

Leo P. Trambukis
COMMISSIONER OF PUBLIC SAFETY



Leonard W. Reilly
ADMINISTRATIVE ASSISTANT

COMMISSIONER OF PUBLIC SAFETY
209 FOUNTAIN ST., PROVIDENCE, RHODE ISLAND 02903

November 18, 1976

To: The Honorable City Council
From: The Commissioner of Public Safety
Subject: Response to Resolution #455 (9/9/76)
(Fireboat for Port of Providence)

The attached report (with addendums) from Chief Michael F. Moise of the Providence Fire Department constitutes the response requested for Resolution #455, dated September 9, 1976, and is being submitted for your consideration.

I believe Chief Moise's report is a comprehensive one which accurately reflects the current situation and certain information and recommendations which hopefully will be of some assistance to you in any decision you make regarding the matter.

IN CITY COUNCIL
DEC 2 1976

READ:

WHEREUPON IT IS ORDERED THAT
THE SAME BE RECEIVED.

Edward J. Reilly
CLERK

Respectfully submitted,

Leo P. Trambukis
LEO P. TRAMBUKIS
Commissioner of Public Safety

CITY OF PROVIDENCE

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

RESOLUTION OF THE CITY COUNCIL

Na 455

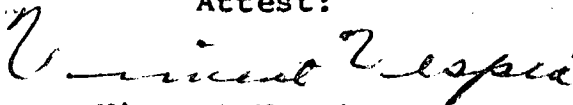
Approved: September 9, 1976

WHEREAS, on July 20th last, a spectacular waterfront fire was knocked down through efficient efforts of the Officers and Men of the Providence Fire Department, which threatened much valuable property along the Port of Providence, and

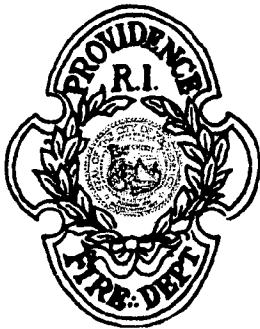
WHEREAS, the Chief of the Fire Department, ever alerted to effective methods of containing, controlling and knocking down conflagrations, has made his position clear that waterfront fires, particularly in the area of storage facilities of fossil fuel and liquified natural gas tanks, should be attacked from the waterside of the Port of Providence, by use of a Fire Boat or Boats,

NOW, THEREFORE, BE IT RESOLVED, that the Chief of the Fire Department is requested to undertake a study of the feasibility of procuring and the use of a Fire Department owned and operated Fire Boat, for the purpose of augmenting Fire Fighting along the waterfront of the City of Providence.

A true copy,
Attest:



Vincent Vespia,
City Clerk.



Providence Fire Department
Headquarters
209 Fountain Street
Providence, Rhode Island 02903

Michael F. Moise
CHIEF OF DEPARTMENT

November 16, 1976

To: The Honorable City Council
Via: Leo P. Trambukis, Commissioner of Public
Safety
From: Michael F. Moise, Chief of Department
Subject: Fireboat for the Port of Providence

Whereas the need for a fireboat for the Port of Providence has been questioned and a resolution has been passed by the City Council requesting the Chief of the Fire Department to undertake a study to determine the feasibility of procuring a fireboat owned and operated by the fire department for firefighting purposes along the waterfront, I respectfully submit the following report for your consideration:

At this time the requirement for a conventional fireboat is as it has been for the past two or three decades. Generally, a conventional fireboat is not required. This premise is based upon the recommendations of the Insurance Services Office Insurance (formally the National Board of Fire Underwriters) grading schedule which require a fireboat generally where there is an occupied wharf frontage of at least a mile. The Port of Providence presently does not have a mile of built-up frontage and most existing building areas along the waterfront are accessible to land mobile firefighting equipment. (See Enclosure 1).

There is, however, a consideration, aside from the wharf frontage requirement, that must be considered. This consideration is the quantity of ship carrying cargo and bulk petroleum and flammable product that travels and docks in the port. This has increased over the years. While the responsibility for fire protection within the Port of Providence, including the waters of the Port, rests with the fire department, the Providence Fire Department has extremely little in the way of fire-fighting capability on the waters of the Port. For this reason, some type of vessel, or vessels, should be available to the fire department in the interim and until the requirement for a large conventional fireboat exists.

It should be realized that the cost of a conventional fireboat falls within the range of \$1,250,000.00 and the annual cost for staffing and maintaining this vessel, conservatively, is estimated to be \$100,000.00. A capital expenditure in this amount does not appear warranted, at this time, in view of the return the city, or its port occupants, would receive. However, as the development of the Port of Providence comes to fruition, the need for a conventional fireboat, together with its affect upon the insurance rates and the City's fire protection grade, would have to be reassessed.

Ideally, in my opinion, the most feasible and economical approach to the fireboat need, not only for the Port of Providence, but also for other communities that border Narragansett Bay, should be a venture oriented by the State of Rhode Island and shared equally by all major communities that border the bay. This could be accomplished after an in-depth and proper feasibility study is made and enabling legislation is passed. Should this be accomplished, it is likely that fire protection to waterfront communities could be provided at a reasonable cost.

The fact that a conventional fireboat is not strictly required and is not economically feasible for the Port of Providence at this time, does not preclude consideration of other options which the city may pursue in the interim in order to provide some waterside fire protection to the Port and to utilize a boat for water rescue and utility service in the Port of Providence.

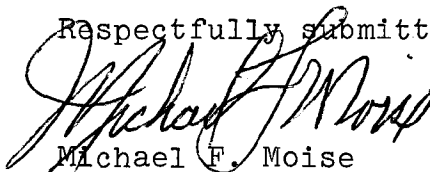
It must be mentioned that the U.S. Coast Guard has stationed a boat with firefighting capability within the Port of Providence. This provides service to the Port including limited fire protection at no cost to the city. However, should the City of Providence opt to provide its own fireboat protection for the Port, there are two (2) options which the city may pursue and which appear to be economically feasible and practicable at this time.

The first option is the outright purchase of a boat such as the type the U.S. Coast Guard has in service at the Port or the type purchased and in use by the City of SanBonaventura (Ventura) California. This boat is approximately 28 - 35 feet in length and has a 500 Gallon Per Minute pumping capacity. It is maneuverable and has the capability for additional use as a water rescue craft. The cost of this type boat would be approximately \$100,000.00. This would be the only large expenditure as it would not be necessary to maintain a crew and pilot on duty with the boat at all times. A boat of this type could be equipped with cardiac telemetry equipment for victims on any boat or ship on the water. Further, it could be utilized by the Port Director for Port utility service, yet still be available for emergency use by the fire department. This option should be seriously considered. (See Enclosure 2).

Secondly, the city could opt to purchase a surplus military craft with firefighting capabilities, possibly at reasonable cost. Cost estimates are difficult to obtain at this time. Moreover, it may be necessary to outfit a vessel of this type according to our needs. Depending upon the size, and condition of the vessel, the need for supplying firefighting equipment, and the requirement for staffing and maintaining such a vessel, this option ultimately could prove to be costly. However, this alternative could be pursued. At the present time, the Port Director and myself are planning to research this possibility in order to ascertain availability and additional costs which may be required. Again, a vessel of this type could have utility use at the Port and be available for emergency use by the fire department.

Gentlemen, in summary, this report has been submitted to the Honorable City Council as my assessment of the need for a fireboat, together with options which may be pursued by the city. I would be pleased to meet with you at anytime to discuss anything further on this matter.

