COURSE AGENDA

Session 1:
o Introduction & Terminology
- transporters
- cranes
- barges

Session 2:
o Dimensions & Weights
- laws of Newton
- mass vs. weight
- combined forces (vectors)
- wind & water forces
- acceleration & deceleration
- friction forces
- calculations of weight

Session 3:
o Center of Gravity
- what is it
- how to treat it
- how to determine it
- C.O.G. in three dimensions

Session 4:
o Heavy Transport (Principles)
- Difference between trailers and transporters
- Definition of hydraulic platform transporters
- principles of hydraulic platform transporters
- Equipment selection (the right tool for the right job)
- Suspension settings (what, how and why)
- The equalizing effect
- stability (structural & hydraulic)
- stability area
- stability limits
- self propelled vs. pull type (steering, propulsion)
- propulsion (truck vs. power pack)
- forces on a transport
- lashing and securing
- Combining different brands
- Combining conventional and self propelled
- The use of turn tables on long loads
- transporting long loads without turn tables
- Ground and soil forces
- Most common accidents and how to avoid them

Session 5:
o Heavy Transport (Execution)
- the transport plan
- surveys (points of attention and required documents)
- equipment check
- loading the load (from supports, crane or ship)
- transporting the load
- offloading the load

Session 6:
o Heavy Lifting
- detailed overview of cranes and crane types
- manufacturers vs. owners
- definitions
- principle of lever & principle of pulley
- capacity vs. load moment
- How to determine the size of a crane without having a chart
- Spreader bars and lift beams (design and use)
- Basic and advanced rigging (explanation and examples)
- Lifting loads in and out of the water
- Multiple crane lifts
- Wind energy and cranes
- Tailing a load
- Most common accidents and how to avoid them

Session 7:
o Jacking & Skidding
- Jack & pack
- principle and working of climbing jacks
- Strand jack working
- strand jack applications (vertical, horizontal, up-side-down)
- Jacking towers
- Skidding applications (wood, steel, Teflon, stainless)
- disadvantages of skidding
- hydraulic gantry working
- hydraulic gantry operations
- Moving on air (airbags, air pallets)
- Moving on rollers (Hilman, rail)

Session 8:
o Load-outs
- barge types and applications
- Hydrostatic particulars for barge/ship (KM, LCB, LCF)
- Archimedes law
- barge/ship movements
- tides (how & when)
- tidal prediction
- Tidal movements during a load-out
- ballasting
- Load-out onto a floating barge (tidal and non-tidal)
- load-out onto a grounded barge
- beach landings
- case studies

Session 9:
o The anatomy of an accident
- Accident categories
- common mistakes
- case studies
- Recognizing an unwanted situation before it escalates
- Crew Resource Management (an effective way of accident reduction, source NASA)
- Safety practices

Session 10:
o Maintenance
- Terminology
- Maintenance, inspection, certification
- certifying bodies
- PM vs. repair
- check lists
- PM (what, where, how and when)

DAILY SCHEDULE

08:30 Registration
09:00 Morning session begins
10:15 Refreshment and networking break
10:30 Morning session continues
12:30 Lunch
13:30 Afternoon session begins
15:15 Refreshment and networking break
15.30 Afternoon session continues
17:00 End of day