

CALIFORNIA  
MARITIME  
ACADEMY

Wednesday, 15 May 1957

## URSUA CAPSIZE IN CARQUINEZ STRAITS; ENGINEERS FIRST TO REACH STRICKEN VESSEL!

(Editor's Note: The following account of the "Ursua Incident" is that of an eye-witness engineer as told to the BINNACLE in an exclusive interview. The BINNACLE welcomes correspondence from other midshipmen as to the details following the Ursua's run from the boat basin)

Vallejo- 13 May- 1430: The 1936 sailing craft the Ursua suffered near disaster today as her First Class Deck crew guided her up the Carquinez Straits towards Mare Island.

An eye-witness informed the Binnacle that within three minutes of leaving the TS-GB, the Ursua, the wind on her port quarter, heeled over and filled with the high tide.

Reports indicate that the craft's crew was unable to bring down the mainsail in a sudden gust of wind.

An authority questioned by the Binnacle (name in our files) stated it was the old fatal error of "belaying a sheet".

All occupants were thrown into the H<sub>2</sub>O

except M/S Coppe who somehow managed to cling to the disabled craft.

Two rowboats of Second Class Engineers and one boat of Deckies, who were practicing trial landings in the basin, rushed to the scene to rescue the survivors. M/S Thue's boat, laden with experienced engineers, reached the Ursua first. In hot pursuit of the engineers was Mr Pederson with a well trained but slower crew. The Engineer boat took on the Ursua's gear, which included deck boards, anchors and oars.

The TSGB's Navigator, Mr Nied, soon arrived with the Liberty Launch, made a line fast to the Ursua, uprighted her, and towed her back to the basin where she was duly bailed.

Electrical Officer Lippman was seen warmly congratulating M/S Thue for his fine work. Other engineers in the "winning boat" included Ybarrando, Allison, Steele, Rotkins, Defoe and Arbuckle.

## LIBRARY COMMITTEE PURCHASES \$600 WORTH OF NEW BOOKS

The newly formed Library Committee, under the chairmanship of Mr Nied, recently purchased \$600 worth of new books for the CMA Library. The titles cover both fictional and technical areas. Included among the new books are the following: Practical Marine Engineering, Man, Time & Fossils, The Stars: A New Way To See Them, The World's Tankers, Van Nostrand's

Page 2, THE BINNACLE

STAFF

John T Ellis  
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LIBRARY COMMITTEE PURCHASES \$600 WORTH OF NEW BOOKS (continued from page 1)

Scientific Encyclopedia, Shiphandling, High Fidelity Home Music Systems, The International Maritime Dictionary, Careers in the United States Merchant Marine, Coast Guard, Army and Navy, and many other titles.

Other books include Frozman, Darkness at Noon, Anthology of American Negro Short Stories, War and Peace, The Complete Book of Skin Diving and The Eternal Sea.

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Know Your Instructor

Lt Otto Bruhn

In charge of the boilers on the TSGB is Lt Otto J. Bruhn, First Assistant Engineer, from Dixon, California. Lt Bruhn also teaches General Rules & Regulations to the First Class engineers.

After graduation from high school in 1939, Lt Bruhn ventured to the University of California at Davis, having earned an alumni scholarship for his outstanding scholastic work in high school. Besides being an outstanding scholar, he excelled in track. His record for the 440 yard dash, set at a central state meet in 1939, still stands at his old high school in Dixon.

While in college, prior to the war, he won a letter in track each year. He received a varsity letter in his Freshman year at Davis. He ran the 440 yard dash in about 48:4 seconds, and he also ran in the relay.

While at the University of California at Berkeley, in 1947, he was President of his fraternity (Delta Chi).

At Davis, Mr Bruhn majored in history and political science. In the early part of 1942 his roommate received some literature from King's Point Maritime Academy. Soon they both applied for admission. In June 1942, Mr Bruhn was preparing to participate in the Pacific Coast

track finals in Washington, when he received a letter from King's Point. He had been accepted and was to report to the Academy immediately. Being an ardent track star and not yet having participated in the meet, he waited a few days before deciding whether or not to go to New York. He finally decided to go, graduating in June of 1944.