Respectfully submitted,



Michael F. Moise
Chief of Department

MFM:eg

(Enclosures (3))

American Insurance Association

ENGINEERING AND SAFETY SERVICE

85 John Street, New York, N. Y. 10038

Revised February, 1975

Special Interest Bulletin No. 137

FIRE DEPARTMENT APPARATUS—FIRE BOATS

Protection to ports is an important factor in the economy of our nation. The extensive use of wooden substructures for piers and wharves, and the general inaccessibility of such below-deck areas make it extremely difficult to combat effectively a fire which has gained much headway. Coupled with the importance of preserving piers and wharves and their contents from loss by fire is the fact that ships tied up for loading or unloading often become involved in fires which originate on the piers or wharves. The major port cities of our country have recognized that only by the use of marine fire fighting equipment can the fire department provide effective protection to waterfront property. Fires on or near tanker wharves present a serious exposure hazard. A fire boat also can be used as an auxiliary water supply by pumping to hand lines up to 1000 feet from the waterfront.

In general, a fire boat should be provided where there is an occupied wharf frontage of at least a mile, and additional fire boats may be needed to protect more extensive occupied wharf frontages; the response distance should not exceed 1½ miles. In any event, a fire boat must be able to respond to an alarm immediately, which requirement generally precludes its use for other purposes. The boat should be able to maintain a speed of at least 10 knots.

River or harbor tugs, even though equipped with fire pumps and turrets, usually cannot be depended upon for regular fire boat service since they may not be immediately available when needed most. Furthermore, the pumps are generally of small capacity, in most cases not more than 750 gpm.

Newer boats have internal combustion engines, and capacities ranging from 5,000 to 12,000 gpm. Purchase of the larger sizes is usually not advisable unless there are special circumstances that must be considered, such as properties which require larger quantities of water because of the hazard involved.

In general, a 5000- to 6000-gpm capacity fire boat, using diesel engines or other comparable drivers, should be satisfactory. Such a boat can be built so that most operations may be controlled from the pilot house, and the crew generally need consist only of an officer, an engineer and 2 or 3 men to handle the turrets and act as deck hands; a pilot may also be required in some instances. U.S. Coast Guard regulations establish minimum manning in many areas.

In designing a fire boat for the normal port city, important points to be considered are as follows:

1. The rated capacity should be at least 5000 gpm at 150 psi pump pressure. Pump pressure should be measured in the discharge piping at or near the boat's waterline, preferably in the header loop.
2. Each pump preferably should have a separate driving unit. Engines should have adequate speed and horsepower ratings and be suitable for their intended use.
3. The total rated capacity of the boat should be equally divided among 2 or more pumps in order to provide flexibility and reliability of operation.
4. Each pump should have its own suction line and sea chest, so located that the possibility of blockage of more than one at a time will be minimized.
5. Discharge piping should be arranged and valved so that at least one-half of the rated capacity of the boat will be available in case of a break or repair to the pipe.
6. The size of discharge pipe should be such that the velocity of the water in the piping will not exceed 10 feet per second when rated capacity is being delivered.
7. At least 2 turrets should be installed and a manifold with at least three 2½-inch hose outlets should be provided on each side of the boat.
8. When not anchored or docked, means should be provided for maintaining the boat in position while delivering at least ½ rated capacity. A separate propulsion engine is preferable although pumping engines may be used for maneuvering at the expense of loss of capacity.
9. Fuel capacity should be sufficient to permit rated capacity to be delivered for a continuous period of not less than 12 hours.
10. Provision should be made for maintaining engine starting batteries at full charge when the boat is moored.
11. The hull should be designed and controls so arranged that the most efficient use can be made of the boat, considering local conditions.
12. Fire protection should be provided on the boat, including the distribution of portable extinguishers and, where necessary, the installation of a carbon-dioxide flooding system in the engine room.
13. The boat should be equipped for towing so that it can be used to move endangered or burning vessels away from piers and wharves.

Enclosure 1

14. When harbors are subject to freezing, the boat should have a bow designed for icebreaking.
15. Stowage space should be provided for at least 1000 feet of 2½-inch or larger hose and 300 feet of 1½-inch hose. Other equipment that should be carried will depend upon local conditions, but should include at least axes, adaptors, crow bars, cutters, one or 2 short ladders, gas masks, rope, cellar and distributing nozzles, large capacity spray nozzles, and syphon or eductor. A fixed foam system, should be installed.
16. In some instances, a dinghy, carried on the fire boat and equipped with an outboard motor and a small portable pump will be of value in fighting fires in the substructure of piers and wharves.
17. The boat should be radio equipped on the fire department radio system in order that proper communications can be maintained with fire alarm headquarters.

Certain cities may have no need for a conventional fire boat to protect waterfront properties but do have

a considerable number of pleasure craft. Under these conditions, a small boat with a 500- or 1000-gpm pump and necessary minor equipment would be of considerable value.

Where financial limitations of the community do not permit complete manning of a fire boat, a boat can still be kept in operation by providing a man on board at all times and depending upon men from a land company for manning when the boat responds to a fire. Under such conditions the land station should be within a reasonable distance of the fire boat berth.

A fire boat should be tested upon delivery to make sure that contract specifications have been met; the test should ordinarily consist of a 3-hour operation of each pump at rated capacity and a 30-minute operation of all pumps together, at the rated capacity of the boat. Some reserve power is desirable. Similar tests for at least 30 minutes should be made at least annually.

