



Sun Ship Log



Vol. 8, No. 1

Sun Shipbuilding & Dry Dock Company

January-April 1970

Congratulations



A real example of brotherhood in action is pictured above. On the left is Charles Fay, who would have been the victim of a robbery attempt were it not for the bravery of William Johnson, on the right. Mr. Johnson found the robber and turned him in to police. Joseph O'Brien, who then participated in turning Mr. Fay.

Fellowship In Action

Recently Charles Fay, ME-612, married and the father of six children, was working the second shift on the job end of Hall 601, Intermediate during that night hour. William Johnson, ME-612, was assigned to work with the mechanics on the off end of the 1100. While working through the

evening, the 1100s old father of two found the robber. He attempted to identify the robber and observed that it was a white male. William Johnson, Mr. Johnson decided to advise the property to its rightful owner and turned the robber and in custody into the Guard Office. Mr. Johnson said, "I just feel good helping the company in the way that I can. It's not easy to keep me out of trouble."

Capt. Joseph O'Brien, ME-11, participated in turning the robber.

\$1,000 Prize Awarded



Charles Fay, the Ship's First Working Captain, is pictured here at his desk in the front Desk Room where he supervises working mechanics throughout the plant when he's not making the rounds of shops and departments. It is this character which won the 1969 AIRCO Welding Award.

1970 AIRCO Welding Award

Recognizing his substantial contributions to the world of welding, the American Welding Society has awarded Charles L. Buckley the annual 1970 AIRCO Welding Award. This award, which comes with a sum of \$1,000 will be formally presented to Mr. Buckley at a luncheon April 20 in Cleveland.

This award was established "to encourage originality and innovation through the use of welding techniques in new products. It is awarded to those welders who have made significant contributions in the welding of new products. It is awarded to those welders who have made significant contributions in the welding of new products."

It was Mr. Buckley in a welding department is an understatement.

The achievement for Sun Ship on about two centuries to last. Take for example Charles L. Buckley, a simple good man not only of his reputation but of the company he provided the men who worked under his guidance. Not in 1970 when he began his career here, it was a partnership with

the men who have the "saw" (Charles Buckley, they have a man who is close to the welders—guiding, their work, training, and their making. Last year, he and his wife moved themselves to a house near of Cleveland. This year, he has enough of his own money to move to another European country. He says he is of "America."

Mr. Buckley is a very real example for all of us of what the rewards for devotion to duty can bring.

New Office Building Climbs Skyward



The project, which was started on December 22, 1969 to show the rapid growth of the new Sun Shipbuilding & Dry Dock Company.



Along the line of rapid growth, Sun Ship has shown progress during the project which began the new office building.

MAILING LABEL

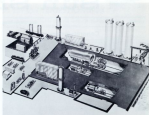
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NO. 1
SUN SHIP LOG
JANUARY 1970



Chamber A, largest of the two main chambers for the ocean pressure laboratory's low-pressure system, (chamber is shown) as the combination of assembly of all major parts and prior to being put into the DSER pressure hull, a product of Sun Ship's steelhylene (steel) system.



As per, construction of deep, submersible test facility at the Sun Ship Research and Development Laboratory in Annapolis, Chambers A and B for the low-pressure system (15,000 psi) and the high-pressure test system (150,000 psi), (Chamber C, in the lower right, is 100 ft long).

Deep Sea Environment Research and Development

Key components of a laboratory for studying the effects of deep ocean environments, being developed by the Naval Ship Research and Development Laboratory in Annapolis, are deep submersible test chambers—gigantic pressure vessels filled with seawater and pressurized to simulate conditions down to 36,000 feet beneath the sea. The ocean pressure laboratory will have two systems, one for low and one for high pressure.

The construction does far to the low pressure system, known as Chambers A and B, they are situated a powerful new tool for testing pressure hulls (such as the DSER), control technologies, propulsion

machinery, life support systems, and instrumentation in a realistic deep-sea environment.

Chambers A and B are a product of Sun Ship's fabrication expertise. The larger of the two chambers, Chamber A measures 57 feet long, has a 10 foot, 2 inch inside diameter, and weighs 750 tons. Individual assemblies within the chamber weigh as much as 150 tons. The smaller Chamber B is similar to Chamber A, except that it measures 12 feet long with a 4 foot inside diameter, and weighs 100 tons. Individual assemblies within the submersible are

placed in form the body. Special "U" working process, oriented perfect welds, even in material up to 18 inches thick that required as many as 150 passes with automatic welders. Five double-lined pressure vessel successful the situation.

