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San Diego, CA 92120-3404

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The Silent Sentinel

March 2011



Our Creed and Purpose

To perpetuate the memory of our shipmates who gave their lives in the pursuit of their duties while serving their country. That their dedication, deeds, and supreme sacrifice be a constant source of motivation toward greater accomplishments. Pledge loyalty and patriotism to the United States of America and its Constitution.

In addition to perpetuating the memory of departed shipmates, we shall provide a way for all Submariners to gather for the mutual benefit and enjoyment. Our common heritage as Submariners shall be Strengthened by camaraderie. We support a strong U.S. Submarine Force.

The organization will engage in various projects and deeds that will bring about the perpetual remembrance of those shipmates who have given the supreme sacrifice. The organization will also endeavor to educate all third parties it comes in contact with about the services our submarine brothers performed and how their sacrifices made possible the freedom and lifestyle we enjoy today.

90 Degrees North Crew Patch, designed by David Kauppinen for San Diego Base. Patch will be manufactured and sold by SD Base to all interested USSVI members. Sale price will be dependent on production costs (with all profits going to SD Base). We are now in the process of obtaining written quotes. The patch will only be made in the USA.



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The Silent Sentinel via Email

To all of my Shipmates and families who currently receive our Great newsletter via the mail who would like it sent via email or continue to receive it via mail, please fill out the form and mail it to the base or myself. We are trying to cut the cost of the newsletter down from \$3700 to about \$1900 a year. By receiving the Silent Sentinel via email will cut down the printing and mailing cost. The other plus to receiving it via email is you can save it on your computer and not have the paper lying around the house.

A subscription to the Silent Sentinel newsletter will be available to surviving family members via internet email, at no charge, upon notification of the Membership Chairman. If a printed hard-copy is preferred, via US Post Office delivery, an annual donation of \$5.00 will be requested to cover costs.

NAME: _____

ADDRESS: _____

CITY/STATE/ZIP: _____

EMAIL: _____

TELEPHONE: _____

Would like the SILENT SENTINEL emailed: YES _____ NO _____

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USSVI Base Commander
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*DUE TO LOGISTICS CONSTRAINTS, ALL INPUTS FOR THE SILENT SENTINEL MUST BE IN MY HAND NO LATER THAN **ONE WEEK** AFTER THE MONTHLY MEETING. IF I DO NOT RECEIVE IT BY THIS TIME, THE ITEM WILL NOT GET IN. NO EXCEPTIONS! MIKE*

March Meeting

Our monthly meetings are held on the second Tuesday of the month at VFW Post 3787, 4370 Twain Ave., San Diego. Our next meeting will be on 8 March 2011. The post is located one-half block West of Mission Gorge Road, just north of I-8. The meeting begins at 7 p.m. The E-Board meets one hour earlier at 6 p.m.

Check us out on the World Wide Web

www.ussvisandiego.org

BINNACLE LIST

Al Strunk
Bob Medina

Submarine Losses in February

Submitted by C J Glassford



SHARK # 2 . (SS 174) - 58 Men on Board

Sunk, on 11 Feb 1942, by Japanese Destroyer, in Makkasar Strait,
120 Miles East of Mendoa, in the Celebes Sea : "ALL
HANDS LOST "

AMBERJACK (SS 219) - 74 Men on Board

Probably Sunk, on 14 Feb 1943, by Combined Efforts of a Japanese Seaplane, Torpedo Boat, and Submarine Chaser, off Cape St. George, New Britain: "ALL HANDS LOST"

GRAYBACK (SS 208) - 80 Men on Board

Probably Succumbed, on 27 Feb 1944, to Damage Inflicted, by Land Based Japanese Naval Aircraft suffered the day before in the East China Sea: "ALL HANDS LOST"

TROUT (SS 202) - 81 Men on Board

Most likely Sunk, on 29 Feb 1944, by Japanese Destroyer, in the Philippine Sea Area, Off Formosa:

"ALL HANDS LOST"

BARBELL (SS316) - 81 Men on Board

Sunk, on 4 Feb 1945, by Japanese Naval Aircraft, In the South China Sea, Palawan Passage:

"ALL HANDS LOST"

POMODON (SS486) - Duty Section on Board

Battery Explosion and Fire, on 21 Feb 1955, from Hydrogen Buildup during recharging of Battery Cells, at San Francisco Naval Shipyard: "5 MEN LOST"



Minutes of the San Diego Base Submarine Veterans Meeting, February 8, 2011.