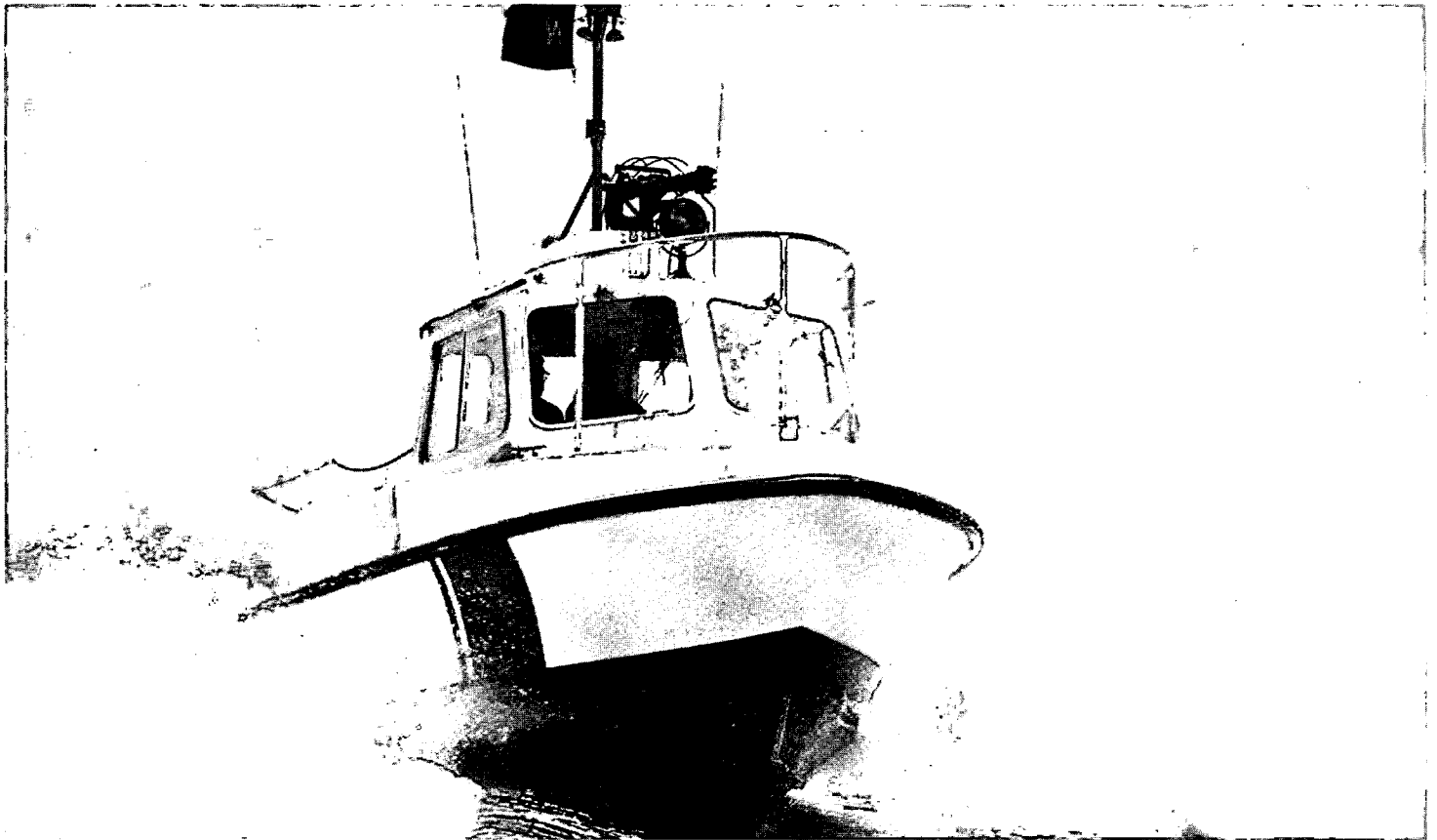
THE WILLARD COMPANY

1300 Logan Avenue, Costa Mesa, California 92626 (714) 546-5522
1306 Logan Avenue, Costa Mesa, California 92626 (714) 546-5522
11200 Condor Avenue, Fountain Valley, California 92708 (714) 540-5211

INCORPORATED

Newsletter Vol. 2, No. 2

Spring 1976



FIRST COAST GUARD VESSEL IS LAUNCHED

The first of a contractual quantity of 31 U.S. Coast Guard Ports and Waterways Boats was launched in early May in Long Beach Harbor. These new patrol boats were designed by the Coast Guard and are built by the WILLARD MARINE Division in its Costa Mesa Plant under the direction of Mr. Richard Lenassi. The boat represents a major advance in the tools available to the Coast Guard for patrol and protection of our waterways. It has, in addition to normal equipment, an integrally mounted water and foam dispensing fire fighting unit to suppress boat and dock fires. It will have a rapid response capability and the

ability to operate in shallow or debris-strewn water.

Jack Hochadel, President of WILLARD, gave the greatest credit to Richard Lenassi who has managed the program from the proposal phase to launching of the first boat. Lenassi, a former Coast Guard Lieutenant Commander, established and directed the engineering, quality control, and manufacturing efforts which have successfully produced the Ports and Waterways Boat. Also playing a major role was C.W.O. Theodore Burton, a U.S. Coast Guard Officer who is the resident inspector and responsible for contract liaison with Coast Guard Headquarters in Washington D.C.

The first boat has been subjected to two weeks of comprehensive acceptance tests and trials including stability measurements, fire unit tests, electrical tests, performance trials, endurance and fuel consumption tests, and handling trials. Each of the remaining boats will be subject to an abbreviated series of tests prior to shipment to various home ports throughout the country.

As of the launching of the first boat, seven of the 32 foot Ports and Waterways Boats have been molded and are in various stages of completion in the production line. Costs and schedules are in line with those budgeted and the company is quite pleased with the program.

WILLARD'S CORPORATE ORGANIZATION

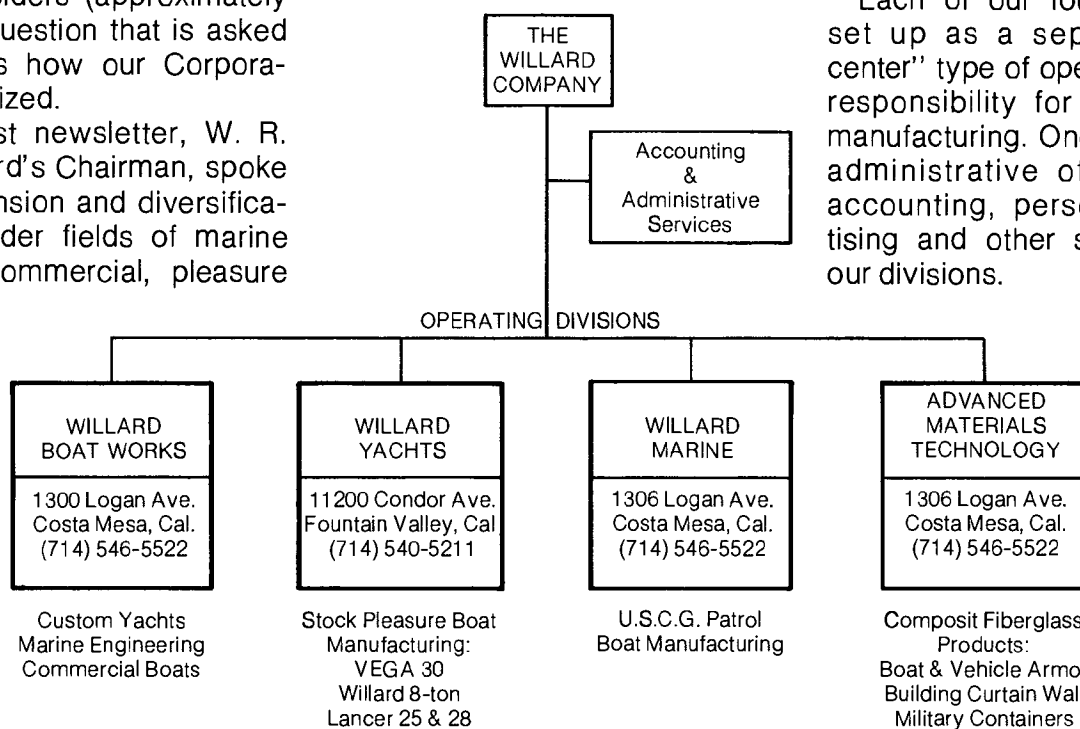
The purpose of WILLARD'S newsletter is to have a vehicle to better communicate with our employees (numbering 110), our suppliers (in excess of 300), our present and past customers, and our shareholders (approximately 350). One question that is asked frequently is how our Corporation is organized.

In our last newsletter, W. R. Tighe, Willard's Chairman, spoke of our expansion and diversification into wider fields of marine products (commercial, pleasure

and governmental) and also of our ADVANCED MATERIALS TECHNOLOGY Division which manufactures various composit

fiberglass products. The functional organizational chart diagram below will give you a clear picture of WILLARD'S four divisions, along with their locations and products.

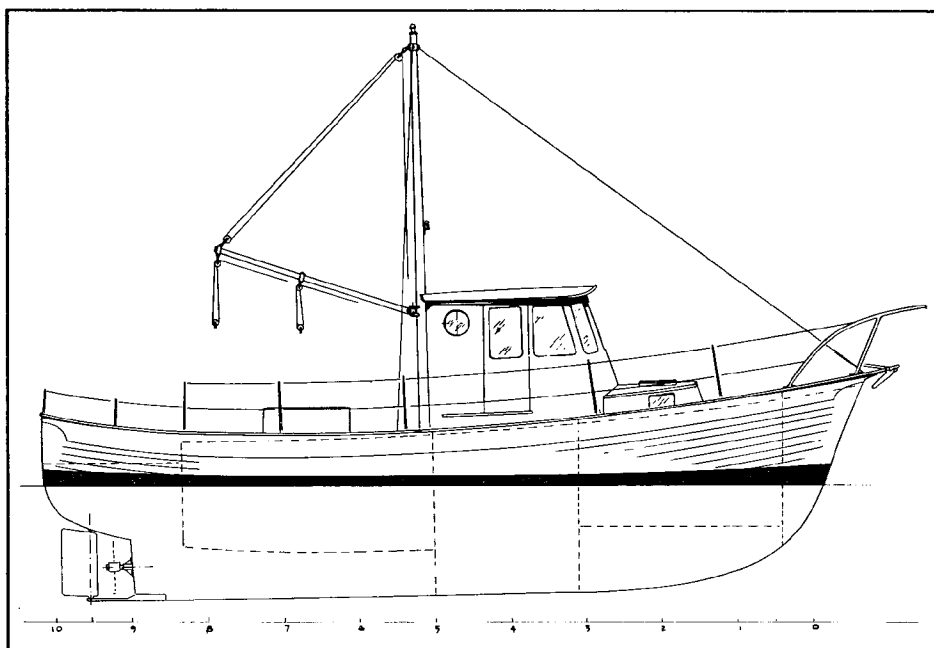
Each of our four divisions is set up as a separate "profit center" type of operation with full responsibility for its sales and manufacturing. One financial and administrative office supplies accounting, personnel, advertising and other services to all our divisions.



