

Deep Water Anchoring

Puget Sound ports are naturally deep water ports which contain anchorages in excess of 40 meters depth. Designated anchorages in Commencement and Elliott Bays, the respective gateways to the Ports of Tacoma and Seattle, can exceed 100 meters in depth. When designated anchorages are full, ships may have to anchor in depths approaching 125 meters.

Anchors have been lost when anchoring in Puget Sound. In one case, a bulk carrier attempting to anchor in 125 meters of water walked out three shackles of chain (one shackle is about 27 meters), and then attempted to drop the anchor the remaining two shackles to the bottom. The brake had no effect and the anchor was lost costing the vessel some \$40,000 in repairs and salvage.

In other cases, anchors were walked out under power to within 15 meters or less of the bottom in depths of 100 to 115 meters and were lost anyway. The condition of the anchor windlass was suspect in these later losses.

Losing an anchor is expensive. Replacement costs for lost anchors and chain can cost as much as \$100,000 if salvage is not successful. A runaway anchor can cause injury to the foredeck crew. If the anchorage is crowded and the weather foul, a lost anchor can lead to close quarters situations, or worse. Therefore, it is extremely important that ship owners, operators, and masters insure that the anchor windlass and ground tackle are properly maintained. Masters should also follow proper procedures to safely deploy the anchor. This is especially important in a deep water anchorage.

Nautical publications caution against dropping the anchor from the brake in deep water. They recommend instead that the anchor be walked out under power from the windlass. One source, *Knight's Modern Seamanship*, suggests that when anchorages with depths of 70 to 90 meters are used it may be advisable to walk out the anchor to its desired slope. Another source, *Towards Safer Ships & Cleaner Seas*, takes a more

WHY IT MATTERS

This bulletin was prepared to share lessons learned with industry and the interested public. Prevention recommendations are also made to prevent similar occurrences. Sharing lessons learned is important if Washington State is to achieve its "zero spills" goal.

WEBSITE INFORMATION

<http://www.ecy.wa.gov/programs/spills/spills.html>

Contact information:

Mike Lynch
360-407-7482
mily461@ecy.wa.gov

Special accommodations:

To ask about the availability of this document in a version for the visually impaired call the Spills Program at 360-407-7455. Persons with hearing loss, call 711 for Washington Relay Service. Persons with a speech disability, call 877-833-6341.

cautious approach and suggests walking the anchor to its desired scope in any water over 40 meters in depth. The best approach to anchoring any ship in deep water is an informed decision made by master and pilot working together.

Most vessels anchoring in Puget Sound will anchor with a Puget Sound pilot on board who will work with the master and crew to safely anchor the vessel. To do this, however, the pilot must have complete information regarding the operational status of the anchor gear.

If you anchor in a Puget Sound port, inform the pilot of the condition of the anchors and windlass well in advance of deployment. This information may be included on the pilot card provided to the pilot on boarding the vessel, or conveyed to the pilot while approaching the anchorage. Include information such as:

- The number of operational anchors.
- The scope of chain available for each anchor.
- The nature of any recent damage to the anchors, chain or windlass and any repairs effected.
- The nature of any temporary repairs.
- The condition of the anchor brake.

With this information the pilot will be better able to ensure the safety of the anchoring.

MORE SAFETY ADVISORY BULLETINS

- SAB 09-01:** Vessel Fueling Spills (09-08-010)
- SAB 06-02:** Oil Transfer Rates (06-08-019)
- SAB 06-01:** Automatic Identification Systems (AIS) (06-08-010)
- SAB 00-01:** The Importance of Identifying and Addressing Root Causes of Equipment Malfunctions (00-08-015)
- SAB 97-01:** Deep Water Anchoring (00-08-004)
- SAB 96-01:** Shifting a Ship by Warping (00-08-003)
- SAB 94-03:** Piston Crown Maintenance (00-08-006)
- SAB 94-02:** Importance of Preventative Maintenance (00-08-007)
- SAB 94-01:** Potential Problems with Steam Turbine Throttle Controls (00-08-005)
- SAB 99-02:** Passage Planning for the Oregon and Washington Coasts: Special Considerations (99-256)
- SAB 99-01:** Traffic Separation Scheme and Puget Sound Vessel Traffic Service (99-253)
- SAB 98-01:** Shipboard Systems Modifications (98-252)

For additional copies of **Safety Advisory Bulletins**, call or Fax us at the number below, or visit our website. Please be sure to provide your name, address and phone number.

Phone: (360) 407-7455

Fax: (360) 407-7288 or 1-800-664-9184

Program website:

<http://www.ecy.wa.gov/programs/spills/spills.html>

Publication website:

<http://www.ecy.wa.gov/biblio/spills.html>