

KISH P & I LOSS PREVENTION CIRCULAR KPI-LP-95-2012 ***(Windlass damage when weighing anchor; Lessons to be Learnt)***

► **Narrative:**

A vessel was anchored in an exposed roadstead with gale conditions expected after a few hours. As a precaution, the Master had brought the vessel up to 8 shackles on the port anchor with the starboard anchor on the seabed to reduce anticipated yaw. A short time after anchoring, the vessel began to yaw. The intensity of the yawing increased, and eventually, the port cable began to slip, overcoming the combined holding power of the brake and the guillotine stopper.

The decision was taken to get underway, and the starboard anchor was weighed. The crew then began to weigh the port anchor, using engines to reduce the load on the cable. The wind strength was increasing steadily and the windlass struggled to recover the cable when, suddenly and without warning, the dog clutch shattered and the cable ran out of control. Fortunately, no one was injured and the securing arrangement of the bitter end held. The cable was subsequently slipped and the vessel was taken out of service due to the damage to the windlass and the loss of her anchor.

► **Safety lessons from investigation:**

- 1) The selected location for anchoring did not provide sufficient shelter to prevent the vessel's anchoring equipment from being subjected to excessive loads;
- 2) The guillotine bar's locking pin had not been engaged;
- 3) The vessel's SMS for anchoring operations contained no reference to the use of the locking pin when anchoring;

- 4) The severe yaw that developed was due to the windage of the vessel's superstructure, which generated forces in excess of the design load of the anchoring equipment.

► **Recommendations:**

- Owners and operators are strongly advised to review their SMS procedures for anchoring to ensure they address the above safety issues and, specifically:
 - That masters have clear guidance on the capability of their vessel's anchoring system, including any limitations of the anchor system components, including that of the windlass;
 - Effects of windage in various load conditions;
 - Risks associated with excessive yaw;
 - Guidance on anchoring is vessel-specific and highlights that, when at anchor, the weight of the cable should be taken on the guillotine fittings, which should be correctly engaged.



Broken dog clutch and bent shaft on port windlass