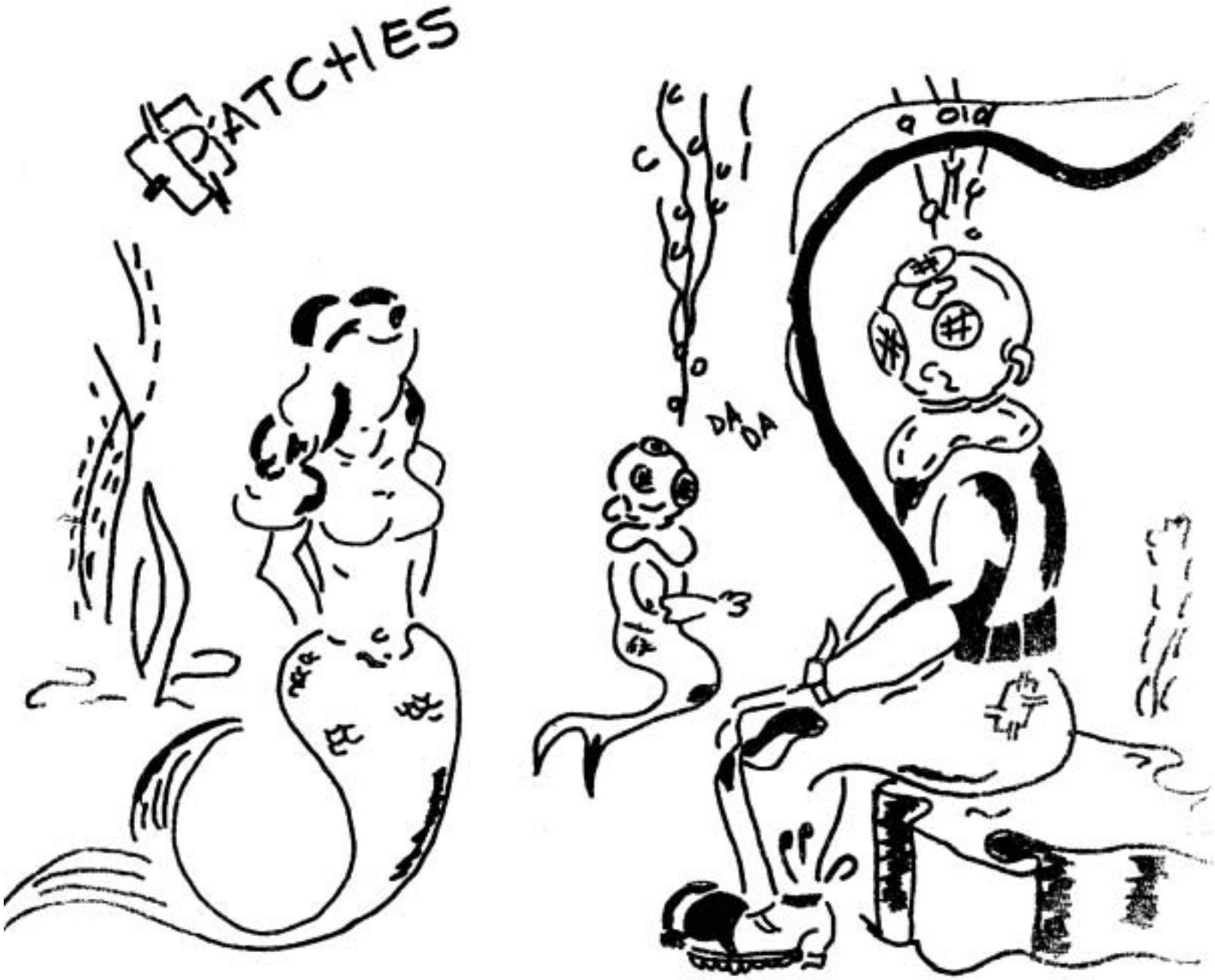
The FACEPLATE

JANUARY 1960



THE SEA HAS MUCH TO OFFER TO THOSE INTERESTED

EXPERIMENTAL Diving Unit
& DEEP SEA Diving School

EDU & DSDS

CDR G. H. MAHONEY, USN, OinC EDU & DSDS

DIVERS PAY

There isn't much I can say on this subject that won't be well covered by a Bureau of Personnel notice which will be sent to all diving activities in the near future. The notice will delve deeply into the subject of extra-hazardous payments also, and will furnish needed guidance until the proposed pay bill can be presented to congress.