1900 – Meeting of the Submarine Veterans San Diego Base was call to order by Base Commander, Bob Bissonnette.

Conducted opening exercises:

Reading of our Creed.

Pledge of Allegiance lead by Charlie Marin.

Chaplin's opening prayer.

Conducted tolling of the Boats:

Following boats were lost in the Month of February:

USS SHARK (SS174)

11FEB 1942

| | |
|----------------------------|-------------|
| USS AMBERJACK (SS219 | 16 FEB 1943 |
| USS GRAYBACK (SS208) | 27 FEB 1944 |
| USS TROUT (SS202) | 29 FEB 1944 |
| USS BARBEL (SS316) | 04 FEB 1945 |
| USS POMADON (SS486) 5 LOST | 21 FEB 1955 |

A moment of Silent Prayer was observed.

Introduction of E-Board members and other VIPS.

Secretary reported 35 members and guest present.

Treasurer's report: Base has a total of 21,893.00 dollars in the account.

Call for Committee Reports:

Binnacle list – Jose Gutierrez has upper repertory problems and Al Strunk is recuperating at home, Bob Medina is at home suffering from leukemia. Mike Hyman is also at home sick. If you have any other shipmates on the binnacle list please call me. (CJ Glassford)

Parade Committee – Jack Kane:

Linda Vista parade will be held on 16 April 2011. Please raise you hand if you plan to attend. (13 members raise their hands)

Flag Day parade will be held at 1000 on 04 June 2011.

The Julian 4th of July parade.

The Veterans Day parade on 11 November 2011 in San Diego.

I will put out more information as the events get closer.

Membership Committee – Ron Gorence not present.

Scholarship Committee – Paul Hitchcock: Scholarship applications must be submitted as soon as possible. We will be review all applications in April. The Official deadline is 15 April 2011, for both our local base and the National organization. Candidates can apply for both scholarships. We would like as many applications as possible. So if you have a family member who is eligible please encourage them to apply.

Storekeepers report: Phill Richeson – We will be providing a catalog next month to purchase new items. We are also building or inventory of items, plus we are getting some submarine movies.

Breakfast Committee: Fred Fomby –Thanks to Doc, Jack and Bill who carried the breakfast since I was out sick. Great job, we netted 238.00 dollars. Our next breakfast will be on 30 May 2011. Please help out since this is our biggest money maker.

|Holland Club Awards were presented to Doc Coates and Phill Richeson. The USS Caimon Association set a letter to Joseph Dubois awarding him a |Holland Award.

1925 Break of 50/50 drawing.

1935 Meeting called back to order.

Unfinished business:

Food handlers class will be conducted this Saturday, 9 to 1100 here at VFW. You need this class if you want to help with the Breakfast.

We need volunteers to work on the trailer used to carry our submarine float. Time

and place will be announced at the March meeting.

It was announced that there will be a change on Holland member's dues; this subject has been tabled until April.

The Budget is not available to be voted on tonight and will be tabled until March.

It was requested by a member that a copy of the budget be placed in the Sentinel for review. The treasurer will submit the budget to be printed in the Sentinel.

New Business:

Base Commander presented the need for a volunteer to work as the chairman for a Eagle Scout program.

Kaps for Kids also need some one to take charge and restart the program. We think this will be a great program for community involvement.

Good of the Order:

A letter of appreciation was received from the Mobile Base for the donation sent to organization for the restoration of the USS Drum.

Tom Warner read a letter sent to his father from an uncle station in Pearl Harbor in 1938 while waiting for his boat.