To prevent corrosion, the chamber is fully lined with a layer of nickel overlaid with two layers of metal. After completion of the work, the entire interior of the chamber was finish machined. Complicated construction was the fact that three machinery modules, two piping modules, and four instrumentation modules had to be forced through some of the thickest parts of the chamber.

Both chambers can be statically pressurized to 15,000 psi, and pressurized to 2 million psi (from 0 to 4,000 psi at 1-minute intervals for large studies). They are both equipped with a 500-channel digital data acquisition system and closed-circuit TV camera for continuous monitoring of equipment under test.

Before being shipped to Annapolis, Chamber A was successfully tested at Sun Ship when it was used to check out the pressure hull for the Navy's Deep Submergence Rescue Vehicle (DSRV), the fabricated by Sun Ship. With the completion of Chamber B, the low pressure system will be completed.

Ingenuity — A Key to Sun Ship Progress



Using the former midbody of an ex-Superg U.S. Lines container ship, Sun Ship was able to lift a Sun Oil tower onto a barge bound for Puerto Rico. The midbody had previously been reinforced with new strengthening beams together forming a capacity for 325 short ton lifts. Called the Floating derrick, barge, it has temporarily replaced the structural crane, and has done much an admirable job that it was in

being planned for more complex jobs.

Credit for the original idea goes to Capt. Farrell, with the details executed by two naval engineers — Mr. Van Der Pelt and Mr. John Priddy. The barge of their ingenuity in showing above lifting the 17 foot diameter atmospheric crane tower onto a barge for the Puerto Rico refinery. Later it hoisted the 28 foot diameter reactor tower. More on this work will appear in the next issue.

Callaghan Widely Acclaimed

The success of the ASSE RM 10, CAL 1000—now more specifically the gas turbine engine—has led to the first real challenge to the superiority of steam turbines, traditionally favored by the American merchant marine. The gas turbine is essentially the ideal ship engine. It is simple, compact, and requires little for repair in a matter of hours. Its only drawback to date is its high consumption of costly jet fuel. Present gas turbine fuel costs are about 30 percent higher than the costs for most conventional engines.

Recently, some 100 personnel were involved with a change-out in which a General Electric LM-2500, the marine version of the power plant for the Air Force's new C-17 cargo aircraft, replaced one of the two Fiat 150 and Whittier P114-2's for a total cost of 1,000,000. The LM-2500 is expected to have 28 to 300 hrs per day, or replace the cost from 1,500,000 a year to 1,000,000 for comparable 10,000 horsepower steam or diesel ships and gas turbine vessels.

If companies are additional experiments will probably take place to determine whether testing equipment and facilities would enable the gas turbines to form the new heavy, and economical, fast oil burn in steam ship hulls.

The pioneering of Sun Ship offers stiff competition for the future of steam turbines.

Bigger Than The Manhattan

Sun Ship craftsmen are about to undertake the biggest ship they have ever built so far. In a contract signed January 21, between Bittell Oil Corporation officials and Sun Ship President Paul B. Atkinson, the contract calls for construction of a 120,000 ton tanker designed to carry 600,000 barrels of North Slope crude oil from the Alaska Sea of Valdez to the U.S. West Coast.

The new vessel, which will have 11 cargo and 2 permanent ballast tanks, will be 340 feet long, 133 feet across, and 11 feet in depth, with a draft of 24 ft. It will be powered by a 30,000-hp steam turbine. Expected fuel speed when loaded is anticipated at 17 knots.

At the signing, Bittell's Walter J. Atkinson, chairman of the delivery, is shared for 1977, the same year Bittell and some other oil companies expect to complete an 800-mile pipeline from Alaska's North Slope to the northern port of Valdez.

Work continued

Work over ...

Safety Classes

Safety Mail

Safety Officer

Sun to Fore in Undersea Work



The Guppy being lowered into the sea from the North Star Fishing Ship.



The Guppy undergoing one of numerous sea tests along before leaving for Florida sea area.

DEEP

Hydrographic activities at Sun Ship have figured prominently in recent weeks. Now 100 and at Annapolis, the first complete OORV (undersea work) was launched. Following one of the Sun Ship's three-sphere pressure hulls, the DEEP is now equipped to handle calls from distant submarines. At the moment on January 24, the DEEP-1 was loaded aboard the C-114 (a cargo plane at Moffett Field, California, for flight to San Diego, where it was turned over to the Navy for a year of tests. A three-man crew will ride in one of three 1000, 2500 foot steel spheres, known as the "pressure hull" of the submersible. These three spheres are one of two hulls that Sun Ship's Naval Hydrographic Division fabricated. The three connected spheres are contained within the 20-foot long steel shell for the vehicle known as DEEP-1.

