

LP 16/2025 Anchor-Dragging Perils – Protecting Submarine Cable Infrastructure

On July 28, the Ministry of Industry and Information Technology of China organized the fourth Communication Submarine Cable Protection Policy Promotion Week. This initiative aims to encourage the marine industry to protect submarine cables, fostering an atmosphere where all stakeholders collaborate to safeguard cable safety. According to data from the International Cable Protection Committee (ICPC), submarine telecommunications cables carry over 99% of global intercontinental data traffic, while submarine power cables enable cross-border and domestic power transmission. Protecting these infrastructures is of paramount significance for ensuring international communication connectivity, maintaining economic stability, and guaranteeing energy security.

I. Severe Consequences

Of the approximately 150–200 annual cable faults recorded globally, 70–80% result from accidental damage, primarily caused by fishing activities and vessel anchoring. Industry initiatives such as cable awareness programs and precise charting have proven effective in mitigating these risks, leading to the consensus that accurate cable mapping is essential for protecting against these prevalent threats. Damage to submarine cables from dragged anchors account for approximately 30% of incidents, translating to about 60 faults yearly. The financial toll is substantial: telecommunications cable repairs typically cost £500,000–£1 million per incident, while power cable repairs range from £10 million to £100 million, depending on variables like depth and cable type. Beyond financial losses, cable damage can disrupt global communications and energy transmission, triggering widespread service outages.

Legally, most countries have enacted stringent regulations on submarine cable protection. Perpetrators of cable damage face severe administrative penalties and potential criminal liability. Such incidents may also escalate into geopolitical risks. For involved captains, shipping companies, and marine insurers, handling cable damage cases presents complex and arduous challenges.

II. Recent Incidents

1. In 2002, the Chilean-flagged container ship *Aconcagua* cut three of the then 4 cables linking the United States to Europe while sailing from Philadelphia to New York City. The captain erroneously attributed the reduction in the ship's speed during a gale to the wind when

in fact it was the ship's anchor dragging. Investigation revealed that the anchor windlass had only been secured with the brake, without engaging the chain stopper.

2. One of the most severe anchor-dragging incidents occurred off Sicily in 2008, where a ship dragged its anchor for 300 km, damaging six submarine cables. Such incidents can disrupt multiple cables in proximity, magnifying the overall impact.

3. In February 2012, the Liberian-flagged vessel *Blue Princess* damaged three submarine cables in the Red Sea. Over a period of 12 hours on 17th February, SEA-ME-WE 3, EASSy, and EIG, causing multiple cable faults. The vessel could be tracked using AIS as crossing the cables at a similar time as faults were reported and appeared to become fastened to the cable with the speed reducing to zero at the time of the final fault during that period.

4. In March 2016, a vessel dragged its anchor causing damage to telecommunications cables and a power cable, which cut off the electricity supply to the Isles of Scilly for a significant period of time.

5. A similar incident occurred in November 2016 between the UK's Channel Islands and Cornwall, where a vessel anchoring in rough weather damaged multiple telecommunications cables.

6. Also in March 2016, a tanker navigating Zhoushan waters negligently kept half shackle of anchor chain deployed. During an emergency collision avoidance manoeuvre, it entered a no-anchoring zone, with its starboard anchor striking and damaging a submarine cable.

7. In October 2017, a cargo ship anchored near Sheshan dragged its anchor into a submarine cable, disrupting signals. Detection and repair costs exceeded RMB 9 million. The manager of the vessel was subject to administrative penalties, and the main person responsible was referred to public security authorities for criminal investigation.

8. An Incident in the Great Lakes, Michigan of an anchor being dragged without detection is reported as having damaged pipelines and 5 cables with the anchor having been deployed for 36 hrs covering approx. 600km causing significant damage.

9. In August 2021, a container ship anchored near Perth, Australia, drifted into a submarine cable protection zone during strong winds. Its anchor severed the Australia-Singapore cable, resulting in a loss of 1.5 million Australian dollars. The captain was prosecuted by the Australian Federal Police, facing potentially three years in prison and a fine of 40,000 Australian dollars.

10. In February 2023, a container ship navigating near Shantou encountered severe weather, dragging its anchor and severing four submarine cables, causing communication failures.

Initial economic losses were estimated at RMB 8 million. The captain and the navigation officer involved were placed under criminal investigation on suspicion of criminal offenses.

III. Causes of Cable Damage by Ship Anchors

Anchoring under normal conditions rarely causes damage. The construction of submarine cables is generally associated with national and economy strategies. Once new submarine cables are successfully laid, whether to publicly disclose their exact locations has become a critical consideration for countries assessing security and geopolitical risks. This may introduce hazards to anchoring operations of vessels, particularly when ships anchor outside of designated areas. Typically, submarine cables are outfitted with protective insulating layers and buried under the seabed. For large merchant ships, when anchors are dropped freely, anchor chains can penetrate 2–3 meters into the seabed depending on geological conditions, creating a persistent risk of damage to those shallowly buried cables.

Intentional anchor deployment poses increased risks. If a vessel experiences an emergency such as machinery or steering failure for example near the coast, anchors may be deployed as a last resort to prevent grounding. However, past incidents have shown that cables can be broken under such circumstances. Some captains may use outdated or inaccurate charts when anchoring in emergencies, failing to identify or ignoring the existence of submarine cables.

Dragging anchors can be more hazardous. Vessel drifting frequently occurs in anchorages with loose seabed sediment or uneven terrain, particularly during strong wind and wave conditions. Under such circumstances, wind and wave forces may cause vessels to shift position, resulting in anchor dragging. While the anchor drags along the seabed during ship drifting, it holds significantly deeper — increasing the risk of cable damage.

Anchor deployed while underway poses the greatest threat. During navigation, vessels may experience accidental anchor detachment due to brake failure or inadequate anchor chain securing, leading to underway anchor dragging and subsequent severing of submarine cables. Such incidents predominantly occur in high wind and wave environments. In these scenarios, anchor dragging causes reduced vessel speed and potential bow yawing — closely resembles ships in winds and waves, often causing captains to overlook the possibility of anchor detachment. In severe weather, safety concerns typically prevent captains from having the crew to check on the anchor and chains. According to a 2022 study by the New York State Department of State, penetration depths of dragged anchor in common sediment types are significantly higher than dropped anchor — up to 9 meters deep.

IV. Advice to Members

1. Vessels should anchor as far as possible in designated anchorages.

2. When anchoring, use the latest edition of large-scale nautical charts.
3. Captains should organize training on chart symbols for submarine cables and pipelines.
4. Promptly and decisively respond to anchor dragging during anchoring.
5. Secure anchors and anchor chains before departure, even for short voyages.
6. Enhance maintenance of anchor equipment.
7. If chain stoppers fail to engage properly, the company should address the issue promptly.
8. If sudden speed reduction occurs while underway, immediately inspect anchor chain securing.

For more information, please contact Managers of the Association.