

## Project Logistics

# Case Study: Project TAKRAF

How do you transport a fully assembled 700 ton ship loader and a 217 ton tripper car safely? Under the careful guidance of the Kuehne+Nagel Project Logistics experts, this technically demanding heavy-lift transportation was executed safely and to the customer's full satisfaction.



## Case Study: Project TAKRAF

**Industry:** Industrial Projects

**Customer:** TAKRAF

**Cargo:** Ship loader of 700 tons and tripper car of 217 tons

**Dimensions (L x W x H):** 37 x 25 x 47 m ship loader and 93 x 22 x 23 m tripper car

**Total volume:** 917 freight tons

**Location:** China to Far East Russia

### Project Logistics' scope of work:

- Extensive engineering work in close collaboration with the client including stowage planning, lifting, lashing, sea fastening design, and motion analysis calculations
- Deployment of a chartered heavy-lift vessel, carefully selected to meet the technical characteristics of the cargo
- Ensuring a systematic HSE management with the customer and sub-contractors
- Receiving the cargo in the port of Nantong via Self-Propelled Modular Transporters (SPMTs) alongside the moored heavy-lift vessel
- Loading including lashing and sea-fastening
- Ocean voyage to the final destination in Far East Russia

### Challenges:

- Extraordinary cargo dimensions: 47 m high ship loader and 23 m high tripper car
- To cope with strong currents, swell and severe environmental conditions in the port of loading and the port of discharge
- Significant deck reinforcements needed to meet the highest safety standards
- High logistical effort due to the small pier facilities in Nantong, China
- Discharge operation under offshore conditions at the port of destination in Far East Russia



### Project realisation

The transport took place in autumn 2019. At the beginning, the Kuehne+Nagel Project Logistics team conducted various meetings with all stakeholders to address all challenging factors. The engineering team suggested several technical optimisations. E.g., 170 lashing points were incorporated and fitted into the design of the ship loader to improve the handling. The modified design of the lashing points and the replacement of lifting lugs with lifting trunnions resulted in easier access and a reduced lifting height.

The tripper car was divided into two sections to facilitate the safe transport and the lifting. In-house chartering specialists supported the engineering team with their expertise in selecting the best heavy-lift option for the cargo and meeting the port's technical requirements.

Thanks to the expertise of Kuehne+Nagel Project Logistics, the loading was completed safely, allowing the heavy-lift vessel to be prepared in time for its journey to its final destination in Far East Russia with the secured ship loader and tripper car on board.



### About us

Kuehne+Nagel Project Logistics provides services for unique cargo projects that require special handling, chartering of vessels or heavy-lift services by sea, air, road or rail with focus on customers from energy logistics, industrial projects and marine logistics globally.

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