LNG

▸**LNT-45:** The new design features the LNT A-Box containment system built separately from the vessel.
Photo: LNG NEW TECHNOLOGIES

New LNG vessel design aims to target niche regional markets

David Wu, the man behind the latest new LNG containment design, wants to build up to 20 ships of 45,000 cbm that he says will be cheaper, simpler and more versatile than anything on the market

Bob Rust **Beijing**

David Wu's Landmark Capital plans to order and operate a fleet of 10 to 20 medium-size LNG carriers based on a proprietary design that it is claimed enables any standard shipyard to build LNG carriers.

Wu, a brain surgeon turned shipowner who is well known in China through offshore and shipping investment projects, tells TradeWinds that he has been working behind the scenes on the project since Norwegian designers brought him the idea a little over four years ago.

"It is the first new LNG shipping system in 40 years," he said. "That is what drew me to the project, that there finally will be a new LNG carrier on the market."

In fact, the new system is one of several new designs that have emerged for LNG tank technology recently. In the past few months, South Korean utility giant Kogas contracted two newbuildings fitted with its in-house-designed KC-1 system and Braemar LNG hopes to see a commercial application of its new flat-panel, semi-membrane, prismatic-shaped (FSP) IMO-type B LNG containment system this year.

Landmark-controlled LNG New Technologies (LNT), based in Singapore and headed by Norwegian managing director Kjetil Sjolie Strand, is touting the LNT-45 ship design and LNT A-Box containment system as cheaper, simpler and quicker to build than currently existing medium-size LNG carriers, and on the operational side as easier to inspect, maintain and repair because of fully accessible primary and secondary barriers. They are also claimed to be better suited to ship-to-ship (STS) transfer of cargo from larger vessels and other aspects of local and regional trading.

▸**LANDMARK PRINCIPAL:** David Wu.
Photo: BOB RUST

A 20-ship fleet of new-design carriers would involve an investment in the $1.5bn range and would enter a medium-size vessel market that is underbuilt and aging.

INITIAL ORDER IS DECIDER

But the big plan depends on the success of LNT's initial order for one 45,000-cbm ship and one option at Xiamen Shipbuilding Industry for between $80m and $85m apiece. The firm unit is to be delivered in 2017, and Wu thinks the building time can be cut from 30 months to 25 or less for the option vessel.

LNT has a co-operation agreement with Xiamen for further ships but can go to other yards as well if need be because the new design does not pose the same technical challenges as the current LNG designs.

The three LNT A-Box tanks, so called after the self-supporting IMO-type-A tank used in LPG carriers, are built separately from the ship in a parallel process and barged to the yard for installation after the hull is already complete and the main engine is installed.

Under the shipbuilding contract signed last week, the yard's price is to be fixed within three months but Landmark and Xiamen are negotiating with vendors in hopes of bringing that figure down from about $85m now to around $80m per ship, and further as more such ships are built.

"In the future maybe $75m to $80m will be a reasonable price," said Wu. "If we compare with membrane ships of the same size, we can achieve about a 20% cheaper price."

Wu tells TradeWinds that Landmark plans to operate the ships itself through Singapore-based LNT and trade them regionally from Malaysia and Indonesia to Chinese discharge ports but also along the Chinese coast and up the Yangtze River. No commercial arrangements are in place yet but Wu says his company is talking to several end-users.

The design can be modified to different sizes but Wu expects the prototype size of 45,000 cbm will make up the majority of the fleet.

"It depends on the customers," said Wu. "Some are asking for 60,000 cbm, some for 30,000 cbm. But the advantage of our design is that the 45,000-cbm ship has the same dimensions as an ordinary 30,000-cbm LNG carrier, so it can go to the same places carrying 50% more cargo."

The 45,000-cbm model would be able to trade as far upriver as the bridge at Nanjing but Wu says some customers are even interested in a ship of 15,000 cbm, which would go much further up the Yangtze, to Wuhan. That depends, however, on the progress of a Chinese government plan to dredge a stretch of the river between Anhui province and Wuhan.

OPERATIONAL ADVANTAGE

Unlike membrane-type LNG carriers, the LNT-45 with its separate tanks will be able to load and unload separate partial cargoes, something that would make it easier to adapt to domestic distribution of cargoes imported by larger ships, say the project sponsors. Tanks can also take partial loads because of an internal structure that mitigates "sloshing".

Shanghai-based Landmark is a Sino-Norwegian partnership of Wu and Norwegian fellow investor Paal Utvik. But Wu has been more closely involved in the LNT project, which dates to before Utvik joined the company. Besides backing individual shipping and offshore projects, Wu and Utvik also participate through Landmark in start-up Maritime & Merchant Bank.

LUCKY LNG BREAK FOR XIAMEN

Irene Ang **Singapore**

Xiamen Shipbuilding Industry diversified into the LNG market as a way to survive in the challenging shipbuilding market.

A yard official tells TradeWinds that work started more than three years ago on efforts to break into the sector.

But he describes how it happened as more of a coincidence.

"We were originally focused on car/truck carriers [PCTCs] and offshore vessels," he said. "At around that time, Landmark Capital approached us over these LNG newbuildings and we thought the shipowner's idea was feasible."

He added: "The PCTC is a niche sector, demand for ships is limited and more shipyards are able to build them. As for the offshore business, we joined the sector late and we could only construct Xiamen to focus only on PCTCs and offshore ships."

The official adds that constructing small LNG carriers would suit his company as the yard has limited space. It is equipped with one drydock and one slipway and can only construct vessels up to panamax size.

"We cannot build large tankers, bulkers or containerships. The only way out is to get into building

▸**XIAMEN SHIPBUILDING INDUSTRY:** Tough market