MEXICAN COMMERCIAL VEGA 40'S DELIVERED

WILLARD BOAT WORKS Division has recently delivered two commercial VEGA 40 Trawler hulls which were built for a Mexican University for use by their Department of Oceanography. These boats will be manned by professional captains and will carry five students on three to five day trips. They will be equipped with all the laboratory equipment necessary to locate and analyze samples of ocean life, as well as with normal living quarters.

Mr. Bill McNames, Marketing Manager of WILLARD BOAT WORKS Division, stated that these hulls may be the first of a multiple order which would be extended over the next 18 month period. Our engineering department has been working closely with representatives of the



Willard commercial Vega 40

University in order to incorporate design improvements resulting from experience being gained

during completion of the initial boats.

A.M.T. SHIPS ARMORED CAR



The ADVANCED MATERIALS TECHNOLOGY Division of THE WILLARD COMPANY recently completed armoring a new Lincoln Continental for the president of a foreign country. The car is intended to provide the same

level of protection provided the American President. When completed, the vehicle had the appearance of a conventional automobile but the occupants were protected on all sides, including the top and bottom,

from ballistic attack. In addition, the fenders were reinforced to permit ramming of any blockading cars and the fuel tank was converted to a racing type fuel cell that would not explode upon perforation. The total weight added to the car was less than 700 pounds.

The company has engaged in a sales campaign to reach other prospective buyers. ADVANCED MATERIALS TECHNOLOGY was approached by representatives of a foreign government to do this work because of its armor design reputation earned by the accomplishments of the Division's General Manager, William McLaughlin, a physicist specializing in composit materials research. The company has received a number of additional inquiries regarding the car including some from within our own government.

WILLARD ADDS NEW MANUFACTURING FACILITY

WILLARD has leased an additional facility in Costa Mesa, California, to be utilized for the production of the Coast Guard 32 foot Ports and Waterways vessels and for various ADVANCED MATERIAL TECHNOLOGY projects.

The spacious building allows room for seven units under con-

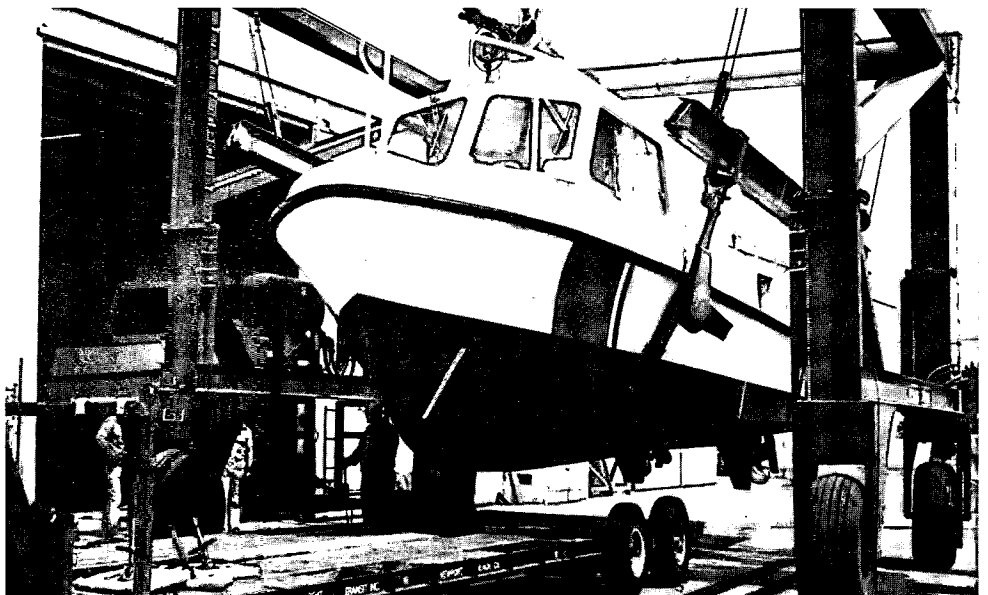
struction inside, and has ample paved yard area for final inspections and loading-out for delivery. Two fiberglass molding and grinding bays are also in the facility. Sufficient office area is available for the plant Operations Manager Richard Lenassi and his staff, and for the U.S. Coast Guard Resident Officer Ted

Burton.

This facility, known to us as WILLARD MARINE Division, is directly adjacent to our custom yacht division, WILLARD BOAT WORKS. The close proximity has provided excellent opportunities for efficient interdivisional use of equipment and personnel.



Dick Lenassi and Ted Burton



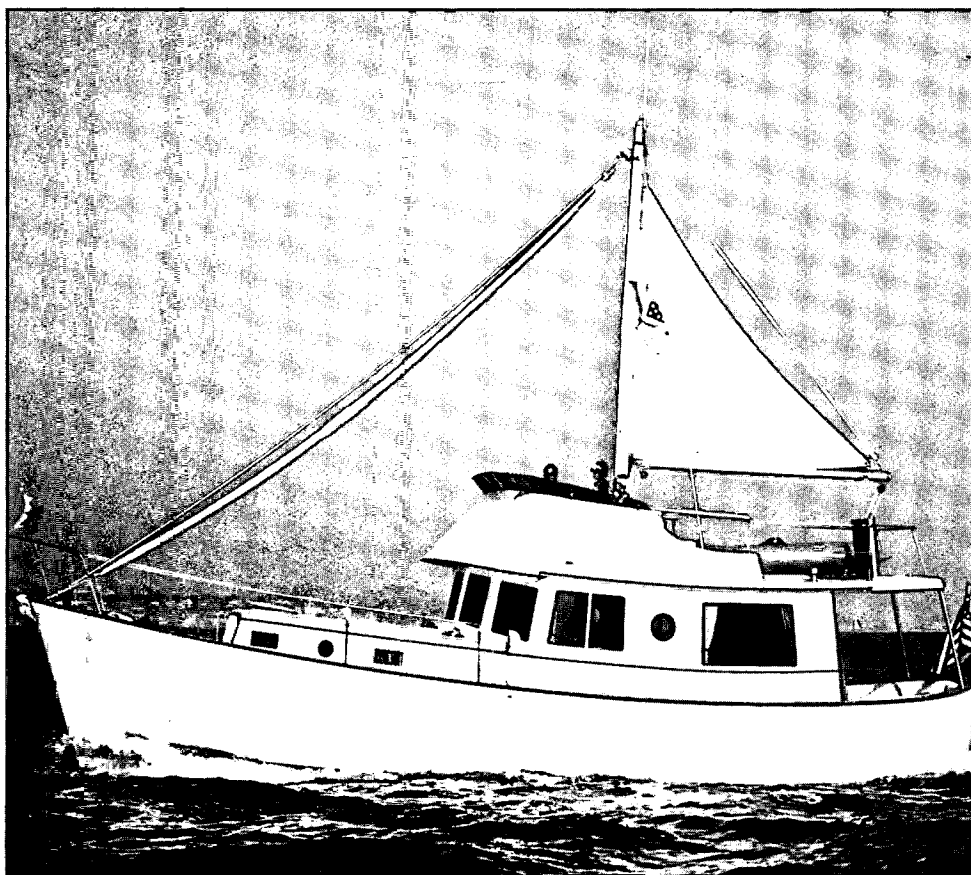
Loading of first Coast Guard vessel

VEGA 40 GOES CUSTOM

The VEGA 40 Trawler Series, which was originally offered as a production stock yacht, is now being marketed and built at WILLARD BOAT WORKS Division as a semi-custom boat.

