

#### **4. MARINE SEA VOYAGES**

A ship moves in six different directions:

- Rolling, pitching, heaving, surging, swaying and yawing.
- Wave impact (water shipped over the bow impacting on deck stowed cargo or containers during heavy weather).
- Temperature extremes (resulting in heat or freeze damage).
- Condensation (ship's or cargo sweat).
- Flooding (cargo stored on inadequately drained surface).
- Navigation exposures, stranding and collisions.

The ocean leg of the voyage, in an international door-to-door move, can subject the cargo to severe motion stresses. These forces can be considerably greater than during a highway or rail move. A container may travel as much as 70 feet with each complete roll of a vessel, often as much as 3-4 times per minute.

**Containerization of cargo does not automatically confer safe transport of your goods. Safety depends not only on how the container is stowed, but also on its structure, its integrity, and the quality of the carrier.**