SCUBA SCHOOL

The Diving Unit recently supervised a course in mixed-gas and oxygen scuba at the Underwater Swimmer's School for instructors of fleet units requiring the information. The idea was that the nucleus so trained could conduct fleet training (chiefly EOD and UDT) in the Mark 5 apparatus, British CDBA, and the various closed-circuit units.

LIFELINE FAILURE

We recently received a letter which stated that lifelines received at one command were improperly made up and that the plugs were not connected safely. This could easily be fatal, so check your lifeline plug connections to see that they are by the book. The Diving Manual shows how, but doesn't require a strength test. We will make a change to correct this.

AIR COMPRESSOR AIR SYSTEM FILTERS

A report from the Army shows that the cellulose sponges now in the supply system are a poor substitute for the old luffa sponges as a filter in air systems. The cellulose sponges expand as they absorb moisture and provide considerable blockage to air flow. The luffa sponges do not swell as they get saturated.

GENERAL

This will be my last "FACEPLATE", as I am being relieved on 15 January by CDR J. C. MC NICOL, presently Assistant Officer in Charge of the Diving School. Don't forget that this is <u>your</u> newsletter. You can make it much bigger and much better if you will send in contributions. Your routine operations may be of considerable interest to your diving shipmates elsewhere in the world.

EDU NEWS

LCDR N.E.NICKERSON, USN, Asst OinC, EDU

A belated Merry Christmas and a Happy New Year to all of you in the field. The Christmas holidays were spent here at the Unit in catching a short breather and getting set for the new year's projects. Also we managed to squeeze in some much needed refresher training for ourselves on conventional H_eO_2 diving.

There are some projects in the mill which should prove both interesting and result in some definite improvement to you users in the field.

The new Diving Manual is now out in its entirety and all parts, 1 through 4, should be in your hands before this issue of the "Faceplate" reaches you. This brings up an important point concerning the use of the diving tables. Now that the manual is out the new tables are the only ones authorized for use. So those of you who have not already done so, make the switch and get rid of your old tables. In addition send in any errors or omissions you notice in the new manual and we'll see that changes are kept up to date.

The Unit has received several requests for the "Diving Duty Summary" sheet which goes on the left hand side of the "Divers Log". This sheet was locally prepared by the Diving School and issued to all initial graduates and [illegible] completion of the course. Since the total number required [illegible] [illegible] the "Divers Log" [illegible] [illegible] and, [illegible] the Diving Duty Summary [illegible] information. The Record of Dive form [illegible] through your local DPPO.

The activity "Diving Log Book", NavShips 1000 (Rev. 11-57), as most of you know, replaced the old NavShips 1000 sheets, however, the unit still receives from a few activities the old forms. These are no longer required or desired. The "Diving Log Book" is available only through the Experimental Diving Unit so send your requests directly to us. A plain memo type request is all that is required, and we will get them off to you the same day the request is received.

William Badders recently spent several days with us and at the Diving School on his current tripto the States from the Canal Zone where he is still the Salvage Master, Master Diver. He reported an interesting technique in underwater non-ferrous metal cutting which I feel is worth passing on to you although we haven't had an opportunity to try it out here yet. Instead of oxygen in the arc-oxygen method, the oxygen is replaced by plain tap water. The reported cutting rate is improved radically and electrode life considerably extended.

In closing, I would like to remind all of you that we are here to serve you. Let us hear of your problems and keep us informed. We will pass the dope on and any news of wide interest will be published in the Faceplate.

<u>EDU PROJECT NEWS</u>

LCDR J.L.GREENE, USN, Project Officer and
<u>LTJG G.M.JANNEY, USNR,Asst Project Officer</u>

The primary function of the project department at the Experimental Diving Unit is to develop and evaluate diving equipment as authorized by the Bureau of Ships. The projects are conducted primarily by the enlisted diving personnel under the direction and supervision of the project officer and the asst.project officer.

