



## SAFETY PERFORMANCE FOR REACTION FORCE AND ENERGY ABSORPTION

The purpose of a fender is to absorb the kinetic energy of the ship for protection of the ship's hull. Sea & Tec Pneumatic Fenders offer low reaction force and high energy absorption, making it possible for fenders to perform well under harsh conditions, protecting ships and facilities against external impact.

## NO DEFORMATION UNDER HARSH CONDITION

Sea & Tec Pneumatic Fenders utilize the compressive elasticity of the air; therefore performance deterioration due to fatigue is absent. The reaction force and deflection of solid-type fenders under rough weather conditions easily reaches their respective maximums. Therefore, repeated compression with shearing force resulting from the movement of ships causes fatigue and often damages solid-type fenders. While the reaction force of a Sea & Tec Pneumatic Fender will not reach the maximum load because the reaction force increases slowly and allowable deflection is wide. The Sea & Tec Pneumatic Fender will protect ships and facilities even under the harshest circumstances, such low temperature and rough weather condition.

## HEAVY DUTY REALIABILITY

Sea & Tec Fenders are composed of several rubber layers as well as a reinforcement tire cord layer. This provides strong durability enabling fenders to be extremely resistant to pressure (external and internal), shearing, tearing or any other external impact. In addition, fenders with larger than  $\phi 2.0$  are equipped with a safety release valve designed to release excess internal pressure when the fender is accidentally over compressed.

- **Pressure Rating**
  - There are two initial pressure ratings for Sea & Tec Pneumatic Rubber Fenders:
    - Pneumatic 50 (P50, Initial internal pressure 50kPa)
    - Pneumatic 80 (p80, Initial internal pressure 80kPa)
- **Net Type**
  - Net-type fenders ( $\phi 500 \times 1000L \sim \phi 4500 \times 12000L$ ) are covered with a chain net, wire net or fiber net for small size fenders. Usually these nets have used tires together with rubber sleeves for additional protection, except fiber net which has only rubber sleeves. Chain nets last longer against corrosion, while wire nets are light and more easily repaired.
- **Sling Type**
  - Sling-type fenders ( $\phi 500 \times 1000L \sim \phi 4500 \times 12000L$ ) have an attachment eye on each end for lifting and installation. Handling of sling type fenders is easy due to their lightweight.