CJ Glassford reported on upcoming events: Sailor of the year Award for both shore and sea will be held Friday, February 25, 2011.

Old timer's luncheon will be on Friday at 1030 on May 27, 2011 at the Handlery Hotel. Luncheon is being held in May because all the boats will be out to sea.

Submarine Birthday Ball will be on May 28, more info next month.

Dave Copeland has created a new ships patch that can be made and sold to the membership and other persons interested. It was requested he post it in the Sentinel so the membership can see it and bring it up again at the next meeting under new business.

Fred Fomby will be not able to attend next months meeting and he wanted to know if anyone would like to supply midrates for the next meeting. Since Fred will be out of town all inputs to the Sentinel must be in no later than February 23.

Base Commander presented the need for help maintaining the Submarine Memorial at Liberty Center. Many of the WWII vets are unable to do this work.

If you are interested in helping contact Base Commander.

This Saturday is the 100th Anniversary of Naval Aviation.

2001 – Meeting adjourned.

Sailing List

| | | |
|--------------|------------------|----------------|
| FRED FOMBY | BOB COATES | LARRY KENDALL |
| ED WELCH | JACK KANE | TOM WARNER |
| TOM POLEN | DENNIS MORTENSEN | PAUL HITCHCOCK |
| MATT BAUMANN | DON MATHIOWERTZ | JOE DUBOIS |
| CJ CLASSFORD | JOE ACAY | CHARLIE MARIN |

| | | |
|-----------------|------------------|--------------------|
| NIHIL D. SMITH | DAVID BALL | RAY FERBRACHE |
| PHILL RICHESON | DAVID KAUPPNER | MANNY BURCIAGA |
| BILL EARL | RUSS FILBECK | MERT WELTZIEN |
| FRANK WALKER | WILLIAM JOHNSTON | BOB FARRELL |
| BOB BISSONNETTE | JIM HARER | JOHN GRIENENBERGER |
| CLIFF BRITT | CHARLES SIMMONS | JOEL EIKAM |
| LARRY DORE | DON TERRY | |

Upcoming Parades

26th Annual Linda Vista MultiCultural Fair and Parade

Saturday, April 16, 2011. Parade starts at 1100 muster at 1000.

La Mesa Flag Day Parade

Saturday, 4 June 2011. Parade starts at 1100 muster at 1000.

Maps for both parades will be available at the next Monthly Meeting and in the April Sentinel.

For more info contact Jack Kane (subvetparades@cox.net) or 619-602-1801.