The list of equipment with which we are presently concerned is long and varied. During the past year the evaluation projects included the evaluation of underwater stud drivers, masks, open circuit scuba, compressors, underwater watches, quick release couplings, diver's dress, underwater television and underwater lights. Included in the development projects were mixed gas scuba equipment, closed circuit scuba, scuba mouthpieces, and a number of classified projects. The majority of the work done in the past several years has been concerned with scuba rather than surface supplied diving.

The tests of equipment at the Experimental Diving Unit are conducted in the pressure tanks, the laboratory, and the swimming pool. After the completion of the tests, detailed reports of each project are submitted to the Bureau of Ships. The reports of evaluations of commercially developed or manufactured equipment usually contain information which is not intended for unlimited circulation and therefore these reports are not normally available for further distribution. The results of the evaluations are transmitted to the fleet in the form of new or improved equipment.

Since the tests performed at EDU are usually conducted on new equipment and [illegible] have the [illegible] or manpower to conduct endurance te[illegible] [illegible] it is difficult to obtain data on the performance [illegible] equipment after field use.

It would therefore be very helpful and useful if all diving activities would send reports of performance, equipment failures, equipment modifications, original ideas, and general comments and recommendations concerning diving equipment to:

Officer in Charge
U.S. Navy Experimental Diving Unit
U.S. Naval Weapons Plant
Washington 25, D.C.

However, evaluations of any new equipment developed by diving activities or obtained from commercial sources must be requested from the Chief, Bureau of Ships, attention Code 638.

MEDICAL NEWS

LT J. A. LOGAN, MC, USN

Since the last publication of TheFaceplate another class of Medical Officers has completed the eight week course in diving Medicine. In this class there were seven - four from the U.S. Navy, one Royal Netherlands Navy, one Royal Hellenic Navy and one from the Japanese Maritime Self Defense Force.

One of the Medical Officers in this class, LT Wayne D. Boring, MC, USN, made a study of the files of case reports of decompression sickness in order to determine the incidence of recurrence of decompression sickness following treatment with table I. He has also included figures applicable to tables IA, II and IIA. The paper is reprinted in its entirety.

A Determination of the Incidence of Recurrence Following Treatment of Decompression Sickness Exhibiting Pain Only

The purpose of this examination of the U.S. Navy treatment tables for decompression sickness manifest as pain only is to determine the incidence of recurrence of each of the four treatment schedules employed in this form of decompression sickness.

All information was obtained from the reports of decompression sickness collected at the U.S. Navy Experimental Diving Unit from July 1, 1945 to December 31, 1958.

This examination is limited to those instances in which tables I, IA, II, and IIA were used in accordance with the instructions contained in the treatment of decompression sickness and air embolism, table 1-21. All cases exhibiting muscular weakness, numbness, and other serious symptoms which were treated on these tables were excluded from these tabulations. The tabulation of figures is contained on the next page.

Table I was used 205 times with 6 recurrences. The incidence of recurrence was 2.93%. On table I-A there were 3 recurrences in the 47 times it was used for a recurrence incidence of 6.38%. Table II, used 85 times, had a recurrence incidence of 4.71% for a total of 4 recurrences. Table IIA was used 21 times with 1 recurrence or an incidence of 4.76%.

No comparison can be made between the incidence of recurrence of these tables. The number of instances in which tables 1A, II and IIA were used are too few to yield conclusive results. However, it is possible to say that there is no basis for doubting the reliability of table I when it is properly used.

