

Hard Lessons From the *Alaska Ranger* Tragedy

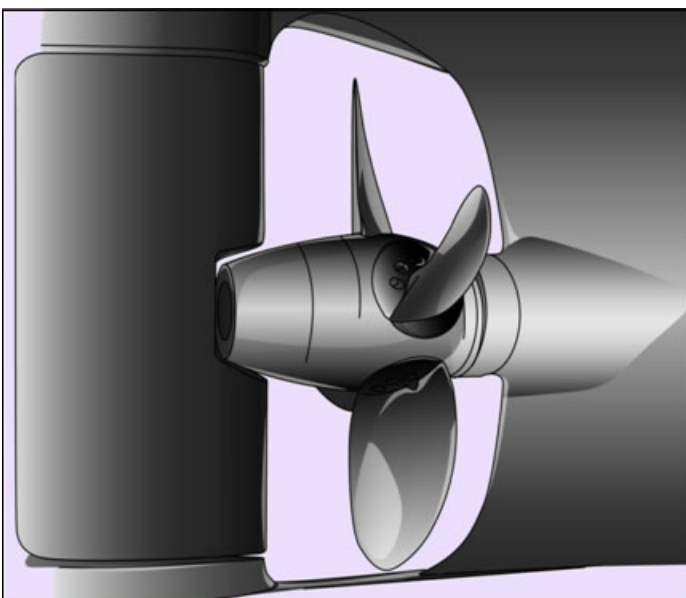


BY HARVEY LINTON
for WorkSafeBC

Commercial fishing boats around the world are shifting to controllable pitch propellers (CPPs). They allow better control of a vessel's forward and astern motion without pulling the clutch in and out, or increasing or decreasing engine revolutions. In fishing operations, CPPs can make it easier to maintain the right speed, simplify docking or mooring and contribute to engines and clutches lasting longer. Here are examples of CPP positives for specific gear types:

- **Trollers** – easier to maintain the right speed for gear relative to wind, wave and current conditions.
- **Trawlers** – beneficial when shooting, towing or hauling the trawl.
- **Longliners/trap boats** – easier to keep the correct position when hauling gear.
- **Seiners** – more flexibility when towing, closing up and hauling the net back on board.
- **Gillnetters** – towing nets easier.

That's the good news. But for all fisheries, the negative side of the CPP equation requires you to know what you're doing. Illustrating one potential problem is the tragic case of a processor/trawler that lost power, flooded and sank last Easter Sunday in the Bering Sea.



In emergencies, know what the pitch of your controllable pitch propeller (CPP) is.

When the order came to abandon the *Alaska Ranger*, its main engine was running with the clutch in and considerable astern pitch on the CPP. This left two life rafts hanging off the bow with crewmembers unable to access them. About two dozen had to jump into the icy water wearing immersion suits. Ultimately, from a 47-member crew, four died and one was never found.

Although the Marine Board Investigation hadn't finished its *Alaska Ranger* investigation, the US Coast Guard issued a safety alert this summer to address "safety issues that merit immediate public dissemination."

Key Advisory: "While controllable pitch propeller systems are generally designed and constructed to fall in the 'as is' position, in hydraulic CPP systems, the actual blade pitch may change. In this case the vessel was making considerable sternway. Apparently, this was not a unique occurrence."

Strong recommendation: "That owners, operators, and masters of vessels with controllable pitch propellers understand the design and operation of the system. This includes the primary and emergency sources of power for the control and main systems, the location and procedures for using alternate control stations, and the locations of the emergency shutdowns."

Vessels about to be abandoned should never be making way, whether driven by standard or controllable pitch propellers. With CPPs, vessel masters must always maintain situational awareness and accurately anticipate how their decisions will affect the safety of crew and vessel safety. Especially important in flooding emergencies, this includes understanding the impact of vessel speed, heading, heeling and trim.

Not only the skipper, but the crew must learn and know what to do in emergencies. The best way is to conduct periodic emergency drills wearing immersion suits and simulating life raft launches.

We can never forget that any vessel can come to grief, and skippers and crews must practice the steps necessary to save lives if the worst happens.

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