SUBVETS SAN DIEGO 2010 CHRISTMAS PARTY



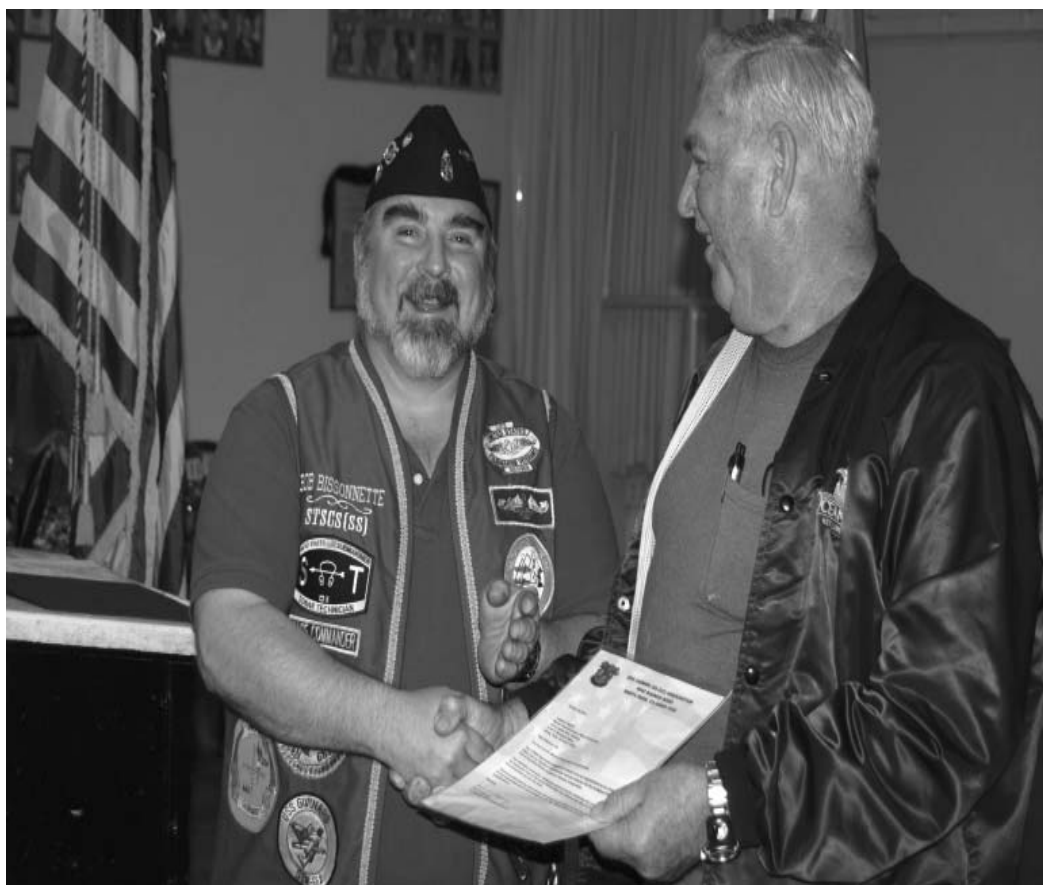


Robert "DOC" Coates, Frenchy Dubois, and Phillip "Phil" Richeson Become Holland Club Members



DOC

PHIL



BASE COMMANDER B BISSENNETTE

FRENCHY

Decorated War Veteran Lou Smeykal Of West Covina Turns 101

sgvtribune.com, Jan 27, 2011

Decorated World War II veteran Lou Smeykal turned 101 years old on Jan. 15. He celebrated the day with his family and old friends at the Regency Grand, a senior living community in West Covina. Among the friends to attend was his old ship mate, whom he has been friends with for 70 years. Smeykal was a submarine master chief and served on two submarines in the Pacific during the war, earning a Bronze Star Medal for valor. He served on the USS Skate. During the war, Smeykal's submarine [rescued] downed P-51 fighter pilots and damaged many enemy ships. Smeykal was a longtime resident of Covina before becoming a part of the Regency Grand community eight years ago.

Second 'Narco Sub' In 8 Months Discovered, This One In Colombia

Diesel-driven boat built to haul 8 tons of cocaine

By Dane Schiller, Houston Chronicle, Feb 15, 2011

Any doubt about the persistent ingenuity of drug traffickers hell-bent on getting cocaine into the United States evaporated with the discovery of the second "narco submarine" captured in the swamplands of South America, officials said Tuesday.

The vessel was under guard by the Colombian navy Tuesday as inclement weather prevented it from being towed from its mooring in a secret man-made channel.

What is not clear yet is if the submarine, which could carry an estimated 8 tons of cocaine, was built by the same organization that built the vessel captured eight months ago in neighboring Ecuador.

One such vessel could have been considered an aberration, but a second erases any doubts, said Jay Bergman, head of the U.S. Drug Enforcement Administration for the Andean region.

"You can't speak to what it has cost to build these things, but it is in the millions of dollars, and obviously an organization or organizations are spending lots of money," Bergman said.

The sub was found Saturday but not made public until Tuesday.

Traffickers have used planes, boats and now submarines to try to move bulk amounts of cocaine from South America, where it is grown, to Mexico, where it is often pushed by land into the United States.

Neither of the subs, each of which is under 100 feet long and would have had crews of less than a half-dozen, could be compared to anything being used by a modern navy. Both were made of fiberglass, keeping them light.

The Colombian version has some upgrades, such as built-in bunks, computer gear and two remote viewing cameras on a pole protruding from its conning tower, Bergman said.

