

## YARD DIVING BOAT - (YDB)

The two Yard Diving Boats of HCU-I have one characteristic which makes them a vital part of every salvage operation -- their utility. These 64 foot handsome craft are mainly used as a diving platform, handling "hard hat" deep sea diving, shallow water rigs, and SCUBA, through the use of its many air compressors, diving stations, and equipment storage facilities. However, the YDB's have been called upon and used as a tug, a ferry, a provisions craft, a dormitory, a scout, a communications station, a fire fighting platform, and a liberty boat. Their excellent maneuverability enables them to get into "tight" areas where the other craft of the unit are unable to go.

Manned by a crew of from four to six enlisted men, not necessarily divers, the YDB's rotate between Subic and South Vietnam. Constantly on the go during deployments, the remarkable YDB's and their crew have salvaged everything from a hand tool to you name it! Some of the rewards of a YDB crewmember, as in the CSB, are those, of close companionship, responsible decision making, and excitement. A good way to go in HCU-I.

## COMBAT SALVAGE BOATS

Our four Combat Salvage Boats are converted Landing Craft Mechanized (LCM 6), designed and equipped for riverine salvage work in support of the Mobile Riverine Force in Vietnam. A much smaller version of the YLLC, each CSB is manned by a handpicked, all enlisted crew of six to eight men, four of whom are divers.

Due to its size, the CSB is able to perform salvage operations in lesser rivers and channels than the YLLC's. Its size, however, is not an indication of its capabilities. The CSB is capable of entirely independent salvage operations. Being equipped with a 10-ton A-frame derrick mounted forward, two jetting pumps, air compressors for both diving and salvage applications, cutting and welding facilities, and an excellent fire-fighting capacity, the CSB's are establishing quite a reputation as the mainstay of salvage support for the Mobile Riverine Groups.

To the men of the CSB, salvage is independence, responsibility, teamwork, and excitement. Valuable experience in inland and restricted water navigation, working independently where there are no others from whom to

seek advice, relying upon and being relied on by others, comradeship, and "being where the action is" are all factors which make a tour on the CSB a rewarding experience.

## LIGHT LIFT CRAFT - (YLLC)

Our five Light Lift Craft are converted landing craft that have a variety of salvage capabilities. The designation "Light Lift Craft" is based on its capability to lift 25 tons with an A-frame derrick mounted forward. In addition, it is capable of a 100-ton ballast bow lift. As a salvage platform, the YLLC's are exceptional. They have air compressors installed to provide air for both diving operations and for use as a salvage tool. A Clyde salvage winch and a capstan, both with a 7.5 ton pulling capacity, provide the muscle needed for the A-frame, the three complete sets of beach gear carried on board (60 ton pull, each leg), and the flexible power needed on independent operations. They have two 1000 gpm at 200 psi. jetting pumps installed for dewatering, underwater digging, and auxiliary fire fighting. The YLLC's also provide cutting and welding facilities, messing and berthing for team members at remote salvage sights, and serve as a mobile logistical support base for any operation.

The machinery is all powered by two 200 kW AC generators which are also able to provide electrical power to the salvage sight and shore power to distressed ships and bases. Manned by an Officer in Charge and 16 enlisted men, these craft are very well equipped and flexible for salvage operations. While deployed in Vietnam, they often operate independently and yet are a vital asset to a major salvage job.

The crews of the YLLC's take pride in their craft, the job they perform, and in the caliber of their shipmates. They are tightly knit, a hard working crew -- Salvors all. The similarity to shipboard life, the rewards of a small unit, the teamwork, and the independence while deployed are the major aspects to the YLLC's which make its duty very rewarding and enjoyable.

## MEDIUM LIFT CRAFT - YMLC

Four YMLC's on lease from Great Britain have been indispensable in effecting major salvage tasks in Vietnam. These craft have a tidal/ballast lift capability of 750 tons each, are manned by Harbor Clearance Teams, and provide headquarters and berthing facilities for deployed teams and craft at Vung Tau harbor.

## HEAVY LIFT CRAFT - (YHLC)

### **WORLD'S LARGEST SALVAGE LIFT CRAFT**

*Story and Photos by JOI Ely U. Orias from "Subic Bay News" - 30 JUN 67 issue*

*Article provided by Willy Meyers via Tony Basile*

The world's two largest salvage lift craft, both commissioned in 1943 by a World War II enemy and contracted 14 years later by the United Nations to clear the Suez Canal of sunken vessels, have been acquired through absolute sale by the U.S. Government.

