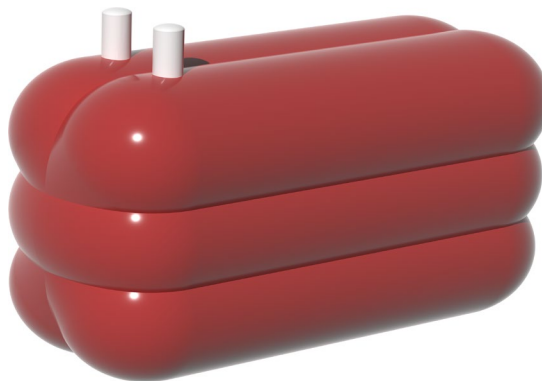


Karbon's multi-cargo 6Lobe Tank for LCO₂ achieves Approval in Principle from DNV, as the world's largest pressurised cargo tank for liquefied CO₂ as well as LNG and ethane

Karbon CCS Global Ltd has received Approval in Principle (AiP) from DNV for its 6Lobe Tank, a six-lobe type C cargo tank of up to 28,700 m³ designed to alternate between cargoes of liquefied CO₂ (LCO₂), LNG and ethane on board large ocean-going combination carriers.

6Lobe Tank



The 6Lobe Tank can help carbon capture and storage reach utility scale by transporting LCO₂ in bulk over intercontinental distances. LCO₂ carriers based on 6Lobe Tanks would have larger capacity than existing carriers, and would operate as combination carrier carrying cargo in both directions. Japan and Korea, for example, have limited domestic geological CO₂ storage, and import large volumes of LNG from Australia, Malaysia and the Persian Gulf, which have CO₂ storage capacity or would pay for CO₂ for enhanced oil recovery (EOR).

Very Large Karbon Carrier



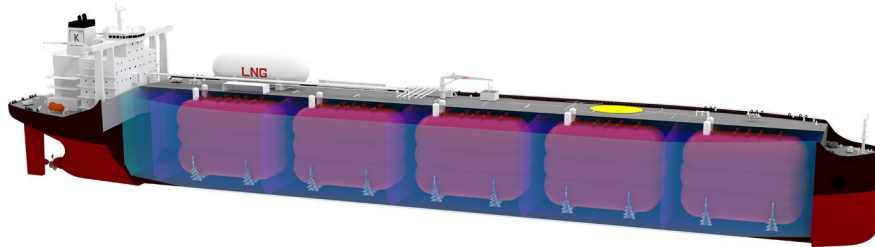
The AiP covers the 6Lobe Tank and its installation on board a large carrier for voyages alternating between LCO₂, LNG and ethane. DNV's review addressed cargo containment capacity, design pressure and temperature, material suitability, safety systems, and compliance in principle with the IMO IGC Code and DNV class rules for gas carriers. Front-end engineering design and the AiP study were completed by the naval architecture and marine engineering firm Korea Maritime Consultants Co., Ltd. (KOMAC), with input on tank design and materials from steel specialist K-Special Steel (KSC).

The 6Lobe Tank is larger than any pressurised type C tank currently in service. It carries alternating cargoes of LCO₂, LNG and ethane at temperatures from -163°C to -55°C, with a minimum tank design pressure of 13.06 bar. It can also be configured to carry ammonia (with different steel and tank configuration) or LPG. The tank is the basis of the Very Large Karbon Carrier (VLKC), built on a VLCC hull, holding 278,300 m³ of cargo at 254,400 tonnes of cargo deadweight - in line with the largest LNG carriers in service, and around three times the capacity of any LCO₂ carrier yet announced. On a route

such as the Persian Gulf to Korea, a vessel would deliver LNG and return with LCO₂ for EOR in Gulf oilfields.

6Lobe Tanks could also be installed in the centre compartments of Suezmax and Aframax combination carriers, with crude oil or oil products in the wing tanks.

Suezmax Combination Carrier Concept



Mathias Sørhaug, Business Development Director CO₂ Shipping, DNV Maritime, said: “Scale and efficiency are the key drivers for reducing the cost of CCS. Large carriers capable of transporting liquefied CO₂ on one leg and petroleum gases on the return voyage can unlock new value chains, improving asset utilization and overall project economics. This AiP demonstrates that Karbon’s 6Lobe Tank concept is technically feasible within an agreed framework of requirements, and we are pleased to have supported Karbon in reaching this important milestone.”

Nils Høy-Petersen, Chief Technology Officer of Karbon CCS Global Ltd, said: “Karbon’s high-capacity multi-cargo 6Lobe Tanks and combination carriers complement its patented cost-efficient utility-scale Karbon Process for CO₂ capture using non-toxic potassium carbonate solvent. The combination of cost-effective CO₂ capture and transport could stimulate Carbon Capture and Storage initiatives globally. DNV’s independent assessment of Karbon’s transport concept gives cargo owners, shipowners and yards a verified basis on which to plan.”

An Approval in Principle is an independent evaluation of a concept based on a predefined framework of requirements. It confirms the feasibility of the design and ensures there are no significant technical obstacles hindering its implementation.

About Karbon CCS Global Ltd

Karbon has developed and patented industrial-scale carbon capture technology spanning CO₂ capture and shipping. Its capture processes compress industrial exhaust gas with integrated gas turbine technology, allowing energy-efficient CO₂ extraction with inexpensive, non-toxic, and environmentally benign potassium carbonate solvent. Modular and scalable Karbon trains operate independently of their host plants, draw no external power or heat, and capture CO₂ at an industry-low cost per tonne and are validated in FEL-1 Feasibility and FEL-2 Pre-FEED studies by Kiewit Corporation.

Karbon is privately held and develops its technology through licenses and partnerships. It is in discussions with host plants worldwide regarding CO₂ capture. With the outline design and DNV Approval in Principle in hand, Karbon is presenting the 6Lobe Tank and the Karbon Carrier to shipyards, shipowners, and cargo owners. Karbon is open to partnerships and investment across its capture and shipping solutions.

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