But it had just one engine instead of two, and did not have any of the dozens of suitcase-sized batteries that would be needed to give it power when completely submerged.

Instead, the DEA official said, its cruising depth seems to be limited by the length of its snorkel, which would have to reach the surface to suck in air for its diesel engine, much like a giant straw. "If somebody is going in one of these things, I'm like, 'What are they thinking?'" Bergman said. "You can go down, but can't guarantee you can come back up."

Australian Navy Fleet Cannot Run At Full Capacity Figures Reveal

Cameron Stewart, The Australian, Feb. 10, 2011

Two-thirds of the Royal Australian Navy fleet could not operate at full capacity at some stage of the first half of last year, putting the force under pressure to scale back its activities around the world.

The parlous state of the navy is revealed in full for the first time by figures that show 38 of the fleet's 54 vessels were at some stage hit by faults, repairs, operational restrictions or crew shortages in the first half of last year.

The navy was further embarrassed last week when it was unable to send any of its three main amphibious support ships - HMAS Tobruk, HMAS Manoora and HMAS Kanimbla - to Queensland to assist in recovery efforts after Cyclone Yasi because the ships were either out of action or unseaworthy.

According to the navy's figures, which were provided in response to questions on notice from opposition defence spokesman David Johnston, each of the navy's six Collins-class submarines spent between five and 12 months of the year to last June in dock undergoing repairs or maintenance.

End of sidebar. Return to start of sidebar.

On average, the submarine fleet was seaworthy for only 32 per cent of the year because of faulty diesel engines, broken generators, crew shortages and maintenance.

The troubled fleet cost \$325 million to sustain during that period.

The navy's surface ships were also hard hit by problems, with eight of its 12-frigate fleet running on "lower levels of operational readiness" as "crewing gaps" affected trials, training and regional engagement in the six months to June last year.

Likewise, its fleet of amphibious, replenishment and hydrographic ships was riddled with problems, ranging from engine and hull defects to shortages of crew.

Senator Johnston said the figures revealed a level of disrepair in the navy that was shocking and unacceptable.

"I want to know who is accountable for this multi-billion-dollar mess and how have we come to this," Senator Johnston told *The Australian*.

"Virtually all force element groups are about 70 to 80 per cent laid up through maintenance and are non-operational. Clearly this is not good enough."

Navy chief Russ Crane told *The Australian* last night that a shortage of trained crews had contributed to lower operational readiness levels for some ships.

"We have some pressures in terms of manning," Vice Admiral Crane said.

While navy recruitment had bounced back strongly, there was an imbalance between the numbers of trained and untrained crew, which was limiting the options for the navy.

"We have a lot of very young, inexperienced people in the training system," he said. "We need to train our way out of the surge of trainees we have at the moment."

A navy spokesman said the situation was improving with 496 more trained people now than at the same time last year.

Vice Admiral Crane said that, despite the pressures, he saw no immediate need to scale back the tempo of naval operations.

"I am comfortable I have sufficient capacity to meet the requirement directed to me by the chief of the defence force," he said.

Navy figures show that all six hydrographic ships were affected in the first half of last year by either defects, crew shortages or upgrades. The navy said eight of its frontline Anzac and FFG frigates had operated "with managed crewing gaps and conducting lower levels of operational readiness activities such as scheduled maintenance, trails activities, training exercises and regional engagement activities".

The amphibious and replenishment fleet had crewing shortfalls, HMAS Tobruk had a hull defect, HMAS Sirius an engine defect and HMAS Kanimbla had unexpected maintenance delays.

Vice Admiral Crane said the availability of submarines and submarine crews had improved in the seven months since the 2009-10 financial year and that the navy would be creating a fourth submarine crew that would ease pressure further.

Nuclear Subs Buy Floated

By Brendan Nicholson, The Australian, Feb 7, 2011

Australia could buy 10 of the latest nuclear attack submarines from the US for much less than it would cost to build 12 conventional replacements for the Collins-class boats, says the Kokoda Foundation think tank.