The VEGA 40 Series has been expanded to include, along with the Voyager and Nomad, two new models — a deluxe motor-sailer and a commercial version. These boats are now being built-to-order, which recent sales records and inquiries indicate is the proper marketing method. They are offered in various stages of completion from a bare hull to a completed boat, and as is traditional with WILLARD BOAT WORKS, the VEGA 40 is also available as a totally custom craft.

Offering the VEGA 40 as a custom boat enables WILLARD BOAT WORKS to meet each individual buyer's personal needs and specifications, an approach which is not normally



Vega 40 Nomad underway

offered by manufacturers in vessels of this size.

THE WILLARD 8-TON IS CHRISTENED



The Willard 8-Ton is christened

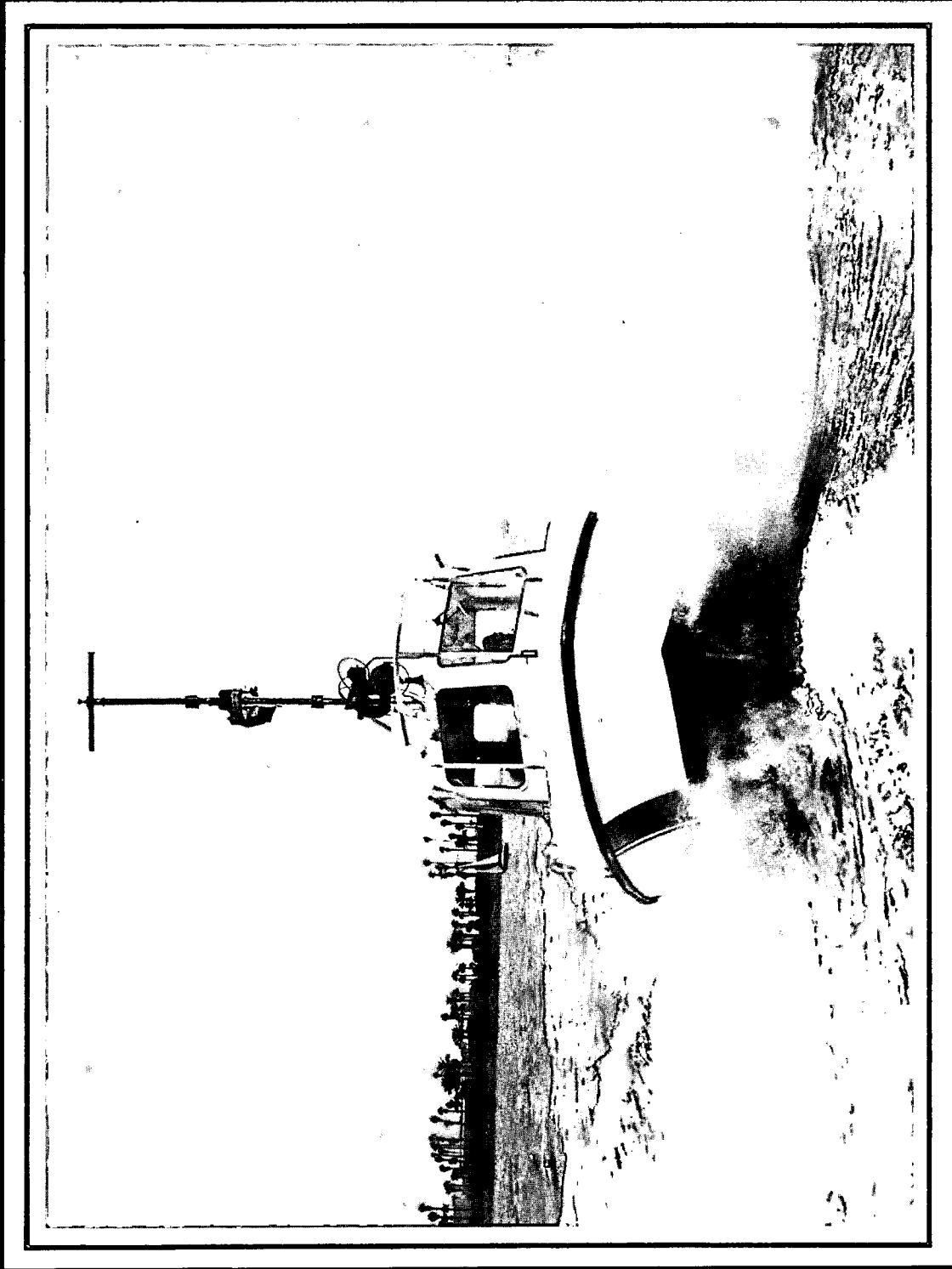
Karen Hochadel, the wife of WILLARD'S President Jack Hochadel, formally christened our new 30' blue water cruising vessel, the WILLARD 8-TON, at the docks of our Newport Beach dealer, The Crow's Nest. The crowd of people stood by silently as Mrs. Hochadel spoke the classic words of blessing, and burst into cheers as the champagne bottle broke over the bow of the boat. A toast was made and all joined together in celebration.

The ceremony was attended by over 100 people including WILLARD principals, various well known people within the yachting industry and the public interested in WILLARD'S new line of cruising sailboats. Mr. Al Lockabey represented the press and at a later date he featured the vessel in the boating section of the Los Angeles Times.

With the addition of our new cruising sailboat to WILLARD'S existing lines of 30 and 40 foot VEGA Trawlers, several dealers have been added throughout the country and have received their initial allotments of 8-Tonners. At this printing, this sparkling new boat can be seen at the following locations:

CROW'S NEST, Newport Beach, California, CHANNEL ISLANDS YACHT SALES, Oxnard, California, KETTENBURG MARINE, San Diego, California, SAILBOATS INC., Oakland, California, LONG ISLAND YACHT SALES, Babylon, New York, TRADE WINDS YACHTS SALES-EAST, Baltimore, Maryland, YACHTS UNLIMITED, Seattle, Washington, J.E. ROBERTS & ASSOCIATES, INC., Sandusky, Ohio, YACHTS EAST, INC., East Greenwich, Rhode Island.

