

April 7, 2026

MIR-26-12

Fire aboard Pipelayer *Deep Energy*

On December 1, 2024, about 0352, the pipelayer *Deep Energy* was docked at the Millard Maritime facility, located in Theodore, Alabama, undergoing a maintenance period, when a fire started within one of the vessel's three crane cabins (see figure 1 and figure 2). The crew began fighting the fire and contacted the local fire department, who extinguished the fire. There were no injuries. The crane cabin on the *Deep Energy* sustained significant fire damage that was estimated at \$1.8 million.¹



Figure 1. The *Deep Energy* in October 2024. (Source: Ian Sloan, marinetraffic.com)

¹ (a) In this report, all times are central standard time, and all miles are statute miles. (b) Visit [ntsb.gov](https://www.ntsb.gov) to find additional information in the [public docket](#) for this NTSB investigation (case no. DCA25FM007). Use the [CAROL Query](#) to search investigations.

Casualty Summary

NTSB Casualty type	Fire/Explosion
Location	Millard Maritime Facility, Theodore, Alabama 30°31.83' N, 088°6.23' W
Date	December 1, 2024
Time	0352 central standard time (coordinated universal time -6 hrs)
Persons on board	126
Injuries	None
Property damage	\$1.8 million est.
Environmental damage	None
Weather	Visibility 10 mi, winds east at 3 kts, air temperature 39°F, water temperature 68°F
Waterway information	River; depth 41 ft at casualty site



Figure 2. Area where the *Deep Energy* fire occurred, as indicated by a circled X. (Background source: Google Maps)

1 Factual Information

The *Deep Energy* was built in 2013 by HD Hyundai Marine Engine (formerly STX Heavy Industries in Korea) and delivered to Technip FMC Limited, a company that manages and oversees engineering construction projects for the energy industry. The *Deep Energy* was designed as a pipelayer to support the installation of underwater reeled rigid pipe, flexible pipe, and cables. The vessel was equipped with two 2,800-ton reels, one knuckle boom crane, two service cranes, as well as a lay tower on the vessel's stern (see figure 1 and figure 3).²