Foundation founder Ross Babbage said the submarines could operate with US boats sharing an Australian naval base and they could be maintained by US nuclear experts.

Dr Babbage, a member of the government's advisory panel for the 2009 Defence white paper, told *The Australian* 10 of the US Navy's new Virginia-class attack submarines could be bought and equipped for a total of \$28 billion.

While the white paper called for 12 new conventional subs, it gave no estimate of their likely cost. But Andrew Davies, of the Australian Strategic Policy Institute, has calculated that they would cost about \$36bn and that figure has not been challenged by the government.

In the past, apart from political and social objections to nuclear power, key submarine experts have dismissed the idea of Australia opting for nuclear subs because of an expected high cost and because the nation has no nuclear industry to repair and maintain them.

Dr Babbage said a dramatic step, such as taking this nuclear option, was necessary as evidence emerged of China's rapidly increasing military power.

"Australia needs to consider purchasing 10-12 of the United States' latest nuclear powered attack submarines in order to balance, offset and deter the dramatic expansion of China's military capabilities," he said.

"China's massive military build-up is clearly designed to force the US and its allies out of the western Pacific.

"Key Australian security interests are being challenged."

A combined force of Australian and US nuclear submarines sharing a base in Australia would send a very strong message to China's military leaders, he said.

At the AUSMIN talks between Australian and US defence and foreign affairs ministers in Melbourne last year, the two governments agreed to a stronger American military presence in Australia, with US forces to share bases and store equipment here.

Buying boats from a "hot" production line would greatly reduce the likelihood of delays, cost blowouts and problems with technology, Dr Babbage said.

Navy Hunts For New Subs

By Michael Fabey, Aviation Week, Feb 8, 2011

Thanks to the recent announcement that the Pentagon is officially on board — for now — with the general strategy to buy replacement submarines for the Ohio-class strategic boats, it is time to hunt for the next fleet of boomers.

This is no small Pentagon program by any measure. For fiscal 2012, the Navy estimates it will spend about \$1 billion for research and development alone for the replacement program, according to sub-builder General Dynamics Electric Boat Division. It will likely

cost up to \$40 billion just to buy the subs, and overall program costs could reach \$100 billion or more. Even for the Defense Department, that is real money — especially in these days of growing financial austerity within the Pentagon — and there is certain to be pressure on the Navy to keep a lid on costs for the new boomers.

One of the hints on just how the Navy might do that was dropped in a statement about granting earlier this month of the Pentagon's Milestone A authority. The service says, "The Ohio replacement will leverage the successful Virginia-class acquisition program." That particular line, analysts surmise, could well mean the Navy would entertain and perhaps even embrace a multiyear submarine construction contract proposal similar to the deal now being used for the Virginia attack boats. Indeed, the Navy and Pentagon might also be open to a teaming agreement similar to the one employed for the Virginia-class subs, where Electric Boat and Northrop Grumman's Newport News, Va., shipyards both build and assemble the Virginias.

That might not be such welcome news to Electric Boat, which designed and built the Ohio-class boomers and assumed it would be the favorite to get the replacement work. Still, another teaming agreement would be a pre-emptive strike on any protest should the Northrop Grumman team want the work and the Navy be forced to select one of the contractors.

The Navy also could do more than just leverage the Virginia-class teaming and multiyear agreements for its Ohio-class replacement subs. There are no subs in the world's oceans that operate more quietly than the Virginias, except for the costlier Sea Wolf-class attack boats. And when it comes to boomers, there are few priorities more important operationally than being quiet. These subs are meant to sit and wait, undetected, until the moment comes to fire their missiles.

Virginia-class attack boats are designed and built for other missions, but the subs can be designed to accommodate strategic Ohio-class replacement needs. And a modified Virginia-class vessel could be easier for the Pentagon and Congress to swallow for more multiyear construction agreements.

HMS Astute Support Systems Fail

Defencemanagement.com, Feb. 7, 2011

HMS Astute has suffered another setback during sea trials, with onboard system failures forcing the nuclear-powered submarine to return to port at Faslane.