32' Ports & Waterways Boat



THE WILLARD
COMPANY
INCORPORATED



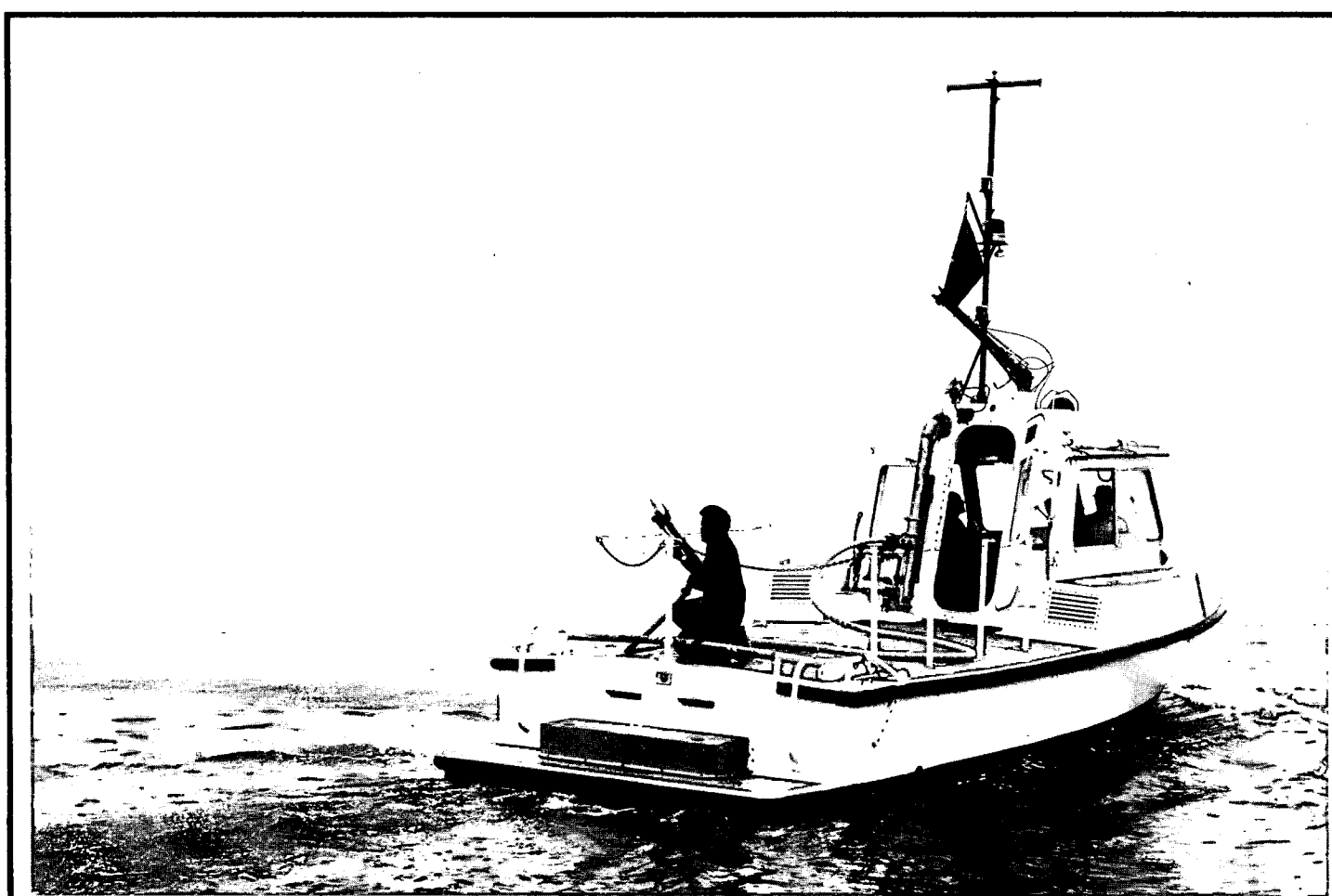
1306 Logan Avenue Costa Mesa, CA 92626

BASIC BOAT DESCRIPTION

The 32 foot Ports and Waterways Boat is used for fire suppression and patrol, and is in production for the U.S. Coast Guard by The Willard Company. The vessel's hull and superstructure are constructed of fire retardant fiberglass reinforced plastics which complies with military specifications MIL-R-7575 and MIL-R-21607. The hull is a hard chine design, with twin screws powered by diesel engines. The main deck is flush over the engines, with a 3 foot rescue platform aft, 6 inches above the waterline. Twin molded fiberglass deep skegs protect the rudders and propellers from debris or in the event of groundings. An enclosed pilot house contains the main control station. Heavy duty rubber fenders are permanently installed around the sheer, on the sides, and aft across the stern rescue platform.

SPECIFICATIONS:

Length overall	35' 0"
Length on deck	32' 0"
Length waterline	32' 0"
Beam over guards	12' 0"
Freeboard forward	4' 4"
Freeboard aft (at rescue platform)	6"
Range at maximum speed	175 Statute miles
Maximum speed	Over 20 Knots
Crew	2 or 3 men
Cargo capacity	2,000 lbs.
Draft	3' 6"
Fuel capacity	200 gal.



PROPULSION:

Twin Caterpillar 3208 diesel engines with Twin Disc MG-506 gears.

ELECTRICAL SYSTEM:

12 volt DC underway with 115 volt AC shore connection for battery charger, engine hot starts, cabin heater and receptacles.

SANITARY FACILITIES:

Chemical Toilet, Sink and 12 gallon potable Water Storage.

FLOODING PROTECTION:

Four watertight compartments, each equipped with submersible type automatic/manual Bilge Pumps.

FIRE FIGHTING CAPABILITIES:

A turret nozzle operable from the pilot house by remote control provides dual rate foam and water fire fighting capabilities. The bypass type foam proportioning system will provide both 3% and 6% foam concentrate at 250 or 500 GPM from the turret or 100 GPM from hand held hose on deck.

FIRE PUMP AND ENGINE:

Waterous CLNT bronze pump is driven at 500 GPM @ 200 PSI coupled to a General Motors Detroit 3-53 diesel engine.

FIRE FIGHTING SYSTEM:

Feecon Corp. Model RWDF turret, Model NFW handline nozzle, and around the pump (foam) proportioning system.

FIRE EXTINGUISHING SYSTEM:

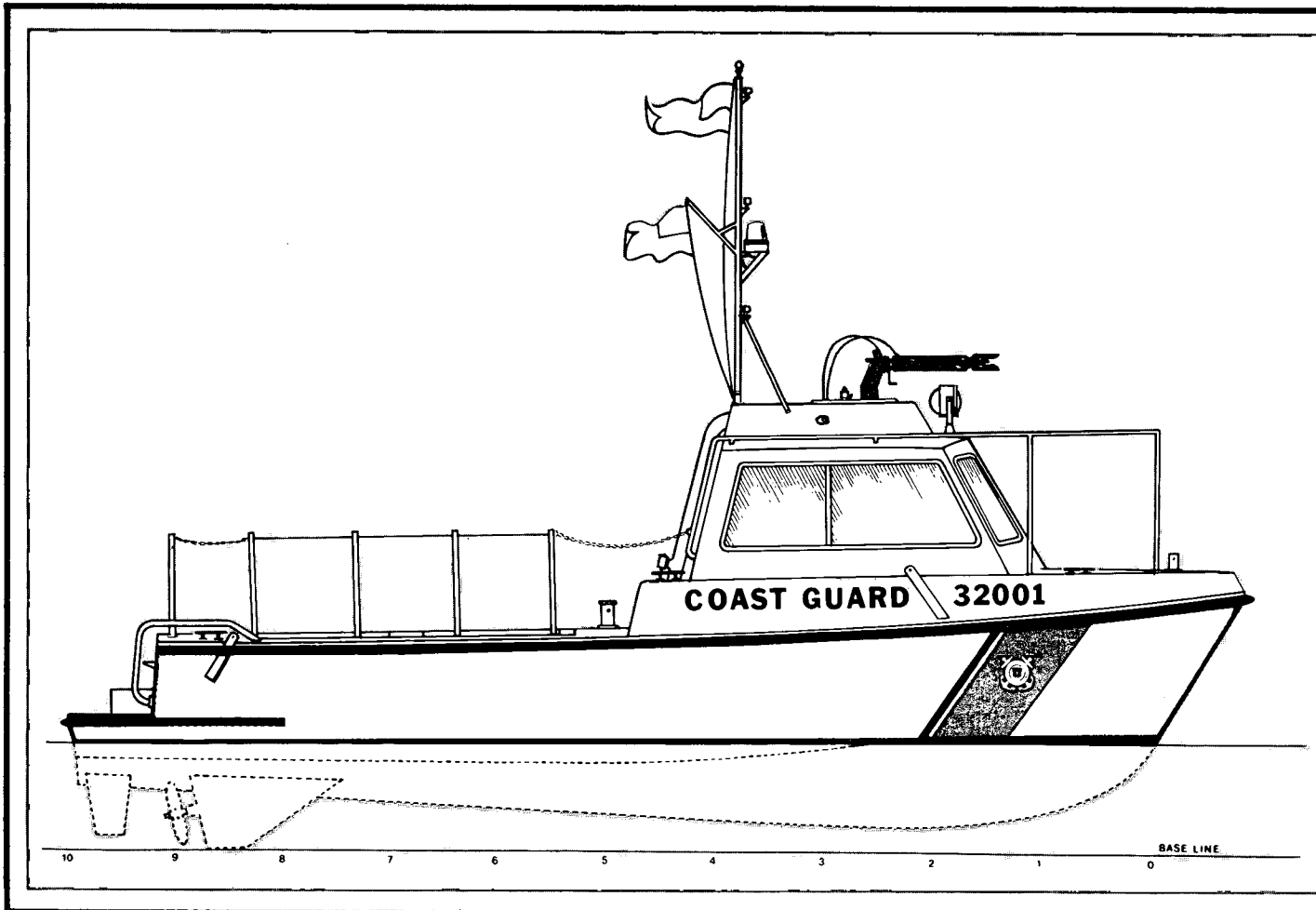
Engine room equipped with Halon 1301 automatic/manual Pyrotecator Marine system.