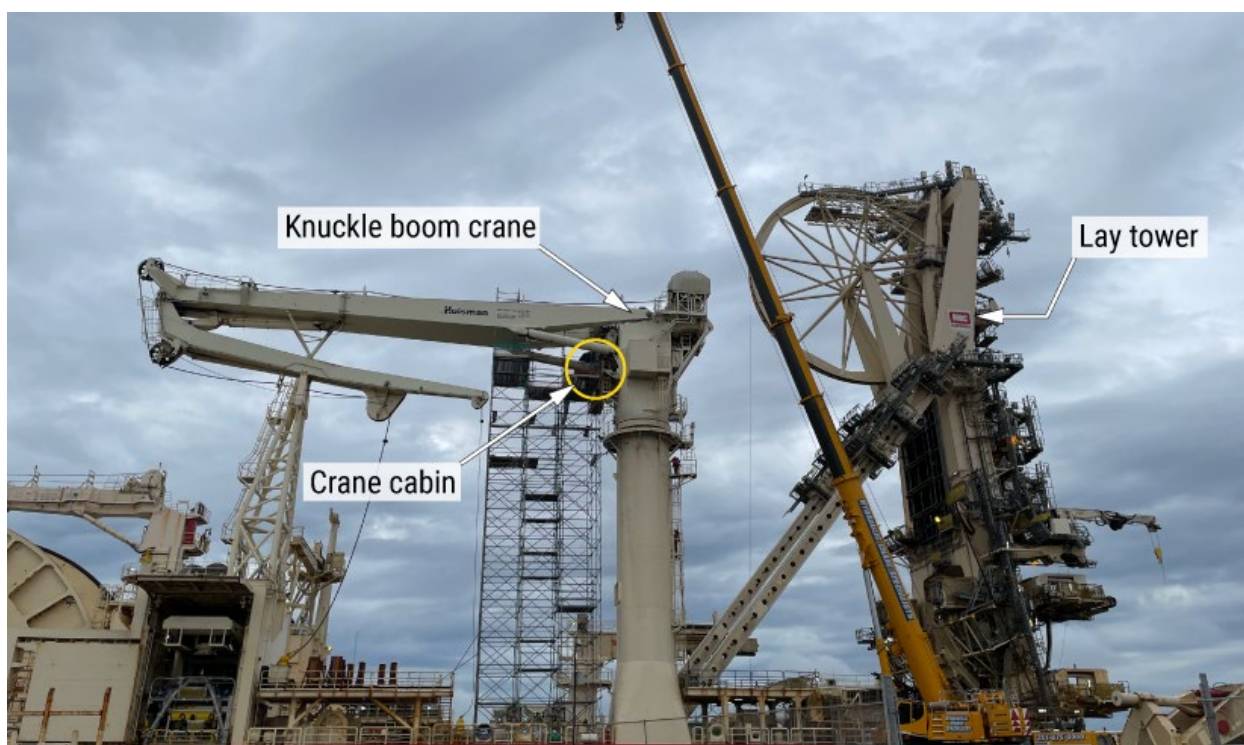


Figure 3. The knuckle boom crane from the port side of the vessel after the casualty.

On November 24, 2024, the *Deep Energy* was moored alongside the Millard Maritime facility for a 5-week-long annual maintenance period, with 126 crewmembers on board. During the maintenance period, some of the crew stood 8-hour watches, while others performed day work. On November 30, scaffolding was erected around the forward section of the knuckle boom crane tower to enable scheduled examination and maintenance of the crane boom (see figure 3). On December 1, about 0352, the fire alarm panel on the bridge sounded, indicating that a smoke detector within the knuckle boom crane cabin had activated. The senior chief mate, who was on duty,

² A *lay tower*, or *pipelay tower*, is a structure on a pipelayer that supports, aligns, and welds pipe sections for installation on the seabed.

contacted the rigging superintendent (also on duty) and directed him to investigate.³ The rigging superintendent proceeded to the crane cabin, which required him to climb about 84 feet up the crane tower.

About 0401, the rigging superintendent accessed the crane cabin platform and confirmed that there was a fire within the crane cabin, on the starboard side by the entrance (see figure 4). He informed the senior chief mate of the fire and then retrieved the carbon dioxide fire extinguisher from inside the crane cabin. He emptied the extinguisher on the fire but was unable to extinguish it. The senior chief mate directed him to get down from the crane platform.

Following confirmation of the fire, the senior chief mate notified the master and sounded the general alarm. The master then proceeded to the bridge to muster the vessel's two fire teams according to the vessel's fire response plan. As the fire teams were mustering, the main fire pump was started, and the master directed the senior chief mate to inform the US Coast Guard about the situation. The crew in the engine control room notified the master on the bridge that all electrical power to the crane and associated equipment was secured (they opened the associated electrical breakers).

About 0408, after seeing the fire within the crane cabin break the glass of the structure and grow in intensity, the master directed the senior chief mate to again contact the Coast Guard and inform them that the vessel required assistance from the local fire department.



Figure 4. The crane cabin on fire, as seen from shore, after the fire broke the glass and before the arrival of the Mobile Fire Department. (Source: Unknown, via Coast Guard)

³ Due to the size of the vessel's complement, which included several departments, the title "senior chief mate" was used to differentiate this position from other positions that required credentialed chief mates.

The master directed Fire Team 1 to use the vessel's fire hoses to apply water on the crane cabin from the main deck. The water was unable to reach the crane cabin from that position, and they moved to reposition themselves. Fire Team 2 was then sent to deploy additional fire hoses. About 0416, Fire Team 1 reported to the master that they had repositioned themselves on the lay tower and were able to apply water onto the fire. In addition, two members of Fire Team 1 began to proceed up the crane tower to stage on the crane platform and attack the fire with additional carbon dioxide extinguishers.

About 0420, two fire trucks from the Mobile Fire Department, including a ladder truck, arrived at the dock. The fire department chief and the vessel's chief engineer met on the dock. They developed a plan to remove all personnel from the crane tower and the main deck so the fire monitor on the ladder truck could direct a high volume of water onto the crane cabin.

Before firefighters applied water from the ladder truck, Fire Team 2 confirmed that all electrical power to the area was secured and all personnel had departed from the aft section of the vessel. About 0437, the ladder truck started to direct water onto the crane cabin and continued to apply water until the flames were no longer visible. To confirm that the fire was extinguished, two members from each of the vessel's fire teams and two Mobile Fire Department firefighters proceeded up the crane tower. The fire department used thermal vision goggles to ensure that there were no hot spots that could reignite. At 0500, the fire was declared out. The fire department departed the scene at 0550.