Following their Suez Canal salvage operation, the ENERGIE and AUSDAUER went into mothballs until last March when two German commercial tugs set out for the Philippines from Bremerhaven with the non-self-propelled salvage giants in tow.

Their arrival at Subic via the Suez late last month, 65 days after lifting anchors from their Bremerhaven moorings, added 4,800 tons in lift strength to Subic-based Harbor Clearance Unit One's original 3,000-ton lift capacity. Four British salvage craft leased to the U.S. Navy early this year provided the original strength.

"The two German-made salvage lifting craft work on the same principle as the British lift craft, but nowhere do the latter come near the German vessels in strength," said Lt. Billie Delanoy, executive officer of HCU-I. "With this comparison, explained the lieutenant, "we don't mean to underrate the British craft, which are definitely superior in their own class."

"But the considerable difference between the German and British craft in their lifting capacity is clearly reconciled by the methods they use," said LCDR Harry E. Bolster, commanding officer of HCU-I. Both pursue the effectiveness of buoyancy. When salvaging they weave a cradle of three-inch steel cables under the wreck and work out a system of ballasting the sunken vessel and using the tides to help hoist her up a few feet at a time.

Supervised by three German salvage experts who arrived at Subic aboard the AUSDAUER, twenty Navy enlisted men and two officers assigned to each of the newly-acquired lift craft, went through salvage exercises last week in Subic harbor. This was accomplished by raising a sunken World War II medium landing ship.

"The salvage exercise went off successfully, with HCU-I officers and men learning quickly from their German mentors what ropes there are to know in a full-scale salvage operation," LCDR Bolster said.

The ENERGIE (interpreted as "POWER" ) and AUSDAUER ( interpreted as "ENDURANCE") still sport German decor and furnishings. The Navy said it will keep them until worn out to preserve the craft's glorious past. But the coal burners on each craft will have to go to make room for the new in shipboard cookware.

This, of course, saddens Commissaryman 2nd Class Michael Best of the ENERGIE, who believes that coal burners are just fine because one (especially Best) doesn't have to worry about power failures.

*PHOTO CAPTIONS (photocopy quality was not sufficient to scan)*

1. Capt. Gerhard Funk salvage superintendent for Bugsier Reederei, explains to officers of HCU-I by means of a chart the procedures and techniques in cradling a wreck.
2. Boilerman 1st Class Juan Ayala (left) gets a briefing on ballast tank gauges from Willibald Bartels, chief engineer for Bugsier Reederei, a German Towage Company in Hamburg.
3. WWII medium landing ship (cradled in center) serves as a dummy wreck during salvage trials in Subic Bay.
4. Commissaryman 2nd Class Michael Best prefers coal burner on lift craft to modern cookware.

The designation "Heavy Lift Craft" is indeed an accurate description. YHLC-1 CRILLEY (formerly ENERGIE) and YHLC-2 CRANDALL (formerly AUSDAUER) are the two largest salvage craft in the world. With a tidal ballast lift of 2,400 tons each (that's a combined lift of 8,600,000 pounds!), these non-self-propelled craft really ----- "CAN DO". Originally built by the Germans in World War II, they went through an extensive American conversion to improve their efficiency and to make them as comfortably habitable as any modern US Navy vessel.

Manned by an Officer in Charge and twenty-five men, the "heavies" provide command headquarters and berthing and messing facilities for team personnel embarked. The crews of the heavies find their living much like that of shipboard life with all its benefits; air conditioned living, good food, a large efficient working area, and a movie usually every night. Unlike shipboard life, however, the crew finds their work unique --- heavy, ornery, 3-inch diameter lifting wires and tremendously large equipment and tools. Examples range from a single clamping nut weighing 10 pounds to a dogging wrench requiring three people to work --- and last, but not least, realizing that the main deck is eighteen inches under water, yet everything is working by original design. Being part of the heavies is really something. Hard work, yet very satisfying.

The heavies were employed for the first time by HCU-I in Dong Tam, RVN, on the dredge SANDPUMPER.

