

September 17, 2024

MIR-24-28

# Flooding and Sinking of Fishing Vessel *Christian G*

On October 2, 2023, about 0600 local time, the fishing vessel *Christian G* was anchored in the Gulf of Mexico about 70 miles southeast of Port Arthur, Texas, when the captain discovered the engine room was flooding (see figure 1 and figure 2).<sup>1</sup> For the next 19 hours, the three-person crew of the *Christian G* and the crew of the Good Samaritan fishing vessel *Kenneth Holt* attempted to stop the flooding, but they were unsuccessful. The crew of the *Christian G* ultimately abandoned ship and transferred to the fishing vessel *Miss Hilary*. On October 5, about 1000, the *Christian G* sank. There were no injuries. An oil sheen was observed at the site of the sinking. The lost cargo of bagged shrimp had an estimated value of \$150,000, and the *Christian G*, which was declared a total loss, had an estimated value of \$795,000.



**Figure 1.** *Christian G* in July 2003. (Source: US Coast Guard)

<sup>1</sup> (a) In this report, all times are central daylight time, and all miles are nautical miles (1.15 statute miles). (b) Visit [ntsb.gov](https://www.ntsb.gov) to find additional information in the [public docket](#) for this NTSB investigation (case no. DCA24FM002). Use the [CAROL Query](#) to search investigations.

**Casualty Summary**

<b>Casualty type</b>	Flooding/hull failure
<b>Location</b>	Gulf of Mexico, about 70 nm southeast of Port Arthur, Texas 28°51.36' N, 92°53.68' W
<b>Date</b>	October 2, 2023
<b>Time</b>	0600 central daylight time (coordinated universal time -5 hrs)
<b>Persons on board</b>	3
<b>Injuries</b>	None
<b>Property damage</b>	\$945,000 est.
<b>Environmental damage</b>	Oil sheen, 2,000-3,000 gal diesel fuel on board at time of sinking
<b>Weather</b>	Visibility 10 nm overcast, winds northeast 20-30 kts, seas 8-10 ft, air temperature 80°F, water temperature 79°F
<b>Waterway information</b>	Gulf, depth 84 ft



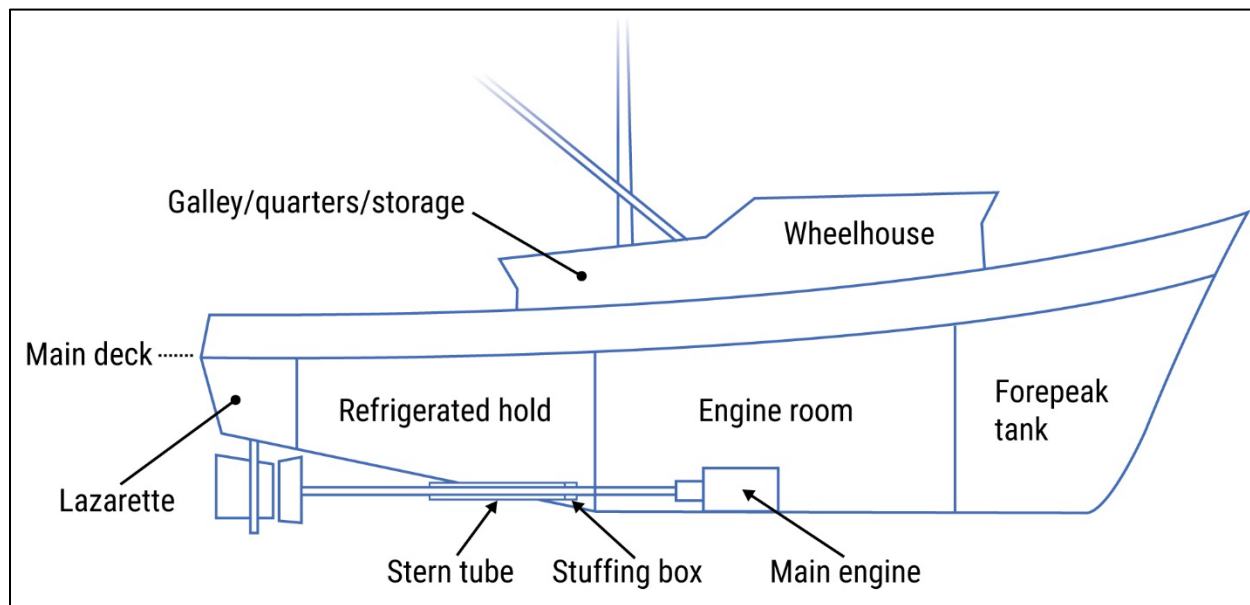
**Figure 2.** Area where the *Christian G* sank, as indicated by a circled X. (Background source: Google Maps)

