Shell and GTT join forces to develop liquid hydrogen technologies

Energy giant Shell will cooperate with France’s GTT, a world leader in gas containment systems, to develop liquid hydrogen (LH2) transport technologies in a European riposte to Asia’s early lead in this new seaborne trade.

The cooperation agreement is part of Shell’s strategy to develop a hydrogen energy supply chain by creating scalable and safe liquefied hydrogen shipping technologies. This includes the development by GTT of a preliminary LH2 carrier design as well as an LH2 cargo containment system for a mid-size LH2 carrier.

“The ability to transport very large volumes of hydrogen in liquefied form, at -250°C, is one of the technological challenges that must be met in order to establish a reliable, efficient, and competitive hydrogen supply chain,” GTT explained.

Carl Henrickson general manager of technology, innovation and digitalisation for Shell Shipping and Maritime, stated: “Shell’s strategy is to become a net zero carbon energy supplier by 2050 or sooner, in line with society, and we see that innovation with hydrogen and hydrogen...
technologies will play a major role in this ambition. Therefore, safe and efficient bulk transport of liquid hydrogen will be a critical enabler and we believe GTT bring key expertise to this project that will ultimately help to accelerate and unlock this future energy source.”

Philippe Berterottière, chairman and CEO of GTT, declared: “Our cooperation will allow a new technological breakthrough in the shipping world with the safe and scalable deployment of liquid hydrogen transport. GTT R&D teams are particularly determined to push back technological frontiers and making decarbonization a reality.”

The French company has come to dominate the LNG seaborne trades this century, and, as earlier, is looking at Japan as a rival in the nascent LH2 trades. Japan’s Kawasaki Heavy Industries has recently dispatched the world’s first LH2 carrier to start on regular route between Australia and Japan while rival shipbuilders in neighbouring South Korea are readying their own hydrogen carrier designs too.