

**MALIN
ABRAM**

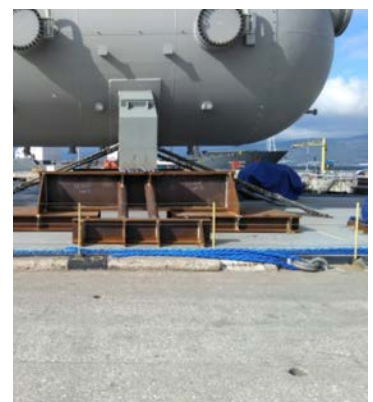
**CONTRACT
RECORD** M356-BG0025-CR-01

**STOWAGE PLAN, SEA FASTENING DESIGN AND
ENGINEERING SUPPORT**



CONTRACT RECORD M356

- **Scope:** To provide engineering assistance for the transportation of 4 off pressure vessels on 2 off sister barges
- **Client:** Bertling
- **End Client:** Bertling
- **Cargo:** 900Te Off Pressure Vessels
- **Vessel:** Simmar Star Barge
- **Locations:** Gemlik, Turkey – CaTro, Kazakhstan
- **Personnal Provided:** Project Engineer (8)
- **Challenges:** The pressure vessels could only be supported on two of their cradles, therefore at 900Te split between two cradles (450Te per cradle), saw very large loads being applied to the deck. A challenging, tree type grillage had to be designed spreading the load from a beam into load spreading mats on deck. As can be seen from the picture the SPMT's took up a large width of the cradles and therefore grillage had to be designed outside the trailer path. This also resulted in very little room for error when positioning the grillages as <10cm clearance was available between trailers and grillages.



Figures:

- Pressure vessel loaded and secured [1]
- Limited clearance during load out [2]
- Pressure vessel on trailer [3]
- Pressure vessel secured on Barge deck [4]
- Grillage Installation [5]