CONCEPT

Dry Cargo Operations: Bulk Stowage, Draft Survey and Cargo Care

10 – 14 October 2027
Dammam - Eastern Province five-star



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Introduction:

Dry cargo losses rarely start at sea: they start with a wet ore cargo accepted without a moisture check, a hold passed as clean when it was not, a loading sequence that overstresses the hull or a draft survey that leaves the tonnage open to dispute. Dry cargo operations turn these moments into controlled steps. This Core Concept course trains superintendents, surveyors and ship operators to allocate holds, sequence loading, determine quantity by draft survey and protect cargo condition. Participants build a Stowage and Cargo Care Plan for a case bulk voyage.

Course Objectives:

- Classify dry bulk and break-bulk cargoes by stowage factor, angle of repose, moisture and self-heating behaviour before acceptance
- Check shipper declarations, moisture certificates and grain stability data against the solid bulk and grain code requirements
- Allocate cargo to holds and sequence loading and deballasting within shear force, bending moment and tank top limits
- Determine loaded and discharged quantities by draft survey with trim, water density and deductible corrections
- Apply ventilation, hold cleaning, lashing and dunnage practice that prevents sweat, contamination and shifting damage
- Produce a Stowage and Cargo Care Plan with an evidence file that supports or defends a cargo claim

Target Audience:

- Superintendents who approve cargo plans and hold readiness for dry bulk and multipurpose fleets
- Cargo surveyors who carry out draft surveys, hold inspections and condition surveys
- Port operations staff who supervise stevedoring, trimming and discharge of bulk and general cargo
- Ship operations staff who issue voyage and loading instructions to masters
- Chartering and post-fixture staff who handle cargo quantity and condition disputes

Course Outline:

Day 1: Dry Cargo Ships, Holds and Cargo Behaviour

- Bulk Carrier Size Classes, Hatch Covers and Hopper and Topside Tank Layout
- Break-Bulk, Multipurpose and Heavy-Lift Vessel Hold Arrangements
- Stowage Factor, Broken Stowage, Bulk Density and Angle of Repose Data
- Cargo Hazard Groups: Moisture Flow, Self-Heating, Dust and Oxygen Depletion
- Current-State Dry Cargo Incident and Claims Review Checklist

Day 2: Cargo Codes, Stability Data and Hull Strength Tools

- Solid Bulk Cargo Code Schedules and the Shipper's Cargo Declaration
- Moisture Content Certificates and Can Test Screening for Fine Ores
- Grain Code Heeling Moments and Grain Stability Calculation Form
- Loading Instrument Shear Force, Bending Moment and Tank Top Limits
- Cargo Securing Manual Contents and Timber Deck Cargo Code Practice

Day 3: Stowage Planning, Hold Allocation and Draft Surveys

- Hold Allocation by Weight, Cubic Capacity and Alternate Hold Loading
- Loading and Deballasting Sequence Plan with Pour-by-Pour Tonnages
- Trimming Methods, Final Trim Pours and Air Draft Checks
- Draft Survey Readings at Six Marks with Trim and Dock Water Density Corrections
- Deductibles Calculation: Ballast Soundings, Bunkers, Fresh Water and Ship's Constant

Day 4: Cargo Care, Hold Readiness and Damage Prevention

- Hold Cleanliness Grades, Hose-Down Routines and Pre-Loading Hold Inspection
- Ventilation by Dew Point Comparison: Ship's Sweat Versus Cargo Sweat
- Coal and Metal Cargo Temperature, Gas and Hatch Seal Monitoring
- Project Cargo Lashing Calculation, Dunnage Beds and Chocking Layouts
- Steel Coil, Bagged and Baled Cargo Damage Patterns and Contamination Controls

Day 5: Case Voyage: Stowage and Cargo Care Plan

- Case Study: Iron Ore Fines Moisture Doubt and Hold Allocation Decision
- Case Study: Grain Hold Rejection at Inspection and Recovery Actions
- Case Study: Draft Survey Figure Against Shore Scale Discrepancy
- Claims Evidence File: Mate's Receipts, Hold Photographs, Protest Letters and Survey Reports
- Stowage and Cargo Care Plan Build for a Case Bulk Voyage and Peer Review

Skills You Will Gain:

- Cargo Hazard Screening
- Hold Allocation Planning
- Hull Stress Monitoring
- Draft Survey Calculation
- Cargo Ventilation Control
- Cargo Securing and Lashing
- Hold Condition Inspection
- Cargo Claim Evidence Handling

Why Attend This Course:

- Return with a Stowage and Cargo Care Plan for a case bulk voyage, from hold allocation to discharge
- Challenge a doubtful moisture certificate or loading sequence before the first grab of cargo enters the hold
- Defend a draft survey figure against shore scale or bill of lading tonnage with a traceable calculation
- Compare cargo practice on ore, coal, grain, steel and project cargo cases with staff from shipowners, operators, terminals and survey firms

Conclusion:

Dry cargo outcomes are set by decisions made before and during loading. The course moves from ship types, holds and cargo behaviour, through the solid bulk, grain and timber codes, loading instruments and securing manuals, to hold allocation, loading sequences and draft surveys, then to ventilation, hold cleanliness, lashing and damage prevention. The final day applies these steps to ore, grain and survey cases and produces a Stowage and Cargo Care Plan with an evidence file for the next voyage.