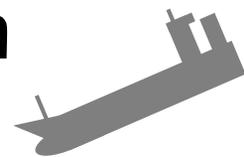




Action Plan for prevention dragging anchor

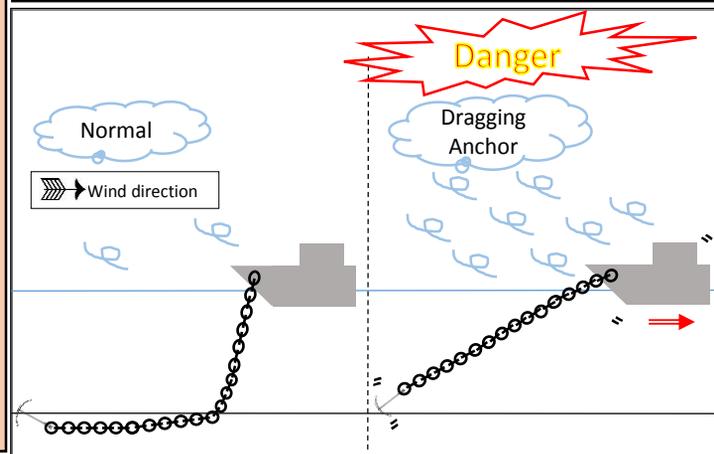


1 Before anchoring

- Grasp the bottom materials of the anchorage
 - ✘ There are some bad condition place to anchor in Tokyo bay (because of the sludge)!
- Predict the weather condition
 - ✘ Predict the wind direction at the maximum, and anchor against the wind and wave.
- Extend the anchor cable
 - ✘ Considering other vessels around you, you may extend the anchor cable.
 - ✘ In stormy weather (the wind speed is about 30m/s), the standard length of the anchor cable is $L(m) = 4d(m) + 145$ d: depth of water
- Grasp anchorage limit
 - ✘ Grasp the wind speed of anchorage limit considering the bottom materials and the length of the anchor.
 - ✘ If the wind speed is over anchorage limit, Stand by main engine and bow thruster. Change to two anchoring or use the steadying anchor.
- Adjust draft
 - ✘ To deepen the draft.
- Adjust trim
 - ✘ Trim by the bow as much as possible.

2 Anchor watch

- Use the main engine, bow thruster
 - ✘ If you're likely to drag anchor, use main engine, bow thruster and turn your bow against the wind and wave.
- Detect the dragging anchor early
 - ✘ Observe the anchorage condition carefully with checking the position by GPS, radar and electronic chart in order to detect the dragging anchor early.
 - ✘ There is a possibility of dragging anchor!
 - When a vessel receive wind from one side after a vessel stop the periodic swing motion.
 - When a vessel damage extraordinary impact.
 - When the anchor cable is being stretched.



3 In case the wind direction changes drastically

- Anchor considering the wind direction
 - ✘ If the wind direction change drastically after dropping anchor, heave up anchor and drop anchor again against the present wind direction.

4 Treatment in the dragging anchor

- ✘ Strong wind prevents you from heaving up anchor, you should change the anchoring method before the wind gets strong.
- Heave up anchor or drop anchor again
- Change of the anchoring method
 - ✘ Change to two anchoring or use the steadying anchor.
- Heave-to
 - ✘ If it's determined to be danger with the anchor, heave up anchor and heave-to.