["You Don't See Many Like the AHLC Twins" - OCT 67 ALL HANDS Magazine](#)

### **Who were CRILLEY and CRANDALL?**

Chief Boatswain's Mate Orson L. CRANDALL was awarded the Congressional Medal of Honor for his extraordinary courage on the morning of 23 May 1939. USS SQUALUS (SS-192), the Navy's newest and most modern submarine, headed for the testing grounds. That afternoon, USS Sculpin picked up a distress signal: SQUALUS had sunk. The Navy rushed its rescue units to the scene, including a new rescue diving "bell" which had never been tested. Four volunteer divers proved the bell worked under the most difficult conditions. Chief Machinist's Mate William Badders, Chief Boatswain's Mate Orson L. Crandall, Chief Metalsmith James H. McDonald, and Torpedoman First Class John Mihalowski rescued 33 officers and enlisted men, nine sailors or less per dive, with the new rescue chamber. All four divers were awarded the Medal of Honor, among the last of those awarded for peacetime submarine rescue operations. Crandall died May 10, 1960, and was buried in

Section 48 of Arlington National Cemetery. Heavy ENERGIE was renamed CRILLEY.

Chief Gunner's Mate Frank CRILLEY was awarded the Congressional Medal of Honor for his display of extraordinary heroism above and beyond the call of duty during inspection and salvage operations in connection with the sinking in a depth of water 304 feet, of the submarine USS F-4 (SS-23) with all on board, as a result of loss of depth control, which occur off Honolulu, Hawaii, on 25 March 1915. On 17 April 1915, William F. Loughman, chief gunner's mate, U.S. Navy, who had descended to the wreck and had examined one of the wire hawsers attached to it, upon starting his ascent, and when at a depth of 250 feet beneath the surface of the water, had his lifeline and air hose so badly fouled by this hawser that he was unable to free himself; he could neither ascend nor descend. On account of the length of time that Loughman had already been subjected to the great pressure due to the depth of water, and of the uncertainty of the additional time he would have to be subjected to this pressure before he could be brought to the surface, it was imperative that steps be taken at once to clear him. Instantly, realizing the desperate case of his comrade, Crilley voluntee to go to his aid, immediately donned a diving suit and descended. After a lapse of time of 2 hours and 11 minutes, Crilley was brought to the surface, having by a superb exhibition of skill, coolness, endurance and fortitude, untangled the snarl of lines and clea his imperiled shipmate, so that he was brought, still alive, to the surface. Heavy AUSDAUER was renamed CRANDALL.

### REPAIR SALVAGE TENDER - (YRST)

The main support base and Command Headquarters, YRST-1 is a non-self-propelled Repair Salvage Tender having an Officer in Charge, an Assistant Officer in Charge, and a crew of 34 men, including several divers. YRST-1 is equipped with repair shops capable of servicing nearly all equipment in the Command. During major salvage operations, the YRST-1 provides a working platform for the fabrication of salvage patches, furnishes electrical power to the wreck, and issues salvage equipment. The Headquarters Group, a small cadre which functions as a staff under the Commanding Officer and Executive Officer, also operates from the YRST-1. This group includes a Naval Engineering Duty Officer who is the Naval Architect and Salvage Engineer, a diving Medical Officer, Supply Officer, and Administrative Officer, with appropriate personnel assigned to their respective departments. Personnel

regularly assigned to craft or teams may be employed on the staff between deployments.

According to the [Naval Vessel Register](#) (NVR), former YRST-1 (now designated as "YR 94 FLOATING WORKSHOP") remains in service.

YRST-1 SPECIFICATIONS	
Name:	none
Class:	YR-94
Builder:	Everett Pacific Shipbuilding & Drydock Company, Everett, WA
Delivery Date:	02/13/1945
Award Date:	11/30/1943
Keel Date:	10/02/1944
Launch Date:	01/17/1945
Overall Length:	261 feet
Waterline Beam:	48 ft
Maximum Navigational Draft:	9 feet
Draft Limit:	13 feet
Light Displacement:	700 tons
Full Displacement:	2700 tons
Dead Weight:	2000 tons
Hull Material:	steel with steel superstructure
Accommodations:	15 officers, 71 enlisted
Custodian:	COMPACFLT BERTHING & MESSING PROGRAM, Pear Harbor, HI

ADVANCED DIVING SYSTEM IV - (ADS IV)

Harbor Clearance Unit ONE has the Navy's only fully operational deep diving system, the Advanced Diving System FOUR (ADS IV). Used for both deep water search and salvage to 600 feet, ADS IV consists principally of one personnel transfer capsule, two on-deck decompression chambers and entry lock, a control van, and associated support equipment. The system is normally operated from the main deck of a salvage ship (ARS), submarine rescue ship (ASR), fleet tug (ATF), or Heavy Lift Craft (YHLC), and can be airlifted anywhere in the world, as we have demonstrated three times in the past two years. The system is maintained in Subic Bay by Harbor Clearance Team TWO, but additional divers from other teams are needed for training and operations.

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