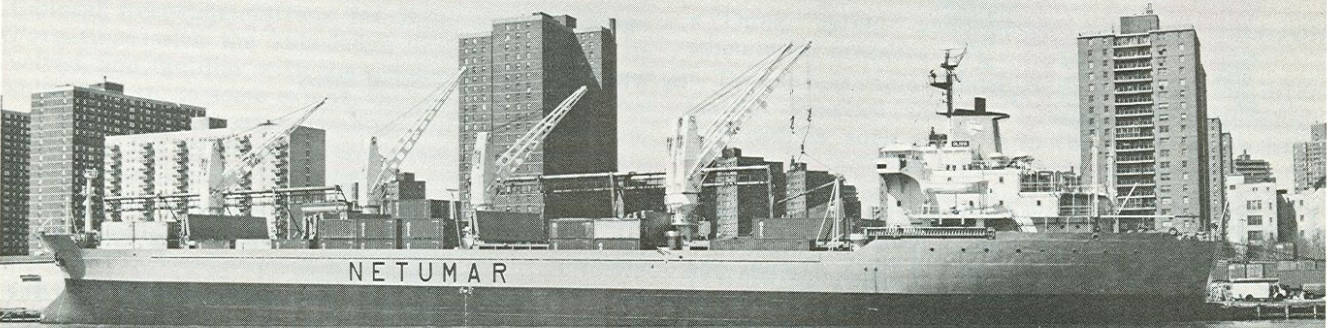


# MV OLIVIA



*Manhattan Box 234, located at South and Clinton Streets, was transmitted at 1619 hours on March 10, 1981. The alarm was for a fire in the engine room of the Motor Vessel Olivia, berthed at Pier 36 in the East River.*

*It was by no means a spectacular fire and would ordinarily be relegated to the pages of a fire report and simply become a statistic. However, due to an unusual circumstance, it is recounted here to emphasize, once again, that in firefighting one should always be ready for the unexpected.*

by **JOSEPH A. FLYNN**  
Chief of Marine Division

Photo by C. Benson, F.D.N.Y. Photo Unit

## ... labeling error creates unusual situation

The fire in the Motor Vessel Olivia started in the forward section of the engine room, port side, when a member of the crew attempted to ignite an oxy-acetylene torch. Due to a defective hose, the flame traveled back to the regulator which blew off the tank, sending a shaft of flame upward, igniting electrical cables on the overhead. The crew, under the direction of the chief engineer, secured the ship's generators, vacated the engine room, and closed all access doors and vents. An alarm was transmitted without apparent delay. The chief engineer then went to the compartment where the controls for the CO<sub>2</sub> system were installed, and activated that part of the system protecting the engine room.

### UNITS RESPOND

Units assigned on the 1st alarm were Engine Companies 15, 9, and 17; Ladder Companies 18 and 6; Marine Company 6, and the 4th Battalion, commanded by Battalion Chief Stanley Hirschfield. Prior to the arrival of Chief Hirschfield, the officer in command of Ladder Co. 18 transmitted a signal 10-75.

When Chief Hirschfield arrived, he boarded the Olivia and was informed of the actions taken. After assessing the fire situation, he transmitted a 2nd

alarm and requested the response of the Foam Unit. Rescue Company 1 automatically responded on the 2nd alarm. Also responding were Chiefs John J. Fogarty, Manhattan Borough Commander; Joseph A. Flynn, Marine Division; and James J. Manahan, Safety Division. The Coast Guard also responded and, in compliance with Coast Guard regulations, assisted in establishing communications with the vessel's officers.

Lines were stretched from the land side and also from Marine Company 6, which tied up to the port side of the Olivia. Lines were deployed to both the port and starboard sides of the ship, with one line to the maindeck entrance to the engine room. No further advance was made with these lines, in order to permit the CO<sub>2</sub> to control the fire. Surveys were made of the main deck and bulkheads to pinpoint the location of the fire, monitor the effectiveness of the CO<sub>2</sub>, and prevent any extension of the fire through the deck and bulkheads by conduction.

In two separate ship fires within recent years, experience has shown that CO<sub>2</sub>, when used in a confined area in sufficient quantities, over a specified period of time, is extremely effective. Of main concern to the Fire Department is to ensure that there



are adequate supplies of CO<sub>2</sub>, and that time is allowed to control the fire.