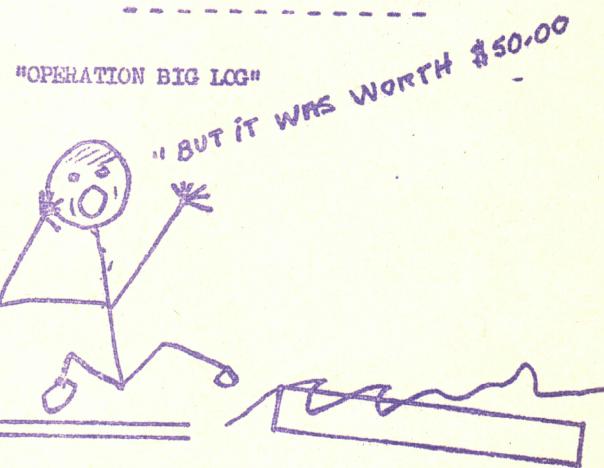
Mr Bruhn has sailed on Liberties, T 2's and Victory ships. He passed his Second Assistant's license in 1945, and in January, 1946, he sat for and passed his First Assistant Engineer's license.

He then went to U.C. at Berkeley to get his degree in Political Science and history, which he received in June of 1947. At that time he considered a career in foreign service but finally decided to return to the engineering field.

After graduation, Mr Bruhn was offered a job in Hartford, Connecticut, as a boiler & machinery inspector, which he accepted. He again went to sea in 1948, this time for Cities Service Oil Company, a large Eastern firm. In 1949 he came home to manage the family ranch, due to his father's ill health. While at home he was in the insurance business, was First Aid Chairman of Dixon's Red Cross, and was a Scout Leader. His group of scouts went to the National Scout Jamboree at Valley Forge, Pennsylvania.

Mr Bruhn is always willing to give anyone a helping hand. One night last week a log got lodged in our boat basin. He was down on the dock immediately, working harder than the midshipmen, going under the dock and giving a helping hand. He well deserves our support.

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"OPERATION BIG LOG"



(The above cartoon was submitted by one of our readers and refers to an incident best known to TSGB midshipmen. The character yelling at the drifting log had not yet been identified.)

## FRED URICH LECTURES ON NUCLEAR POWER

Mr Fred Urich, CMA Class of 1949, appeared before a group of engineer and deck midshipmen on the 30th of April to deliver a talk on "Nuclear Power". The speaker was introduced by Commander Flanner, who pointed out that Mr Urich is intimately concerned with the construction of an atomic submarine at Mare Island.

"I wish to dissipate some of the awe connected with atomic power." With these words Mr. Urich began a quiet speech frequently punctuated with the remark "I wish I could tell you more; I don't dare tell you more . . . ." Actually, the talk increased the awe: if not concerning the basic conditions of an atomic power plant, at least concerning the intense and consistent secrecy of the entire atomic sub project.

Engineers were reminded that the plant is essentially a "low pressure, low temperature, saturated steam plant". The diagrams drawn roughly on the green board in Classroom 110 could have been taken from any Basic Engineering Text: the only blank, unfilled space was that occupied by the reactor. Once the steam was generated, the distribution and use of it was familiar to every engineer.

Brief mention was made of the materials used in the atomic plant: stainless steel. "Cleanliness is paramount: corrosion products must be eliminated."

In building the plant much more care is taken than that taken on the typical oil-fired unit: "Pipe fitters use micrometers." Extremely close tolerances are demanded to prevent the formation of dangerous leaking crevices.

The atomic plant requires a new emphasis on "health physics". Prior to working in the area of the atomic reactor "radiation monitoring teams" must inspect all personnel. Protective clothing is required. Turbine inspection is accomplished with rubber gloves.

Is there danger for marine engineers working with nuclear equipment? Mr Urich states: "There is little to be afraid of in the nuclear plant; it automatically shuts down in casualty cases."

Is a CMA graduate adequately trained for nuclear responsibilities? Mr Urich answered this question by stating that "CMA will prepare you as well as any university". By this he meant that the marine plant under atomic power was not radically changed except as to the source of the power. The engineer who has mastered the conventional plant can easily master the reactor with a "Reactor Plant Operator" course which is available.

Midshipmen interested in field service work should contact M Frank Drew (Westinghouse) in San Francisco. There are many benefits in working for Westinghouse: liberal pay, hospital benefits, legal assistance, etc. The minimum pay schedule was quoted as \$370 per month. Six months training is required. Periodic pay increases are provided.

