



## Disciplines

Viking Systems provides its clients with timely solutions using basic conceptual design tools to advanced analysis design tools for ships and floating marine structures. Viking Systems has applied its extensive knowledge of ship design into the development of SAGA and many of specialized in-house programs. Viking System's Disciplines include:

### Mechanical Engineering

### Powering and Resistance

### Weights and Center of Gravity

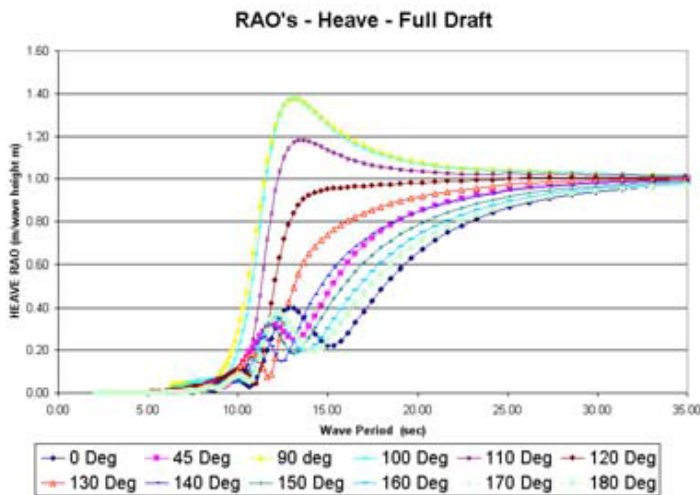
### Hydrostatics

- Trim and Stability
- Damage Stability
- Floodable Length

### Ship Dynamics

- Vessel RAOs
- Design Accelerations

- Ship Structural Design
  - Preliminary
  - Contract
  - Detailed
- Material Selection
- Class Society Rule Design
- Finite Element Analysis
  - Stresses and Deflections
  - Buckling
  - Fatigue
- Reinforcement Analysis
- Shipboard Crane Design
- Mooring Support Structure
- Foundation Design
- Details and Components



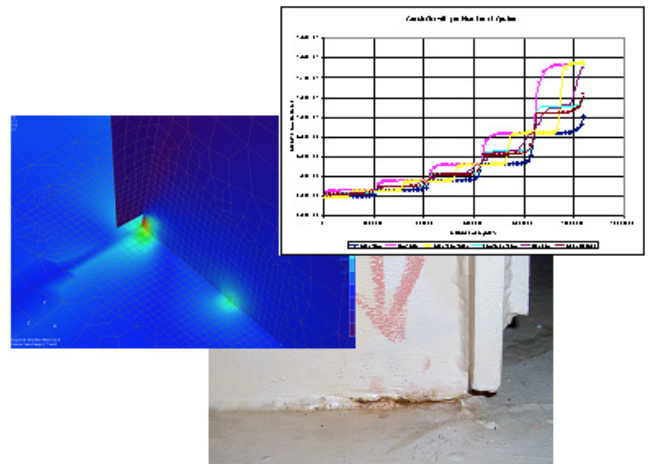
Example of Heave RAO

### Ship Vibration

- Design Loads
  - Site-specific static and Dynamic Loads
  - Liquid Cargo Tank Sloshing Loads
  - Thermal Loads
  - Mooring Analysis

### Model Testing

### Forensic Damage Analysis / Repair / Recommendations



### Vessel Classification Management

### Owners Design and Build Representative