Weapons support and sewage systems failed, with reports suggesting the latest issue left the 90-strong crew unable to use the submarine's onboard toilets.

The submarine may be forced to stay in Faslane for up to six weeks while the problems are rectified and systems repaired.

The sub had only recently returned to sea following repairs to damage caused when it ran aground during sea trials off the Isle of Skye last October.

Then-commander Andrew Coles was relieved of command following the incident.

A Ministry of Defence spokesman said: "Work is ongoing to fix the weapons support and sewage problems."

Unmanned Subs Making Waves In Undersea Warfare

By Seth Robson, Stars and Stripes, Feb 3, 2011

GRAFENWÖHR, Germany — Unmanned aircraft have been playing a major role in the wars in Iraq and Afghanistan for years. Now, the U.S. military is beginning to field unmanned submarines.

In a move that could dramatically cut the cost of undersea warfare, NATO is testing three Autonomous Undersea Vehicles, or AUVs, in the Mediterranean Sea this month as part of the alliance's largest annual anti-submarine warfare exercise.

The AUVs, dubbed "gliders," have much in common with their flying cousins, including wings, according to Michel Rixen, a scientist at the NATO Undersea Research Center in Italy.

"They are very similar vehicles although the dynamics are changed a little," Rixen said. "What is peculiar to the AUVs are buoyancy controls."

The battery-powered gliders, which are about 6 feet long and weigh up to 130 pounds, can be launched from shore or from a small rubber boat. They move through the sea at less than 2 mph, using a pump that inflates and deflates an internal bladder to change the vehicle's buoyancy in the same way a scuba diver might inflate a buoyancy jacket, he said.

"The changes in buoyancy require much less energy than a propeller," he said, allowing the vehicle to stay underwater longer than a propeller-driven AUV.

In 2009, a glider of the same type being used in this month's Proud Manta 11 NATO exercise completed a trans-Atlantic crossing that lasted 221 days.

The gliders will be at sea for three weeks during the exercise, traveling up to 300 miles collecting data on water salinity and temperature and relaying it to scientists on shore, Rixen said. The data is important because it allows sonar operators to calculate the speed of sound through the water — something that helps them detect enemy submarines, he said.

In the past, such data was collected by manned submarines or surface ships.

"We are demonstrating that military oceanography can be conducted from the office, piloting the gliders remotely instead of sending a big submarine (in the case of covert operations) to do a couple of temperature and salinity profiles in the ocean," he said.

The cost of sending a research ship to collect such data runs at \$25,000 a day or more, said engineer Richard Stoner of the research center.

The three gliders — which were manufactured by Teledyne Web of Falmouth, Mass. — participating in the exercise have been at sea collecting data since Jan. 24.

As Proud Manta kicks off in earnest on Friday with six submarines, 19 aircraft and eight surface ships from 10 nations participating, the gliders moved outside the exercise area east of Sicily, Rixen said.

“We want to be careful in this first contribution,” he said. “We don’t want to have a glider hitting a submarine or vice versa.”

The U.S. Navy has conducted similar exercises with gliders, said Tom Curtin, the research center’s chief scientist.

In fact, the Navy is gradually acquiring more than 100 gliders and fielding them to operational units through the Naval Oceanographic Office, he said.

Eventually AUVs are likely to be fielded with the same capabilities as large submarines, Rixen said. Weapons could also be added to the AUVs, something that has already happened with unmanned aircraft, he said.

“These are some of the aspects that we are considering,” he said. But he warned: “If these toys end up in bad hands that could play against us. Someone could potentially put [weapons] on them. That is something we need to be careful about.”

France Adds New Torpedo To Submarine Arsenal

By Christina Mackenzie, Aviation week, Feb 2, 2011

Torpedoes are potent weapons, if rarely used. Excluding the sinking of a South Korean ship last March by North Korea, the last torpedo used in combat was by the Royal Navy in the Falklands War, “and they used a torpedo from World War II,” says Marc Le Roy, director of BU ASM (Business Unit Armes Sous Marines), the underwater weapons business of French naval systems developer DCNS.