Following the talk, Mr Urich answered Midshipmen questions. "How fast will the atomic sub react from full ahead to full astern?" -- "I cannot be specific; let me say that when the matter was considered, the question arose: would the tail shaft twist in two?" Midshipmen learned that lead shields surround the plant, that the reactor was surrounded with water, that waste uranium was reprocessed for use in another atomic core/.

Is the atomic fleet feasible for the merchant fleet? "Atomic power is NOT economically feasible except for large vessels, like super-tankers, at sea 98% of the time."

Does one need a PhD to operate an atomic plant on a naval vessel? Again Mr Urich stated that the navy has trained sailors with limited educational backgrounds to operate atomic plants. "If you can operate a conventional steam plant, you can easily learn to operate a nuclear plant."

What is the size of the reactor unit? "The reactor unit is about 10 feet in diameter and about 20 feet tall."

How is the plant made to respond to power demands? "Neutron absorbing control rods are withdrawn to increase reactivity and inserted to shut down the plant."

All in all, Mr Urich's soft-spoken lecture did give CMA Midshipmen an inside glance at the mysterious world of atomic power; his lecture set the students thinking.

THE Binnacle, Page 4

SOVIETS CLAIM "THE FIRST ATOMIC  
ICEBREAKER"

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Mr Fred Urich's lecture several weeks ago increased Midshipmen speculation as to whether the Soviets had experimented with atomic naval power plants. The question was directed to Mr Urich who replied calmly "I am sure they must have."

Your roving Binnacle Reporter, in San Francisco a week ago on non-editorial business, stumbled upon an approved news-stand which sold the illustrated monthly USSR. The magazine USSR is published by reciprocal agreement between the governments of the United States and the Soviet Union. The agreement provides for the publication and circulation of the magazine USSR in the U.S. and the magazine AMERIKA in the Soviet Union.

The magazine USSR has some interesting articles on the Soviet Union; the pictures are in color; the writing is graphic. Since we are not on Moscow's list of approved distributors of the USSR we will say no more about the general content of the magazine.

We are anxious, however, to draw your attention to the article printed in USSR entitled THE FIRST ATOMIC ICEBREAKER. We believe an excerpt from this article will provide us with something to wonder about. It is not our purpose to debate the question as to whether this is fact or propaganda.

#### THE ATOMIC ICEBREAKER

"The displacement of this new ship powered by atomic energy will be 16,000 tons; its speed in open water will be 18 knots; it will generate 44,000 horsepower to drive its propellers. This most powerful of icebreakers will be able to sail an almost unlimited range, touching both poles in one voyage. It will not need to stop for refueling. Instead of burning 50 to 60 tons of oil every 24 hours like an ordinary ship of its size, this icebreaker will use up a few grams of atomic fuel. All the latest navigational equipment is being installed, with the most powerful radio, sonar and radar instruments available. A portion of the afterdeck is being designed to handle and service two helicopters. They will be employed to scan the seas over vast miles ahead in scouting the best and safest routes. The reactor will be operated

by remote control. The thermal energy produced by atomic disintegration in the reactor will heat the water and convert it to steam which will move the main turbines. They, in turn, will drive turbogenerators that produce electric current for the powerful engines!"

## FIRST CLASS FUTURE

(Editor's Note: The Binnacle recently forwarded to all First Classmen a letter requesting information on their futures to be published over the weeks in a column entitled FIRST CLASS FUTURES. As of this date we have received only two replies; these men, at least, have a future; We hope to hear from the remainder of the First Classmen.)

MIDSHIPMAN PYLES : "Ship in the merchant Marine for 6-9 months or until the Navy gets me. Go in the Navy. Attend Deep Sea Diving School."

\* \* \*

KIDSHIPMAN ROSE : "Time will mostly be the deciding factor for my immediate plans. Immediately after graduation I plan to go to Mexico City and marry a certain señorita I met while in Acapulco. Following the marriage, we will return to the States and I will ship for Standard until my particular class enters flight training at Pensacola. This will be approximately three months after graduation. After I serve my time with Uncle Sam, I plan to settle down to a career with Westinghouse. There is also the possibility that I might ship for awhile between my termination of Navy duty and the beginning of my job with Westinghouse."

*Scoops - Past, Present,  
Future by (W.)*

TURN THE PAGE

SCOOPS: PAST, PRESENT, FUTURE by W.

