Self-Unloader: *Cargo Hopper Liner*

Low co-efficient of friction plastic liner enhances cargo flow
Prevents cargo hang-ups – Improves discharge efficiency

- **Stainless Steel Wear Plate**
- **Plastic Liner Sheets**
- **Cargo Striker Plate**
Environmental Protection Systems:

Environmental Solutions Include

- IMO environmental compliance
- No oil carried on skin
- Dust containment
- Dust collection systems
- Synthetic hydraulic oil
- J-tubes on cargo boom end
- Ballast management system
- Residual cargo containment
- Washdown water containment
Transshipment: Cargo Operations Planning

Load & Unload Plans are key to safe transshipment

- Comply with IMO - BC & BLU Code Requirements
- Check stowage, cargo deadweight, stability & hull strength
- Conduct ‘Key’ Cargo Meeting and exchange Load Plan information
- Monitor cargo operations and compare results to Load Plan
Transshipment Operations: Involve Four separate stages….

1. Approach – maneuvering alongside
2. Connecting the vessels
3. Cargo transfer operations
4. Post transfer separation
Transshipment Master Plan: Key Components

Transshipment Master Plan comprises multiple sub-plans. Crew responsible for executing each plan must be briefed.

- Passage Plan
- Pilotage Plan
- Maneuvering Plan
- Mooring Plan
- Warping Plan
- Cargo Transshipment Plan
- Unmooring Plan
- Contingency Plan
Transshipment: ‘No Go’ Situations

There will be times when the Sea Rules ...

On either Master’s decision – Stop or Do Not Start

Objective: Transship within design limits & crew capabilities
Final Approach: *View from the Bridge*

*Undertaken in all weather – Day & Night*

- **Mooring Master Responsibility**

- **Safety Critical Operation**