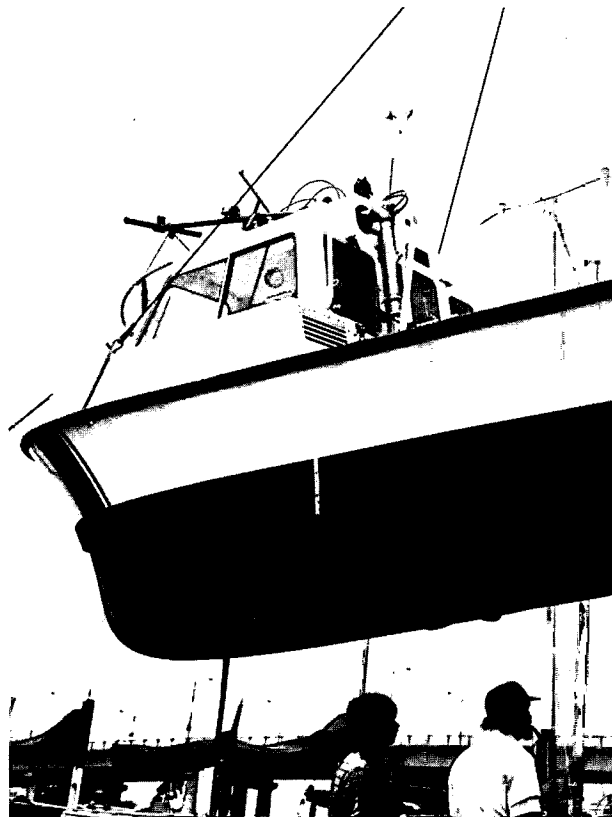
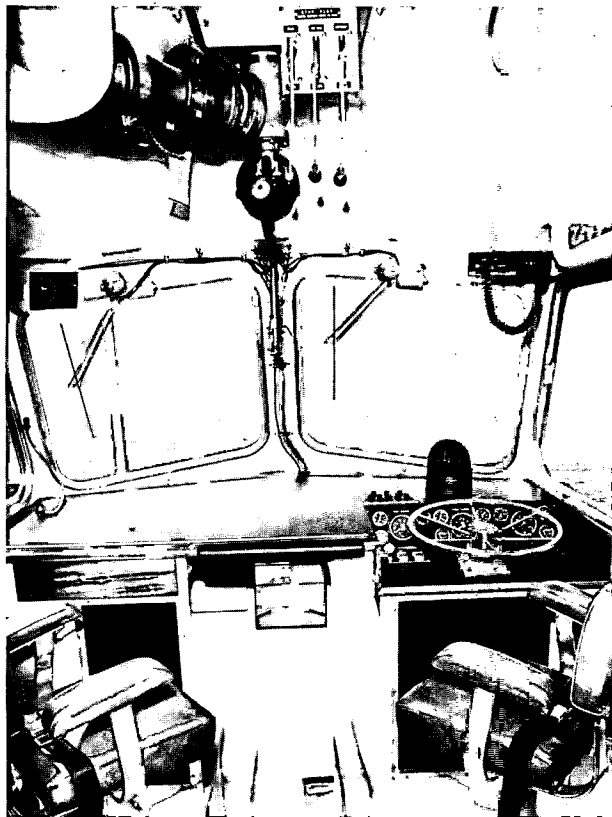
GENERAL EQUIPMENT AND MATERIAL SPECIFICATIONS:

The best commercially available equipment and materials are used throughout to insure long service life and minimum maintenance under continuous duty operations.

QUALITY CONTROL

These vessels are built under a strict quality control system directed by military specification MIL-I-45208A.





THE WILLARD STORY

The Willard Company, which will mark its 20th year in business in 1977, has built a notable reputation for innovation and quality in the design and building of both commercial and pleasure boats.

Willard's current boat output falls into three areas: governmental or military patrol boats; custom boats—those designed and built for a specific customer; and stock boats—pleasure craft built for distribution and sale nationally through dealers.

Willard design and technology has produced the largest fiberglass boat ever built in the United States. This 120 foot long oceanographic research vessel has a 5,000 mile range and carries certification by the American Bureau of Shipping (ABS).

The company's proficiency in the use of fiberglass has enabled it to also successfully employ fiberglass in a variety of applications, notably in Spanform exterior curtain wall panels for high rise buildings and for armor-ing cars, boats and helicopters under govern-ment contracts.

Willard has three major manufacturing facilities in Southern California. Quality control and engineering departments function in each facility assuring that Willard can meet or exceed the specifications of the federal government and the American Bureau of Shipping. Commercial vessels designed and built by the company have included U.S. Coast Guard certified passenger carrying ships, research vessels, pilot boats and commercial fishing vessels.