GUPPY

With the next underway among U. S. fleets to tap ocean resources on a massive scale, the testing of the "Guppy" is the other significant water for Sun Ship. One such complete deep diving submersible, the "Guppy" will compete for its share of the lucrative ocean exploration industry. This industry includes the harvest of minerals of exploration and extraction, fishing industry, pollution control, underwater mining, salvage, dredging, and construction, just a few of the uses for which the Guppy is suited.

The Guppy was completed in the Naval Hydrographic Division and recently left there for testing off the coast of Florida. A two-man team of diving experts, under contract from Richard's Underwater Products, Inc., arrived at Sun Ship February 23 to conduct the initial submersible testing



Richard Hagan, far right, and William Watson meeting first inspection tests.



John Roane manages lower Guppy after test drive.

in a special tank built for that purpose in the North Yard. Along with William Watson and Richard Hagan, divers John Roane and Don Thompson made several successful dives to check out equipment functioning, etc., before the Guppy was shipped to Florida.

At the present time, all four men are conducting some water tests which will probably take them to a depth of 3,000 feet for which the Guppy was designed. With the deep ocean testing will come contribution of the vessel to these depths. Later this spring, the Guppy will be dispatched to Alaska for its first official job—a survey of the ocean floor.

Transporting a pilot and observer, the Guppy is connected to surface support craft by means of an umbilical cable, through which passes the electrical power required to operate its two 100-hp motors and as many as twelve 1,000-watt under-

water lights. The 3-1/2 foot diameter pressure hull also houses a complete life support system for sustaining two men for as long as 48 hours. One of its more unique features are the windows. Two 8 inch diameter hemispheres mounted forward, and a 16 inch diameter hemisphere, mounted in the top hatch, are made of plexiglas and provide a panoramic field of vision. From this design results a wide field of vision that any undersea vehicle now in service or on the drawing boards can boast.

Proof of one Guppy is another key factor. Due to the fact that it is referred to a support ship by an electric cable, the need for the frame has been minimized and with it the need for elaborate engineering and weight considerations, two of the more costly items with current submersibles. This makes it economically attractive for both lease or sale.

Basketball Champions — The Welders



Left to right, they are: Larry Williams, Charles Williams, Mark Turner, Edward Williams, Edw. Williams, Mike Williams, Charles Williams, Charles Williams, and Walter Sperry (Welding from Picture).

Parking Lot Security

An employer's wife recently called The Lansing Post with the following question: "Why isn't there a guard on the Third Street Parking Lot? My husband's car has been stolen twice within the past three months."

The Star-Lap turned this question over to Wm. Barker, and for the interest of all our readers, his comments are presented: "Having ministered our guard to your parking lot at all times except during inclement weather, this guard protects the parking lot, and at any given moment an employee going to work can sight not see them."

The loss of cars and materials from cars is not a problem unique to Star Ship. In recent months I have been in contact with several other large industries in this area who have a similar problem. In a survey conducted by one of these industries, it was found that Star Ship's loss of cars and materials from cars has been considerably lower than the other industries in our area.

It is interesting to note that in some instances the cars that have been vandalized or stolen had been left unlocked and/or keys left hidden in the car over the the interior, under the seat or on the rear seat. If there are any signs of the keys, it is very simple for them to find the keys and steal the car.

Employees could call the Security Department in protecting their cars by

making certain that they remove the keys from the car, by locking all doors and by placing warning markings, packages such as locks, cables, tape, containers, cameras, etc., in the trunk or where they cannot be seen from the outside. In addition we encourage employees to report any unusual incidents they observe. These employees who drive cars with expensive high tops or "tag wheels" should purchase locks that are available at auto supply stores.

Wm. Barker
Industrial Relations
Star Shipbuilding & Dry Dock Co.
(40)

Please accept this isolated, but most common incident, as an expression of appreciation of the Star Ship guards.

As a result of "tagging trouble," my son was in the Parking Lot from Friday, Jan. 10 to 11, Monday Jan. 11th. Many attempts were made on the weekend and at night to start the car and each and every time the guards made their prompt appearance.

This happens good security. As an employee of Star Ship, I appreciate the protective endeavor extended to our Parking Lot.

Ed Carl, Employee
38 Days

Wear Safety Glasses

With two good eyes, wouldn't it be foolish to risk eye injury—perhaps the loss of an eye—because you were careless in wearing safety glasses? So routinely determine to subject to injury the one object that offers us its injury that because of this world, a simple mistake, that it causes everything in the shop when you fail to wear your safety glasses.