## 1 Factual Information

On August 24, 2023, the 79-foot-long steel-hulled fishing vessel *Christian G* departed Palacios, Texas, to catch shrimp off the coast of Louisiana with a crew consisting of the captain and two deckhands. The vessel was built in 2000, and its hull was constructed mostly of 3/8-inch steel plate, with 1/2-inch steel plate in the stern area (see figure 3). The vessel's manager told investigators that the *Christian G* was last out of the water in 2018 but could not recall what maintenance was performed.

Over the next month, the crew shrimped throughout the gulf. On October 2, 2023, at 0000, the ship anchored to wait out adverse weather (5-to-6-foot seas and 25-to-30-knot winds). The freezer hold was almost full with about 35,000 pounds of bagged shrimp. While the vessel was at anchor, the crewmember on watch from midnight to 0300 checked the engine room bilge before he went to bed. No one was on watch after 0300.

At 0600, the engine room bilge alarm, which had a float switch installed about 1 foot from the bottom of the bilge, sounded. The captain entered the engine room and found about 1 foot of water but could not find the source of the flooding. Two 1-1/2-inch, 5-hp, electrically driven pumps installed aft in the engine compartment were discharging water but could not keep up with the flooding. At 0700, the two pumps stopped working when rising water in the engine room submerged the ship's generators, cutting off power to the pumps.



**Figure 3.** Simple profile of *Christian G* (not to scale).

At 0850, the captain called the crew of the fishing vessel *Kenneth Holt* (about 3 miles away) via cell phone to request assistance. About 20 minutes later, the *Kenneth Holt* arrived to assist. The *Kenneth Holt* came alongside the *Christian G* and provided the crew a portable electric pump as well as an extension cord to power the portable pump and two portable electric pumps already on the *Christian G*.

At 0958, the captain of the *Christian G* called the vessel manager and then the US Coast Guard via cell phone. After finishing his call with the Coast Guard, the captain examined the propulsion shaft stuffing box and the "T-cock," the only seawater manifold on the vessel, and determined that those two locations were not the source of the flooding.<sup>2</sup> All engines and the compressor for the freezer were cooled using keel coolers.<sup>3</sup>

At 1010, the captain of the *Christian G* called the Coast Guard Command Center in New Orleans, Louisiana, via cell phone and requested portable bilge pumps because the three portable pumps were not keeping up with the flooding, which he estimated was rising at a rate of 1 foot per hour.

At 1245, with water above the vessel's engines, a Coast Guard Jayhawk helicopter (CGR 6045) lowered two gasoline-powered portable pumps to the vessel. The crew set these pumps up and began pumping with them. One of the pumps did not draw water because of a damaged suction hose. At 1351, the other portable pump stopped working because it ran out of fuel. The three portable electrical pumps continued to run. At 1443, the engine room and the freezer hold were nearly filled with water.

At 1758, the captain decided to have deckhand no. 2 abandon the vessel. Deckhand no. 2, who was wearing a lifejacket, jumped overboard and swam to the *Kenneth Holt*.

The *Christian G* captain and the vessel manager decided that they would attempt to tow the vessel to Sabine Pass, Texas, and, at 1811, the *Kenneth Holt* began towing the *Christian G* while maintaining the extension cord connection that powered the three portable pumps on the *Christian G*. As the vessel was towed 50 feet behind the *Kenneth Holt* in 8-foot waves, water came over the *Christian G*'s bow. The water downflooded through an open exterior galley door on the main deck, into the

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<sup>2</sup> A *stuffing box* is a seal that prevents sea water incursion into the vessel where the propeller shaft exits the hull. The box requires a seal material (packing) that is stuffed around the rotating shaft and tightened down.

<sup>3</sup> A *keel cooler* is a heat exchanger mounted externally on a vessel's hull below the waterline.

deckhouse, and then down into the engine room, which was accessible from inside the deckhouse through a companionway on the port side aft.<sup>4</sup>

At 2149, the *Kenneth Holt* delivered a third gasoline-powered portable pump to the *Christian G*; the pump, housed in a floating container, had been dropped into the gulf by a Coast Guard surveillance aircraft (C2315). The captain set up the pump and began dewatering the engine room. He reported his progress to the captain of the *Kenneth Holt*, telling him that the water level in the engine room was not increasing.