Besides plans for the new dormitories during the fiscal year 1957-58, a new administration building, costing approximately \$175,000, will be built. This building will probably be completed before the dorms because the building is smaller and it is of an unfinished interior. For the fiscal year 1958-59, construction of an engineering building for approximately \$800,000 and outdoor physical education facilities for \$50,000 is planned.

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The Superintendent, Captain Richter, wishes to express his appreciation to those Midshipmen who participated in the cleanup of the Library. Well done!

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On Friday, 24 May, the TSGB will leave CMA to go to San Francisco for Maritime Day. It will leave here at 1330 and arrive in S.F. at 1530. We will dock along side of Pier 43 and have regular cruise liberty. As now scheduled the Starboard liberty section is scheduled to get off Friday and Sunday nights, while the Port section will get off on Saturday. The Ship leaves SF for CMA at 0600, May 27th, and will be back at Vallejo at 0830.

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Tuesday evening, May 14th, a group of Midshipmen were honor color guards at a special dinner at the Palace Hotel. We hope to have M/S Fuller write us a special report on the affair for the next issue of the BINNACLE.

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On May 8th, a group of First Class engineers went aboard the USS Pelias, a diesel driven ship, through the courtesy of Captain McLean of Mare Island. The Pelias is a C-3 fitted with four 2,200 HP, 2 cycle, Bush-Sulzer diesel engines connected to a single shaft through electric couplings and reduction gears. Her cruising speed is about 18 knots. The first class was amazed at her plant layout. They were told that there was plenty of room. When they got down below, they could hardly move around due to lack of space.

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357 applicants have taken exams for admission to CMA. 100 will be admitted on 26 August.

# READY FOR YOUR THIRD?

## FOR THE ENGINEERS:

Question: Give Four Advantages Of The Turbo-Electric Ship?

## FOR THE DECKIES:

Question: What is meant by the term dewpoint?

## ANSWERS:

to release its moisture.  
at a given temperature which the saturated air begins  
or the point of maximum saturation of air  
at which precipitation of moisture starts  
Dewpoint: The dew point is the temperature  
at which condensation of moisture starts  
reversal; elimination of moisture; full torque  
targets location of machinery; advanced  
ENGINEERS: Greater flexibility; advan-

THE

LAST

LAUGH

WORTH THE GAMBLE

The church service was proceeding as usual when an attractive young widow, who was seated in the front row of the balcony, bent over to pick up her handbag that had slipped to the floor, lost her balance, and fell over the railing.

Her dress caught in the chandelier and she was suspended in mid-air.

The minister seeing her undignified position, thundered to his congregation, "Any person who turns to look will be stricken stone blind."

The man at the end of the first row turned to his companion and said, "Ed, I'm going to risk one eye."

### CHALLENGE TO THE THIRD CLASS

#### An Editorial

Captain Richter's Monday lecture contained both an appeal and a warning for the third class.

The Superintendent appealed to the third class to develop its finer potentialities, to uphold the ideals of personal and intellectual honesty. He reminded his listeners that the third class would soon be in a position, as second classmen, to influence, for better or worse, esprit de corps at CMA. Captain Richter urged a greater measure of understanding and cooperation among all students. He deplored the actions of a minority who undermine the morale of others too easily swayed into attitudes and actions detrimental to the Corps.

The appeal was coupled with a warning. The third class by its actions and resolutions can improve current conditions, or it can, by refusing to think and consider the alternatives, cause a worsening of morale and a consequent increase in restrictive measures.

The Binnacle welcomes and supports Captain Richter's appeals and warnings. It is, however, an incomplete analysis to imagine that the responsibility for a better CMA lies totally with the third class. Esprit de corps will improve only when faculty, students and midshipmen officers alike abandon those ideas and actions which cause depression and negativism.

CMA students wish to be reminded that they are the reason for the Academy's existence: That their progress is to be encouraged; that their failures and intellectual problems are of serious concern to their instructors.

We believe that most midshipmen would welcome an increase in comradeship and cooperation among the themselves: a decrease in selfishness, a decrease of impoliteness, misuse of language and disregard for the personal rights of others.

We believe that the CMA faculty would appreciate a more serious and studious student body.

Progress will be made only if all CMA participants realize that we are all to some degree guilty and responsible for those conditions which are sensed and known to be unsatisfactory . . . .