



**MALIN
ABRAM**

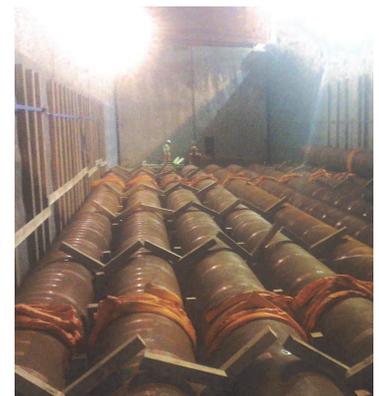
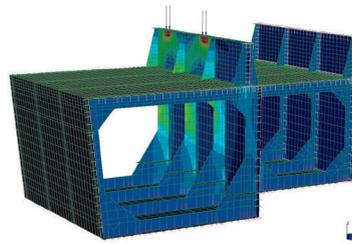
**CONTRACT
RECORD** M102-LB05-CR-01

ENGINEERING DESIGN

aircraft carrier
alliance

CONTRACT RECORD M102

- **Scope:** To provide all technical support associated with the delivery of various hull sections
- **Client:** Aircraft Carrier Alliance
- **End Client:** UK Ministry of Defence (MOD)
- **Cargo:** Aircraft carrier sections weighing approx 1,815 Te
- **Vessels:** Woolston Barge
- **Locations:** Govan (roll-on), Rosyth (roll-off)
- **Personnel Provided:** 8
- **Challenges:** The cargo was very high sided, meaning COG was very high above the deck – high rotational forces. Due to the length of barge and weight of cargo, longitudinal strength of barge was tested and the spine almost snapped under to the loading – the barge can be seen visibly bowing under the weight of cargo during mob. Seafastening design was also a challenge due to the height and mass of the cargo, and the resultant location of COG - however all challenges were successfully overcome for a successful contract.

**Figures:**

- Barge departing River Clyde - Greenock [1]
- FE Model of Barge [2]
- Ring U - Typical Transverse Roll Braces - Actual [3]
- TBC [4]
- TBC [5]