TABLE I

Depth of relief	# times used	# of recur	Incidence Recurrence
1-10	4	0	%
11-20	39	2	5.13
21-30	50	0	0
31-40	48	1	2.09
41-50	26	0	0
51-60	28	3	10.71
61-65	10	0	0
TOTALS	205	6	2.93

TABLE I-A

Depth of relief	#times used	# of recur	Incidence Recurrence
1-10	2	0	%
11-20	5	1	
21-30	8	1	
31-40	5	0	
41-50	17	0	
51-60	7	1	
61-65	3	0	
TOTALS	47	3	6.38

TABLE II

Depth of relief	# times used	# of recur	Incidence Recurrence
1-65	23	1	%
66-70	1	0	
71-90	16	1	
91-110	7	1	
111-130	3	0	
131-150	7	0	
151-164	3	0	
165	25	1	
TOTALS	85	4	4.71

TABLE II-A

Depth of relief	# times used	# of recur	Incidence Recurrence
1-65	1	0	%
66-70	1	0	
71-90	2	0	
91-110	3	0	
111-130	1	0	
131-150	1	0	
151-164	0	0	
165	12	1	
TOTALS	21	1	4.76

LT H.W.S. HUSEBY, MC, USN was detached during December and is presently an orthopedic resident at U.S.N.H., Chelsea, Massachusetts. Prior to his departure he completed his studies on a method of evaluation of CO_2 absorbents and canister design.

EDU PERSONNEL NEWS

CDR G. H. MAHONEY, USN, Officer in Charge, departed on 18 January for Philadelphia, Pa. to assume the duties as Executive Officer on board the USS FULTON (AS-11). Good luck Commander on your new assignment.

WELCOME ABOARD TO:

RZATKOWSKI, S.P., PHG3, USN who reported on board 20 November 1959.

Ernest J. (TV Steve) STEPHENS, BMC(DV), USN after 20 faithful years, will shift uniforms on the 29th of January. Lots of luck to you Steve as a civilian. Steve resides at 8618 Washington Ave., SE, Ft.Washington, Wash, D.C.

ANCHORS AWAY:

DIMMICK, J.M., MM1(DV), USN was transferred in December to the USS QUEENFISH (SS-393) on the West Coast.

HANGER, G. W., SF1(DV), USN will depart on the 26th of January for New London, for duty aboard the USS SUNBIRD (ASR-15).

COX, A.H., SFC, USN orders to the USS HORNET was changed to the USS SKAGIT (AKA-105). Transfer will be 31 March 1960.

GLASSFORD, J.C., YN1, USN will depart on 29 January for Quincy, Mass for duty on the USS SPRINGFIELD (CLG-7) upon commissioning (22 March 60).

DEMOSS, H.J., DM3, USN has orders to the USS PREVAIL (AGC-20) in New York, N.Y. Transfer will be in February.

HUDEK, F.R., PHG3(DV), USN will depart 27 January for the Camera Repair School, Pensacola, Florida.

DSDS NEWS

MASTER DIVERS

Eligibility requirements for designation as Master Diver have been reestablished. The Bureau of Naval Personnel Manual Article C-7408(7)b is being corrected to read:

(b) Eligibility Requirements

1. Be a Chief Petty Officer, pay grade E-7 and above other than hospital corpsman.

2. Have served a minimum of two (2) years with the designation and qualification diver, first class.

3. Have served as a qualified diver, first class a minimum of twelve (12) months aboard an helium-oxygen equipped diving vessel and as a qualified salvage diver, or above, a minimum of twelve (12) months aboard an ARS or ARSD type diving vessel.

4. Have averaged during the preceding year at least 3.5 in each of the following with no individual mark less than 3.2 professional performance; leadership; and supervising ability.

5. Designated divers, First Class/SCUBA diver.

All recommendations for the designation as Master Diver should be forwarded by Commanding Officers to the Chief of Naval Personnel via the Master Diver Selection Board now reestablished at the U.S. Naval School, Deep Sea Divers.

Recommendations should contain a complete resume of the candidates diving duties and insure meeting requirements listed above.

Diver's Lifeline and Telephone Cable

Excerpts from a letter received from a salvage vessel are shown below for information and such action as may be deemed appropriate. The Bureau of Ships has been advised of this incident.

EXCERPT

Ship's divers were making up new 400' lengths of deep sea hose using new 200' lenths of lifeline and telephone cable. In the process of stretching the lifeline in preparation for marrying the air and depth gauge hoses, the lifeline pulled free from the jack plug. The lifeline was under approximately 140 pounds tension when this failure occurred. Had the lifeline failed under operating conditions, loss of life could have resulted.