THE WILLARD COMPANY

1306 Logan Avenue, Costa Mesa, CA 92626

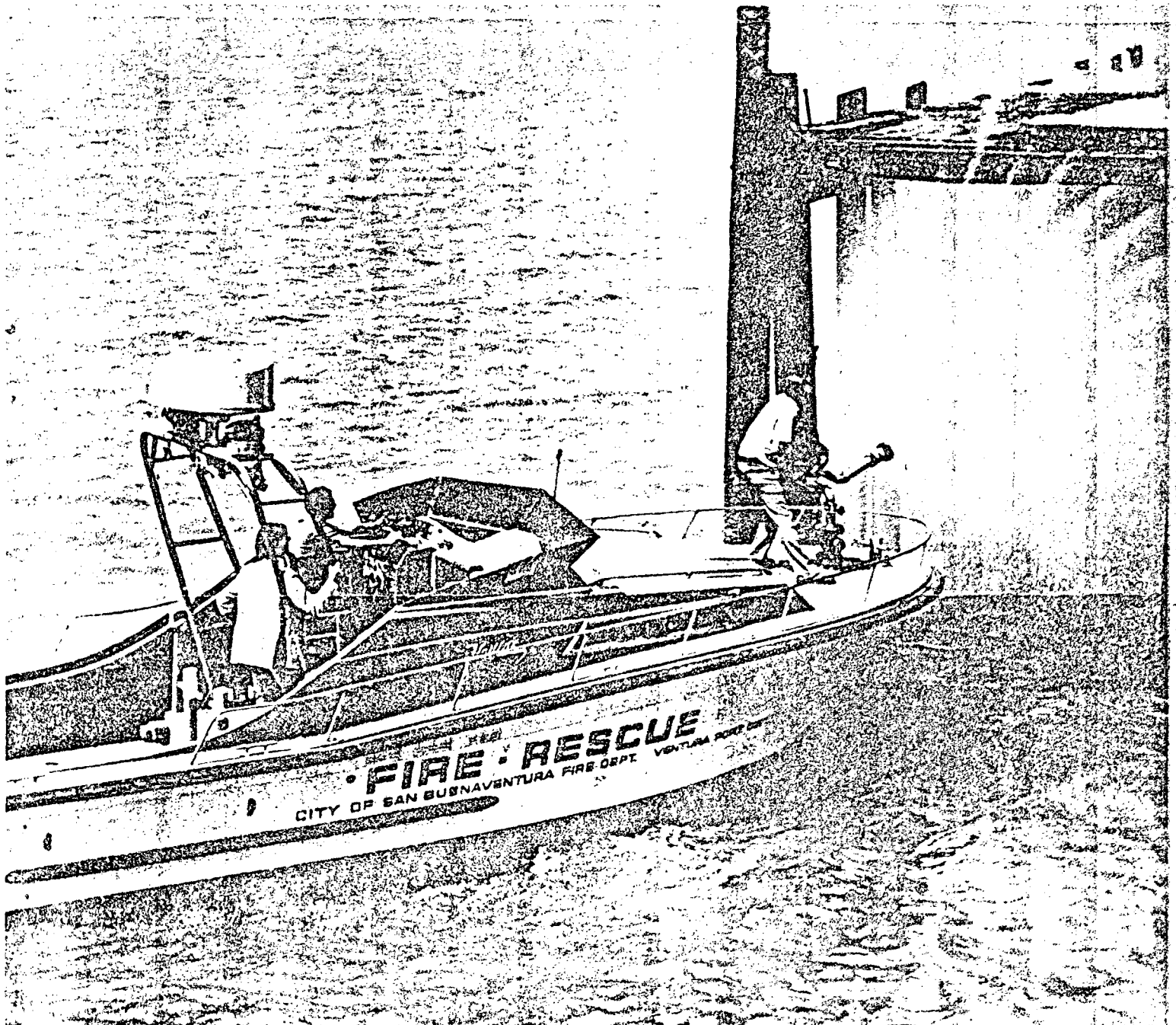
(714) 546-5522



AUGUST 7, 1976

the WEEKLY underwriter

WITH SPECIAL DEPARTMENT FOR THE CORPORATE RISK MANAGER



Encl. - 2

Ocean & Inland Marine

Aviation Insurance

Ventura, Cal. Fire Department Gets Orange-Decked Rescue Patrol Boat

A new \$55,000 fire retardant fiberglass 28-foot Uniflite fire-rescue patrol boat with international orange deck and trunk cabin for high visibility was delivered to the City of San Buenaventura (Ventura), Cal., recently and made its debut leading the Bicentennial marine parade in Ventura Harbor.

Funded jointly by the city and the Ventura Port District, the boat is operated by the Ventura Fire Department. She is powered with twin 270 hp Crusader fresh water cooled gasoline engines. During builder's trials, the modified deep vee hull with monohedron afterbody and 16-degree deadrise showed a top speed of 36 mph (31 knots) and did 32 mph (28 knots) at 90 per cent of maximum engine rpm under normal load conditions.

Built by Uniflite, Inc., Bellingham, Wash., the boat is a standard Uniflite 28-foot patrol boat fitted with a fire fighting system as specified by the Ventura Fire Department. A single 100 hp Volvo Penta pump engine drives a fire pump with a 500 gallon-per-minute (gpm) capacity at a pressure of 100 pounds per square inch (psi).

With bright orange decks, white hull, and black bottom and rubrail, the craft makes a striking appearance with its 13 ft. 4 in. long open, two-level self-bailing cockpit. Steering and control station is at the forward end of the cockpit, protected by a venturi windscreen of tinted acrylic.

A fire fighting monitor with a capacity rating of 500 gpm is mounted on the foredeck. Two 2½-inch hose connections are located in the cockpit. A transom boarding platform and transom gate facilitate launching and recovery of divers and accident victims. The arch-type mast is fitted with radar antenna, two electric loud hailer/sirens, two floodlights, two spotlights, two rotating blue strobe lights, and twin trumpet horn.

Additional equipment includes: a 1¼-inch salvage pump with 25-foot flexible suction hose, belt-driven by one of the main engines through an electric clutch; four 30-pound dry chemical fire extinguishers; docking and transom lights, and towing bitt.

Trials of the fire fighting system showed satisfactory operation of the monitor at full pump capacity at 100 psi and operation at full capacity at 100 psi with two 100-foot 2½-inch hoses and 1½-inch nozzles.

The boat is 28' 2" overall with a 19' 10" beam. The forward 15 feet is decked and has a nine-foot long trunk cabin with two berths, chart

table, storage cabinets, walk-in equipment locker and rope locker in the forepeak.

Hull and deck construction is hand laid-up fire retardant fiberglass. The decks are cored with end grain balsa wood, the cockpit with ½-inch marine plywood, and hull framing is four full length fiberglass stringers with two-inch polyurethane foam cores and foam-cored bulkheads and floors. The hull is classified and labelled by Underwriters' Laboratories (UL) as to fire retardance and laminate strength.

Uniflite builds fire retardant fiberglass patrol boats 23 to 53 feet, suitable as patrol, police, fire, rescue and ambulance boats. The company also builds military and recreational craft. For more information, contact: Seabury C. McGown, Manager, Commercial/Military Sales, Uniflite, Inc., P.O. Box 1095, Bellingham, WA 98225 (tel: 206-676-6243).

DRYDOCK TO BE BUILT BY TPA IN TAMPA

Bids submitted for construction of a 900-foot drydock in Tampa now are being accepted by the Tampa Port Authority, which announced that opening of the bids will take place at its offices on Aug. 13 at 3 p.m. The port agency also stated that a public hearing on the drydock project has been scheduled for Aug. 10 at its next regular meeting.

The new drydock will be built with funds raised from a proposed \$23 million special purpose bond issue. It will be operated by the Tampa Ship Repair and Drydock Co., a subsidiary of American Ship Building Co., which currently operates a 548-foot graving dock on land leased from the Tampa Port Authority. (The new drydock will be built adjacent to the present facility.)

Tampa Ship Repair will pay all principal and interest on the \$23 million, 30-year bond issue.

SEATRIN AGENCIES MOVE TO EXPANDED QUARTERS

Seatrail Agencies, Inc. has moved its corporate offices to expanded quarters at 88 Pine St., New York.

According to James J. Connolly, agency president, the move was prompted by the rapid expansion since last September of the cargo operations of Italian Line, for which his company acts as North American agent.

A fourth vessel will be added to the line's North America-western Mediterranean service next month, permitting the carrier to provide weekly sailings, Mr. Connolly noted.

UNITED STATES LINES ADDS NEW DRY CARGO CONTAINER

A new 20-foot dry cargo container has been added by United States Lines to its intermodal services. R. B. Murphy, the carrier's vice president-intermodal equipment, has announced.

Mr. Murphy said the container is 8 feet 6 inches tall and is designed for nine-high stacking and 50,000-pound racking loads. It is an end-door opening type and meets or exceeds all International Standards Organization (ISO) and American National Standards Institute (ANSI) standards, he noted.

The new unit is constructed with fiberglass-reinforced plastic panels and is reported to offer maximum internal capacity while providing added cargo protection against such conditions as condensation.

STEAMSHIP CO. APPOINTMENT

Lykes Bros. Steamship Co. has named Fritz Wischnowski its owner's representative in Bremen, West Germany. He will supervise and coordinate Lykes' agency network throughout Germany and replaces Walter H. Menuet who returned to the U.S. after holding the post since 1973.

CONTAINER SERVICE DIRECTOR

Carl Pantano has been appointed European Container Service Corp. marketing director. The company is agent for Seatrain International S.A.

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