### ALL OLIVIA'S CO<sub>2</sub> USED

Meanwhile, discussions were held with Olivia's master and chief engineer who informed us that there were two cylinders of acetylene and four cylinders of oxygen in the engine room. The ship's plans were requested and were provided. The chief engineer then stated that he had discharged the entire CO<sub>2</sub> supply that was aboard the Olivia into the engine room. Orders were issued to obtain additional CO<sub>2</sub> through the Netumar Line's representative in New York.

The continual monitoring of the temperature of the main deck indicated that the fire was extending and was not being inhibited by the CO<sub>2</sub>. In addition, a light haze had developed from paint that was being vaporized from the deck and bulkheads, and a slight buckling had occurred over the seat of the fire.

As the CO<sub>2</sub> was not controlling the fire, Chief Fogarty decided to attack the fire with handlines. Prior to stretching any lines into the engine room, a brief survey was made to confirm the location of the fire, its extent, and whether it was feasible to attack it with handlines. The survey was conducted by a battalion chief, and the officer and two firefighters from Rescue Company 1. Equipped with masks, lights, and a lifeline, the survey team entered the engine room. Within thirty seconds they had located the fire and confirmed that it could be extinguished with handlines.

### UNDER CONTROL

The members of Rescue Company 1 took a 2½" handline into the engine room. Back-up lines were in place and ready if needed. Rescue Company 1 members reported by Handie-Talkie that good progress was being made, and that they could control the fire. Another access door to the engine room was opened to provide better ventilation, and members of Engine Company 17 relieved the members of Rescue Company 1 to complete the final extinguishment. The major portion of the fire had involved electrical cables on the overhead. There was no evidence that CO<sub>2</sub> had, in fact, been discharged into the engine room.

### INSPECTION REQUESTED

On the morning after the fire, the Marine Division

Firefighters stretch lines from Mar. Co. 6, which was tied up to the port side of the Olivia. Lines were deployed to port and starboard sides of Olivia, with one line to entrance of engine room.

Photo by C. Benson, F.D.N.Y. Photo Unit



requested that an inspection of the Olivia be made by the Coast Guard. The request was made to determine:

- why there was storage of oxygen and acetylene in Olivia's engine room,
- why oxy-acetylene equipment was used without a permit from the Coast Guard, and
- why the installed CO<sub>2</sub> system failed to control the fire.

That same day, the Coast Guard reported the results of their inspection. Summary action was taken for the violation of regulations governing "hot work" while the ship was in port. What was most unusual, was the report on the CO<sub>2</sub> system.

The system consists of two banks of CO<sub>2</sub> cylinders; seventy-three cylinders for the engine room, and seven for the engine control room. In the CO<sub>2</sub> compartment, there are two buttons that activate the system. Each button is provided with an instruction plate, printed in Portuguese, indicating the space that is being protected when that particular button is depressed. The problem was that the instruction plates were reversed when they were installed.

When the chief engineer pressed the button, which the instruction plate indicated would flood the engine room with CO<sub>2</sub>, seven cylinders were discharged into the control room. No CO<sub>2</sub> was ever discharged into the engine room.

It was fortunate that the fire had occurred in port, and that no one was in the control room. Had an engine room fire occurred at sea, with no CO<sub>2</sub> being applied to the blaze, or a delayed application being made, a substantial or total loss of the ship could have occurred. On the other hand, if anyone was in the control room when the CO<sub>2</sub> was discharged into that area, a fatality could have occurred. As it turned out, the Olivia had to postpone sailing for about two weeks in order to repair their damaged cables.

### LESSONS LEARNED

- Utilize the assistance and expertise of the Coast Guard; at the scene and, if needed, for the follow-up.
- Continuously monitor bulkheads and decks that are adjacent to, or over, the fire area.
- Contact the ship's master, chief engineer, or senior officer as soon as possible to obtain the ship's plans and information as to the probable cause of the fire, its location, and the actions that have been taken to extinguish or confine it.
- If CO<sub>2</sub> has been discharged on the fire, a new supply should immediately be ordered by the ship's master, or the ship's New York based agents.
- If a foreign flag vessel is involved, and their personnel have limited fluency in English, have their New York representative summoned to the ship. Agents of foreign vessels are usually fluent in both English and the language used by the vessel's personnel.
- And finally, at shipboard fires, as well as with all fires, never take anything for granted. *Always be ready for the unexpected.* ▲

#### Statistics — Motor Vessel Olivia

Owner:	Netumar Lines (Brazil)
Length:	568'
Beam:	87'
Depth:	44'
Gross Tonnage:	17,300
Cargo:	Primarily containers (general cargo). Can also carry bulk.