An initial inspection disclosed that the steel core of the lifeline had pulled free from the anchor plug of the jack plug assembly. Individual strands of the wire core of the lifeline had not been unlaid and fanned properly. The wires of the core did not show evidence of being cleaned or tinned so as to take solder in the anchor plug.

Investigation continued by disassembling the jack plug. The anchor plug was determined to be 5/8" deep, but only 7/16" of the wire core had been exposed from the rubber coating and available for insertion into the anchor plug. Thus the steel core of the lifeline was 3/16" short of reaching through the anchor plug. Reference (a), article 602, paragraph 5 gives procedures for assembly of the lifeline under discussion.

The lifeline that failed was received in a shipment of seven 200' lengths which were received in June 1959. Additional jack plug connections of lifeline received in the shipment were disassembled and inspected, and were found to be improperly made. In most cases the wire core was too short to reach through the anchor plug and the wire strands of the core had not been cleaned and tinned properly. As of this date a total of five connections have been disassembled: the one under discussion that failed, three found to be quite poor, and only one moderately well done. All five required complete reassembly including re-soldering the wire in the anchor plug.

No lot number can be found for this shipment of lifeling and telephone cable. The markings on the lifeline are as follows: "Type DLT, A.S. & W. Div U.S.S. 1958". It was ordered under stock number GC 5995-184-0096.

Change of Officer in Charge

During ceremonies held at the Deep Sea Diving School 15 January 1960 CDR J.C. MC NICOL, USNR, relieves CDR G.H. MAHONEY, USN as Officer in Charge, U.S. Naval School, Deep Sea Divers.

CDR MAHONEY having completed a normal tour of duty at the school has been ordered to report to Commanding Officer, USS FULTON (AS-11) for duty in that vessel as Executive Officer.

CDR MC NICOL is not unknown to those at the school as he has been Assistant Officer in Charge since 1857.

The Assistant Officer in Charge duties will be assumed by LCDR EMMETT W. CARPENTER, USN.

Welcome Aboard

JACKSON, B.J., HM1, USN, from Training Tank, Pearl Harbor, T.H.
AANERUD, D.E., HMC, USN, from [redacted], Pearl Harbor, T.H.

Detached

H.W.S. HUSEBY, LT, MC, USN to U.S. Naval Hospital, Chelsea, Mass.
O.R. CRESSEY, SFCM, USN to USS CHANTICLEER (ASR-7)

Awaiting Orders

G.L. BURNETTE, CWO, USN, has submitted his retirement request and expects to go to the hills of TENNESSEE about 1 July 1960.

Promotions

B.L. DELANOY, ENS, USN has been promoted to LTJG
J.A. KENNEDY, MRCA, USN has been promoted to ENS
A.W. FOSTER, WO1, USN has been promoted to CWO
O.R. CRESSEY, SFCS, USN has been promoted to SFCM (E-9)
J.M. KENNEDY, SFC, USN has been promoted to SFCS (E-8)

DIVING DUTY SUMMARY
PRNC-DSDS-14 (4-58)

QUALIFICATIONS	DATE	CERTIFYING OFFICER	DIVER'S LOC FINDER ISSUED
SCUBA DIVER			Activity
DIVER SECOND CLASS			Date
SALVAGE DIVER			Duplicate Binder Issued
DEEP SEA DIVER			Activity
DIVER FIRST CLASS			Date
MASTER DIVER		Authority BuPers letter Serial of	Reason

ASSIGNED TO DIVING DUTY		TOTAL DIVES						DETACHED	
SHIP OR STATION	DATE	DEEP SEA AIR	DEEP SEA HE02	LIGHT WEIGHT	SCUBA AIR	SCUBA 02	SCUBA N202	SCUBA HE02	DATE	CERT. OFFICER

FORM COMPLETED AND FORWARDED TO U.S. NAVAL SCHOOL DEEP SEA DIVER
ON SEPARATION FROM SERVICE
QUALIFICATION REVOKED (GIVE REASON)

C.O. SIGNATURE _____ DATE _____

DIVER'S NAME (Last) (First) (Middle)	SER.NO.	RANK OR RATE	BRANCH & CLASS

Navy-DPPB PRNC, WASH., D.C.