

# LNG TANKS

ESPT offer design, Supply and construction of Pre-stressed [ Posttensioned ] LNG Tanks includes supply of Ultra Low Reinforcement includes necessary construction equipments and Experts that support Contractors throughout the project.

LNG storage tanks normally consist of a steel inner container and concrete outer container which are designed and built by different specialist firms. The design and, more specifically, the fabrication/construction cannot be carried out separately.

EN 14620 Part 2 [14] specifies the general requirements relevant to the materials, design, fabrication, welding methods, welding, construction and installation of metal components for tanks. The types of steel required are defined depending on the liquefied gas to be stored, and hence the respective temperature and type of tank.

- The permissible stresses in plates and weld seams during normal operation and testing are defined, also the minimum thickness of the metal shell, which is 40mm for butane and propane tanks, 50 mm for ethane and LNG tanks.

Prestressing steel, anchorages and ducts must comply with EN 1992-1-1. Furthermore, it is necessary to verify that the prestressing steel and the anchorages are suitable for the low temperatures to which they will be exposed. The section on conventional steel reinforcement distinguishes between temperatures above and below  $-20^{\circ}\text{C}$ , as in the preceding standard, BS 7777. Conventional reinforcement for design temperatures that do not drop below  $-20^{\circ}\text{C}$  during normal operation or abnormal conditions only has to comply with EN 1992-1-1.