The crane operator told investigators that he had been in the crane cabin about 10 hours before the fire was discovered and did not note any issues or concerns before he departed. He said the crane had last been operated on November 24 (7 days before the fire), after the vessel docked at the facility.

The crane operator said the crane cabin contained the electrical systems and controls to operate the crane, as well as a coffee maker, an electric tea kettle, and a compact refrigerator (see figure 5). The refrigerator was located on the deck, on the starboard side of the space by the door, and the coffee maker and the tea kettle were located above the refrigerator on a wooden shelf, which also housed plastic document binders. Plastic bins were also mounted on the wall, above the refrigerator. The refrigerator, which had been placed in the space about 6 months before the fire, was used by the crew to store water and milk. Information about the refrigerator's make, model, age, and country of manufacturing was not available.

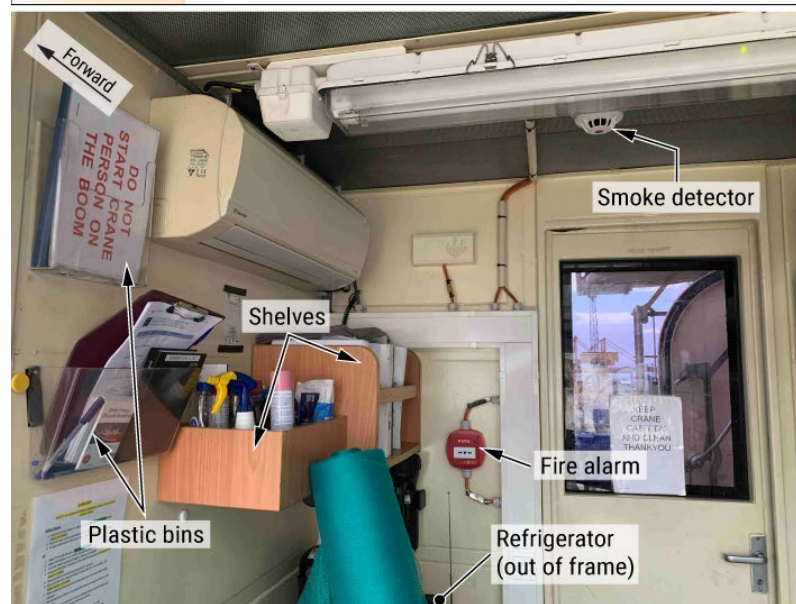
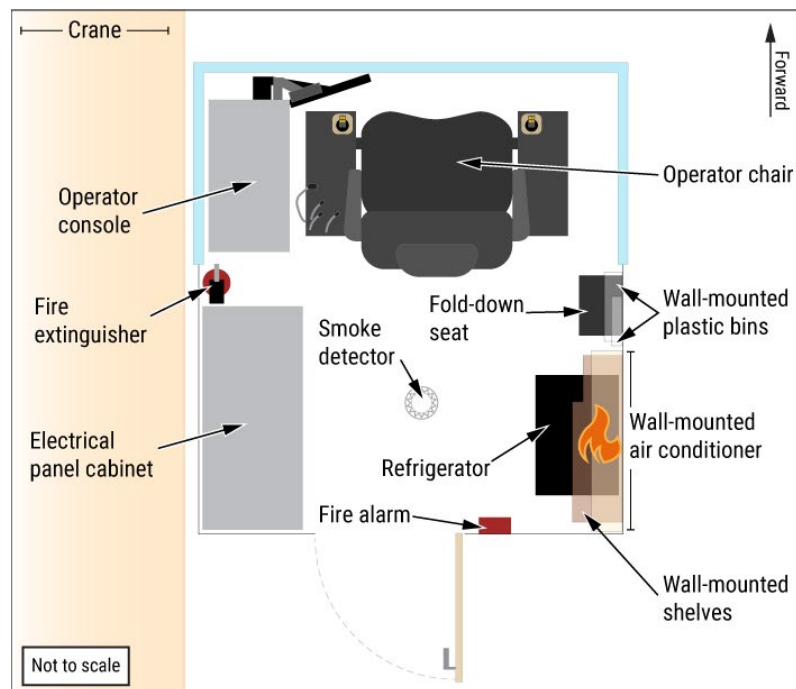


Figure 5. Top: Plan view of the crane cabin room (not to scale and layout approximate). Below: An undated photograph from before the accident, showing the aft corner of the crane cabin room and the items mounted above and near the refrigerator.

