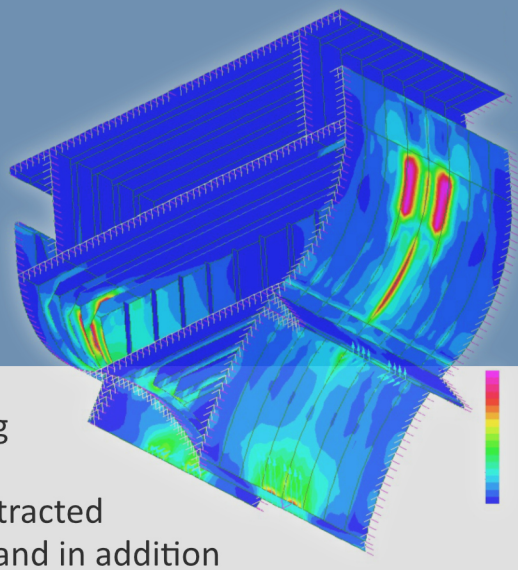
ARGO
Engineering Solutions Ltd

Engineering for Weight Critical
Marine Structures in Composites & Metals

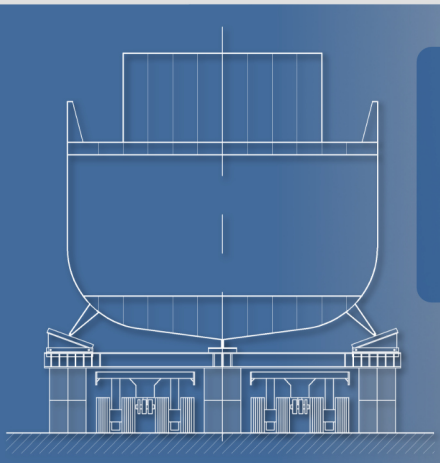
CASE STUDY – Kittiwake Lightship Lifting & Cradle

PRIMARY TASKS - Design & Analysis

- *Review lifting & docking arrangements for vessel movement from water to land*
- *Review vessel scantlings & condition*
- *Assess vessel strength for strop lifting*
- *Design cradles for dockside support & vessel movement*



The lightship Kittiwake was one of the last lightships operating in Irish waters, having been built in 1959, withdrawn from service in 2005 and moored in Dublin. McCarthy Browne contracted Argo to review lifting & docking arrangements for the vessel, and in addition design cradles for moving the vessel dockside on self-propelled modular transporters (SPMTs).



For lifting, Argo modelled sections of the hull complete with internal structure. FE models were then used to assess the capacity of the vessel to cope with the compressive stress from strap loads. The results of the FE analysis allowed Argo to identify the optimal lifting positions & methodology to be used.

After the lift, the vessel was placed onto a custom fabricated cradle. With no hull lines available and bilge keels, Argo were required to produce a design that could be quickly adjusted to match the hull geometry.

Securely locating the vessel on the cradle provided the owner with the flexibility of either storing the vessel quayside or moving it on modular transporters.

CLIENT:

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