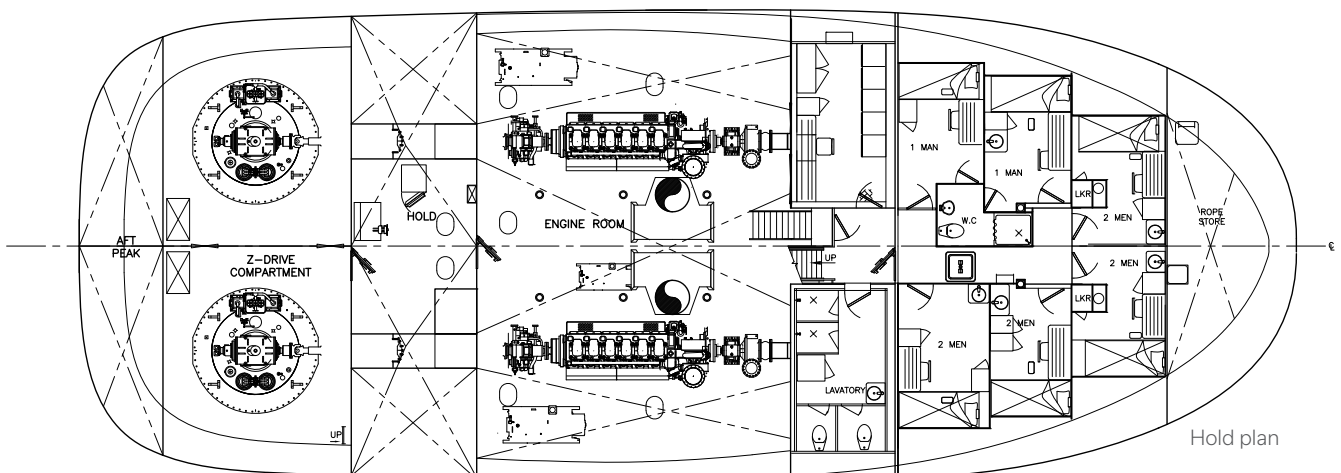
Design schematic of *Ocean Leader* and *Ocean Legacy*



Outboard profile



Main deck



Hold plan



Ocean Sparkle's new escort tug *Ocean Legacy* has 73 tonnes of bollard pull

Singapore-based port services group PSA Marine.

This includes harbour towage in Mormugao and Ennore ports and STS operations for Gujarat Maritime and marine services at the LNG terminal at Dahej for Petronet. Ocean Sparkle also has a partnership with Oman-based Khimji Ramdas Shipping to support Oman Drydock Co in the port of Duqm in Oman.

Since being established in 1995, Ocean Sparkle has built up a diverse fleet of 71 tugs, including 62 azimuthing stern drive vessels with steerable rudder propulsion, six tractor

tugs with steerable rudders and three conventional twin screw tugs – *Ocean Legend*, *Ocean Mistique* and *Ocean Victor*. These tugs have varying towage capacities ranging from 30 tonnes to 70 tonnes of bollard pull.

They are equipped with deck machinery for ship towage and fire-fighting equipment for emergency response requirements. Ocean Sparkle has planned-maintenance systems covering all of the tugs and vessels in its fleet.

It also operates eight pilot boats and five mooring assistance vessels, plus six cutter suction dredgers »»

OCEAN LEADER AND OCEAN LEGACY PARTICULARS

Owner:	Ocean Sparkle
Builder:	Cheoy Lee
Class:	Lloyd's Register
Designer:	Robert Allan
Design:	RAmparts 3200 CL
Bollard Pull:	73 tonnes
Maximum speed:	13 knots
Length, oa:	32 m
Beam, mld:	12.4 m
Draught, max:	5.3 m

» and five barges. Besides, the company has its own training and development centre to support its own fleet requirements and to provide services to others. This includes simulators for teaching tugboat operations, ship manoeuvring and berthing in different ports and maritime conditions.

Cheoy Lee has built 33 tugboats to the Robert Allan CL series and in November it gained orders for three of the designer's Z-Tech 5000 design tugboats, two for PSA Marine and one for South China Towing Co, which is a joint venture between PSA Marine and shipowners Mitsui OSK Lines and Tokyo Kisen.

This hull design and deck layout are said to combine

advantages of modern azimuthing stern drive tugs and tractor tugboat designs. Cheoy Lee expects construction of these three tugs will be completed in Q4 2018.

Its shipyards also produce mooring launches. Its latest completion was *Eimeo*, for Half-Tide Marine. It was built to another Robert Allan design, the RAscal 1600 mooring launch. It started operating at the Dalrymple Bay coal terminal, south of Mackay in Queensland, Australia, in December.

In October, Cheoy Lee turned to Macduff Ship Design for a 14 m mooring and towage workboat that is being built for line handling and harbour tug duties.

NEW TUG TANK CAPACITIES:

Fuel oil:	230 m ³
Potable water:	48 m ³
Lube oil:	3 m ³
Hydraulic oil:	0.7 m ³
Sludge:	3.5 m ³
Oily water:	4.5 m ³
Sewage:	4.5 m ³
Grey water:	1.5 m ³
Foam:	10 m ³

OCEAN SPARKLE FLEET

62 ASD tugs
8 pilot boats
6 tractor tugs
6 dredgers
5 barges
5 twin screw tugs



Ocean Leader has a maximum speed of 13 knots and draught of 5.3 m