Investigators from the Coast Guard and National Transportation Safety Board, and a private fire investigator representing the vessel owner conducted a fire scene examination on board the *Deep Energy*. The interior of the crane cabin was found to be extensively damaged by the fire. The investigators found the remains of the coffee maker, electric tea kettle, and refrigerator on the starboard side of the crane cabin, next to the entrance (see figure 6).

After these items were removed, investigators discovered a fire pattern on the bulkhead, behind where the refrigerator, wall-mounted plastic bins and shelving had been installed, and in the same area where the rigging superintendent first saw flames. In addition to the fire pattern on the bulkhead, the investigators found fire damage to the metal deck-covering under the area where the refrigerator had been located.



Figure 6. *Top:* The crane cabin interior after the fire, with the location of the refrigerator and other objects outlined in yellow, and the burnt remains of the refrigerator. *Below:* The fire pattern on the bulkhead and damage to the deck underneath the removed refrigerator outlined in yellow. (Background source [*top left*]: Coast Guard)

2 Analysis

On December 1, 2024, the pipelayer *Deep Energy* was docked at the Millard Maritime facility in Theodore, Alabama, when a fire broke out in the knuckle boom crane cabin. The crew fought the fire before contacting the Coast Guard and the Mobile Fire Department, who extinguished the fire.

Once the vessel's smoke detection and alarm system notified the on-watch personnel on the bridge of the fire location, a crewmember was sent to investigate in accordance with the vessel's fire response plan. After he confirmed the presence of a fire on the starboard side of the interior of the crane cabin, he notified the senior chief mate. The senior chief mate, in turn, notified the master, who sounded the general alarm. The master mustered the vessel's fire teams, and they applied water onto the fire as the master evaluated the situation. In addition to responding to the fire, the master also requested assistance from the Coast Guard and the local fire department. The crew's quick response and prompt action helped limit the fire damage and extinguish the fire.

A postcasualty investigation identified a fire pattern on the bulkhead on the starboard side of the crane cabin behind a compact refrigerator, indicating that this location was the likely origin of the fire. A failure of the refrigerator's hermetically sealed compressor or an electrical fault could have caused the fire. Additionally, there were two 110-volt electrical receptacles in the crane cabin, including the receptacle the refrigerator was plugged into, which were protected by a 15-amp breaker. If there had been an electrical fault—such as a loose, broken, or frayed wire, or broken receptacle hardware—within the receptacle, it could have created excessive resistance heating, which could have led to the ignition of nearby combustibles. However, because the vessel's breakers were opened as part of the response to the fire, it is unknown whether this breaker tripped. Due to the extent of the fire damage to the refrigerator and elsewhere within the crane cabin, the exact ignition source and cause of the fire could not be determined.

Once an ignition source was produced, combustible materials (including shelving and plastic bins) mounted on the bulkhead, above the fire's likely origin, ignited and provided a path for the fire to expand up the bulkhead to the rest of the crane cabin.

3 Conclusions

3.1 Probable Cause

The National Transportation Safety Board determines that the probable cause of the fire within the knuckle boom crane cabin aboard the pipelayer *Deep Energy* was likely the result of an unknown malfunction of, or an electrical fault within, the refrigerator or its associated electrical receptacle.

Vessel Particulars

Vessel	<i>Deep Energy</i>
NTSB vessel group	Pipelayer (Specialty/Other)
Owner/operator	Technip UK Limited (Commercial)
Flag	The Bahamas
Port of registry	Nassau, The Bahamas
Year built	2013
Official number	N/A
IMO number	9481154
Classification society	DNV
Length (overall)	638.1 ft (194.5 m)
Breadth (max.)	101.7 ft (31.0 m)
Draft (casualty)	28.8 ft (8.8 m)
Tonnage	25,378 GRT
Engine power; manufacturer	6 × 7,000 hp (5,220 kW); Wärtsilä 9L32 diesel engines

NTSB investigators worked closely with our counterparts from **Coast Guard Sector Mobile** throughout this investigation.

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable cause of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for any accident or event investigated by the agency. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)).

For more detailed background information on this report, visit the [NTSB Case Analysis and Reporting Online \(CAROL\) website](#) and search for NTSB accident ID DCA25FM007. 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—

National Transportation Safety Board
 Records Management Division, CIO-40
 490 L’Enfant Plaza, SW
 Washington, DC 20594
 (800) 877-6799 or (202) 314-6551