

Advanced Heavy Lifting and Project Cargo Transport Training Course

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Overview

Advanced Heavy Lifting and Project Cargo Transport Training Course is a one-week advanced course for lift and transport engineers, supervisors, rigging planners, project teams, marine operations, HSE personnel, and assurance reviewers who leave with a Heavy Lift and Transport Execution Plan. Participants integrate engineered heavy lifting, critical lift planning, SPMT transport, project cargo route surveys, and marine load-out controls. The course converts load data and site constraints into verifiable execution decisions. Agile Leaders Training Center presents heavy-lift and project-cargo engineering practice.

Who Should Attend

- Engineering functions responsible for crane selection, lift calculations, and rigging design
- Transport functions responsible for SPMT configuration, route surveys, and exceptional loads
- Marine operations responsible for load-out, barge interfaces, sea fastening, and weather criteria
- Construction teams responsible for site readiness and execution coordination
- HSE and assurance functions responsible for controls, verification, and authorization

The course assumes participants interpret load drawings, crane charts, rigging data, transport layouts, and method statements, and it leaves out basic rigging, routine material handling, general safety induction, and generic project management.

Departments and Industries

The course supports departments and industries that engineer and execute heavy lifts and exceptional-load movements.

- Oil, gas, petrochemical, and process-plant construction
- Offshore wind, marine construction, and port operations
- Power generation, transmission, and industrial installation
- Heavy-haul, modular transport, and project logistics
- EPC, lifting services, technical assurance, and marine warranty support

Learning Objectives

By the end of this course, participants will be able to:

- Analyze load, center-of-gravity, stability, and interface data
- Evaluate crane, rigging, ground-support, and tandem-lift arrangements
- Build SPMT configurations and heavy-haul route plans
- Apply load-out, barge, sea-fastening, and weather controls
- Prioritize communications, contingencies, rescue, and stop-work criteria
- Build an auditable lift and transport execution plan

Course Agenda

Day 1: Establish the Engineering Basis

- Load Definition, Center-of-Gravity, and Stability Data Sheet
- Lift Classification and Criticality Screening Matrix
- ISO 12480-1 Safe-System-of-Work Requirements Map
- Onshore, Quayside, and Offshore Interface Register
- Heavy Lift and Transport Design-Basis Document

Day 2: Engineer Cranes and Rigging

- Crane Capacity Chart and Configuration Selection Method
- Ground-Bearing Pressure and Crane-Mat Design Worksheet
- Sling, Shackle, Spreader-Beam, and Lifting-Point Load Model
- Tandem-Lift Load-Share and Tail-Crane Control Plan
- Rigging Geometry, Tolerance, and Equipment Verification Checklist

Day 3: Plan Project Cargo Transport

- SPMT Axle-Line, Hydraulic-Group, and Stability Configuration Sheet
- Trailer and SPMT Load Distribution Calculation Method
- Heavy-Haul Route Survey and Clearance Register
- Bridge, Pavement, Gradient, Turning, and Obstruction Review
- Loading, Jacking, Support, and Controlled-Transfer Procedure

Day 4: Integrate Marine and Execution Controls

- DNV-ST-N001 Marine Operation Load-Case Review
- Load-Out, Load-In, Barge-Ballast, and Mooring Interface Plan
- Sea-Fastening, Voyage, and Structural-Restraint Verification Record
- Weather Window, Wind Limit, and Environmental Criteria Matrix
- Communication, Hold-Point, Contingency, and Rescue Control Sheet

Day 5: Practice Lift and Transport Execution

- Suggested Exercise: Select Crane, Rigging, and Ground Support
- Suggested Exercise: Configure SPMT and Validate the Route
- Suggested Exercise: Plan Tandem Lift and Load Transfer
- Suggested Exercise: Verify Marine, Weather, and Contingency Controls
- Capstone Exercise: Complete the Heavy Lift and Transport Execution Plan

Practical Exercises

The course uses suggested activities to turn load, equipment, route, and marine evidence into traceable execution controls.

- Suggested activity: calculate load paths and compare crane configurations, rigging geometry, ground support, and tandem-lift tolerances.
- Suggested activity: configure SPMT axle lines and evaluate route clearances, gradients, turns, pavement, bridges, and transfer supports.
- Suggested activity: connect load-out sequencing, ballast, mooring, sea fastening, weather limits, communications, and hold points.
- Suggested activity: document verification evidence, contingencies, rescue arrangements, approvals, and execution records.

FAQs

Who suits advanced heavy lifting and project cargo transport training, and what does it assume?

Advanced heavy lifting and project cargo transport training suits engineering, transport, rigging, marine, construction, HSE, and assurance functions. It assumes participants can interpret load drawings, equipment data, transport layouts, and method statements.

How does heavy lifting and project cargo transport differ from basic rigging training?

Heavy lifting and project cargo transport integrates engineered load paths, crane and transporter selection, ground and route capacity, marine interfaces, weather criteria, contingencies, and verification. Basic rigging training focuses on routine accessory selection, inspection, signaling, and handling practices.

What defines a critical lift plan?

A critical lift plan records the load, geometry, equipment configuration, capacity checks, ground support, rigging, interfaces, roles, communications, weather limits, hold points, contingencies, and verification evidence required for controlled execution.

How is SPMT transport stability checked?

SPMT transport stability is checked through center-of-gravity location, axle-line configuration, hydraulic grouping, load distribution, platform geometry, support polygon, route gradient, turning effects, ground capacity, equipment limits, and controlled operating criteria.

How are offshore heavy-lift weather limits managed?

Offshore heavy-lift weather limits are managed by defining forecast sources, wind and environmental criteria, operation duration, contingency time, decision points, monitoring responsibilities, stop criteria, and safe-state actions for each marine interface.

Conclusion

Participants take back a Heavy Lift and Transport Execution Plan linking load definition, cranes, rigging, ground support, transport, routes, marine interfaces, weather, and contingencies. It changes separate calculations and method statements into one traceable execution path. The plan supports technical review, site readiness, authorization, toolbox communication, controlled performance, and closeout evidence.

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