How you never know a fellow worker, or anyone else that matters, who wears a glass eye? While every machine handling glass eyes are quite expensive, and their owners exercise great caution not to drop, scratch or lose them.



Now take a person with two good eyes. Frequently they are performing, or are in an area, where hazardous work is being done, but without their safety glasses. And why they are missing, and you will find with frequent clarity that it is "They're uncomfortable." True, but in any glass eyes, not to mention the discomfort of losing one of eye sight. Another reason often given is, "It takes more time to put the them fitting on than it does to do the job." However, that argument will never stand up on the day that inevitable injury happens.

So, please, wear your safety goggles and

Here are some reasons why:

- On guard for these common eye hazards:
 - Chipping metal, concrete, or paint
 - Handling chemicals
 - Flying chips from machining
 - Blowing
 - Boreing
 - Sawing
 - Spray painting
 - Grinding
 - Pulling objects

??? QUESTION BOX ???

Any questions you may have regarding benefits, pensions, sick leave, policies, and other matters can be addressed to Mrs. H. Bennett (ext. 554). Answers of general interest will appear in the next issue.

- Q. A few lines back, you write about a starting wage service with the MSA. Has this wage started any movement in the financial situation of the MSA?
- A. The starting wage has been providing a valuable service to our employees who are ill and unable to work. The status and responsibilities are varied, including insurance that the employees in receiving proper medical care. In addition to this, the provides information to the Mutual Benefit Association which states them in the administration of the program. It is difficult to measure the wage's effect and the effect this has had on the financial position of the Association.
- Q. What were the results of the safety hearings we read so much about in the newspapers that were held with the Federal Government?
- A. The safety hearings held by the Department of Labor during the past year concerned safety officers that had been issued over a period of nearly three years. During this period, Star Ship's safety record had been on a path of continued improvement. Although the Government issued a C and D rating Order upon completion of these hearings, no punitive action can be attributed to a result of these hearings. Safety is everyone's business and the company will continue its program of education and improvement in this important area.
- Q. Why did the word say listing the candidate lists on our (pre-check)?
- A. The removal of the accumulated earnings moved from the pay roll was the result of requests by a number of employees who did not want this accumulation listed on the roll.
- Q. Now that the Washington is successful, when will we start building the big breakwater again (Lansing)?
- A. The recent vote passage of the MSA-BASTAN was successful, however, a final decision as to what mode of transportation will be used to transport all from the main ship of Alaska has not been made.
- Q. Are there any educational benefits available to a yard worker?
- A. Star Ship regularly operates in-plant training for yard employees. As the program has been in place to provide any outside educational benefits. Any individual questions concerning in-house training should be directed to John Fossell in the Industrial Relations Office.
- Q. I read a story about the Youth-Care that Star Ship had been this past summer. Is this story just for the summer, or is it a permanent job for the summer?
- A. The Youth Corps was utilized in doing projects for the first time of the City of Chicago and had no effect on the summer living program. During the past summer as in previous summers, the yard did have part-time summer help including some children and relatives of our employees. As the number of jobs that are available for this type work is limited and the demand is great, it is not possible to provide positions for all the people who seek part-time employment.
- Q. It seems everyone is related to someone else around here. With this kind of discrimination, what chance have I got to get ahead?
- A. The fact that we have a number of employees who are related to each other working in the yard is one that we are proud of. It does not limit any effect on the promotion process. Individuals are promoted at Star Ship on the basis of their skills, ability and service in the yard and not because they have members of their family working for the company.
- Q. Recently, some with long service were fired by the company. Could this happen to me and would I lose my pension rights?
- A. The number of men who have had their employment with long service is small. We have reviewed the men during the past several months and have found that decisions were the result of reduction of long-standing and well-understood company rules. In most cases, employee benefits are ended when an employee terminates his service with the Company.

Valuable weld specimen test



Welding tests at the 40 days, after the more standard Charpy is performed. It is a simple matter to do a 10" Charpy test and in the same manner a 10" Charpy test multiple test sample can be made. Welding tests, ext. 515, 516 and 517.

Graduates Applauded

Recent graduates of Star Ship's first Learning and Regulating School, under the instruction of William R. Smith, Jr., Department Supervisor, received Certificates of Achievement for completing 11 weeks course of instruction in basic electrical. The Programs were conducted with the intent that those operating for the company would acquire a good understanding of each other's craft so as to be able to assist each other. To be congratulated are: Everett W. Jones, Jr., William M. Woodruff, James J. Gough, and Oscar W. Long.