At 2235, the tow line between the *Kenneth Holt* and the *Christian G* parted and the connection for the extension cord powering the portable electric pumps broke. Earlier, the vessel manager had directed one of the other fishing vessels he managed, the *Miss Hilary*, to assist. The *Miss Hilary* arrived on scene about 2345. A few hours later, on October 3, at 0041, the vessel captains decided to attempt to tow the *Christian G* again, but their efforts were unsuccessful. At 0200, the pump that had been delivered a few hours earlier at 2149 stopped when it ran out of fuel. At 0900, deckhand no. 2 was transferred from the *Kenneth Holt* to the *Miss Hilary*. At 1540, with no pumps operating, the *Christian G* captain determined the vessel may soon sink. He and deckhand no. 1, who were wearing lifejackets, abandoned the vessel, swimming to the *Miss Hilary*.

On October 4, at 0826, the vessel's emergency position indicating radio beacon activated. About 0950, 52 hours after it first began flooding, the *Christian G* sank in 78 feet of water about 69 miles southeast from Port Arthur, Texas (see figure 4). The vessel was not salvaged.



**Figure 4.** *Christian G* sinking in the Gulf of Mexico on October 4, 2023. (Source: Crew of the *Christian G*)

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<sup>4</sup> *Downflooding* is the entry of seawater through any opening, such as a vent, door, or hatch, into the hull or superstructure of an undamaged vessel due to heel, trim, or submergence of the vessel.

## 2 Analysis

The *Christian G* took on water for about 52 hours before sinking in the Gulf of Mexico. Because the vessel was not salvaged, a postcasualty vessel examination could not be performed and, therefore, the source of the flooding could not be determined.

By the time the captain got to the engine room after the bilge alarm sounded, water was already about 1 foot deep in the engine room bilge, which hampered him from locating a potential hull leak in that area. Because the flooding was initially found in the engine room and the captain could not locate the source of the leak elsewhere in the vessel, it is likely that the leak originated in the hull steel plate beneath the engine room.

The Coast Guard states in Navigation and Inspection Circular 7-68 (NVIC 7-68), Notes on Inspection and Repair of Steel Hulls, that “Deterioration of the metal structure is probably the most common, single defect in steel vessels.”<sup>5</sup> The steel plating had possibly developed a hole from deterioration since the vessel had last been out of the water in 2018. The hole in the plate was likely not large based on the rate of flooding with bilge pumps continuously pumping out the engine room and the vessel remaining afloat for 52 hours.

Additionally, as the *Christian G* was towed behind the *Kenneth Holt* in 8-foot seas, water entered the deckhouse through an open exterior door to the galley on the main deck. Once inside the deckhouse, the water would have flooded into the engine room through the companionway. The rate of engine room flooding was therefore accelerated by downflooding through the open deckhouse door.

## 3 Conclusions

### 3.1 Probable Cause

The National Transportation Safety Board determines that the probable cause of the sinking of the *Christian G* was flooding into the engine room—possibly caused by steel hull plating deterioration.

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<sup>5</sup> Coast Guard, “Navigation and Vessel Inspection Circular No. 7-68,” (October 28, 1968), NVIC 7-68, [28Oct1968.uscg.mil](https://www.uscg.mil/28Oct1968), 4.

**Vessel Particulars**

Vessel	<i>Christian G</i>
Type	Fishing (Fishing vessel)
Owner/Operator	Trawler Christian G Inc. (Commercial)
Flag	United States
Port of registry	Port Lavaca, Texas
Year built	2000
Official number	1095516 (US)
IMO number	9243069
Classification society	N/A
Length (overall)	79.2 ft (24.1 m)
Breadth (max.)	24.0 ft (7.3 m)
Draft (casualty)	8.0 ft (2.4 m)
Tonnage	140 GRT
Engine power; manufacturer	1 × 540 hp (403 kW); Caterpillar 3412TA diesel engine

NTSB investigators worked closely with our counterparts from **Coast Guard Marine Safety Unit Port Arthur** throughout this investigation.

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For more detailed background information on this report, visit the [NTSB Case Analysis and Reporting Online \(CAROL\) website](#) and search for NTSB accident ID DCA24FM002. Recent publications are available in their entirety on the [NTSB website](#). Other information about available publications also may be obtained from the website or by contacting—

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