Nevertheless, France is investing in the development of a new generation of heavyweight torpedo, the F21, which will be the weapon of choice for its nuclear submarines over the next 30-40 years. “France is the latest country to develop a new heavyweight torpedo,” says Le Roy. Germany and the U.S., he adds, “have made incremental improvements to existing torpedoes, whereas with the F21 we are developing a completely up-to-date product.”

The F21 is scheduled to be operational in 2016. BU ASM plans to produce 100 of the torpedoes for the French navy’s Rubis-, Barracuda- and Le Terrible-class submarines. “Because these torpedoes are designed as part of the weapon system of nuclear submarines, they need to be extremely safe,” says Le Roy. There must be zero risk of an accidental launch or explosion. DCNS has developed an important component for safe deployment: an energy pack based on an aluminium/silver oxide electric battery that needs seawater for activation—an element unlikely to be found in the submarine.

To meet submarine safety requirements, the F21 will be launched by a technique in which it is pushed out of the boat by a piston, after which a valve in the torpedo opens and lets seawater into the battery to activate it. The battery “provides high energy density and is the best-performing [type] on the market.”

The battery is sufficiently compact that the overall length of the F21—6 meters (19.6-ft.) long with a 21-in. dia.—is compatible with legacy launchers. One problem with competitive torpedoes that are equipped with older-generation batteries is that to achieve the energy for their missions and countermeasures, they “need long batteries, which add so much to their length that they no longer fit into launchers,” Le Roy says. The torpedo must also have enough energy left once it has reached its target to attack and sink it. “We are talking about high-value targets such as aircraft carriers and frigates,” he adds.

This explains the importance of the primary battery as the energy source. The U.K., Russia, U.S. and Sweden have chosen thermal systems as their energy source. France specified this electric system “because it is safe and silent,” says Loic Beaufort, marketing and business development manager. “In underwater missions, silence is of the utmost importance to avoid detection by the enemy,” he remarks. “This system enables a totally silent attack.”

The F21 is digital and operates in depths of 15-500 meters, which means it can be used in littoral and blue-water operations. Beaufort says that in shallow waters there are “parasite” sounds that confuse torpedoes, which home in on targets acoustically. “We treat the sound signals digitally with the same up-to-date processing as in modern ship sonars, which enables us to largely overcome this difficulty.”

The new torpedo weighs 1.2 tons, has a range of 50 km. (31 mi.), speed of 50 kt., and 1-hr. endurance. It can attack multiple targets and has extended fiber-optic wire guidance. DCNS says it is resistant to most countermeasures.

The warhead contains PBX B2211, a high-impulse, high-bubble-energy, insensitive explosive that conforms to NATO’s Stanag 4439 and France’s Murat (Munitions a Risques Attenuées) standards. The torpedo uses an all-electric “fuse-and-slapper” detonation technology. Primarily used in missiles, the plasma-based slapper system is more stable and safer than the conventional electro-mechanical detonation systems in most torpedoes.

The torpedo configuration can be changed from a weapon to a training device, Beaufort says. “We just put an exercise section on it instead of an explosive one. We can also change the primary battery, providing it with a secondary battery based on lithium-ion technology, which is reusable a great number of times.”

Russia’s 2nd Graney Class Nuclear Sub To Enter Service In 2015

RIA Novosti, February 2

MOSCOW - The Russian Navy will receive a second Graney class nuclear-powered multipurpose attack submarine in 2015, a spokesman for the Malakhit design bureau said.

The construction of the Kazan submarine at the Sevmash Shipyard in the northern Russian city of Severodvinsk began in 2010. The first vessel of the Graney class, the Severodvinsk submarine, will enter service by the end of 2011.

“The hull of the Kazan sub has been built, but we still have to make many upgrades compared with the first vessel in the series. We are planning to deliver the submarine to the Navy in 2015,” the official told RIA Novosti on Tuesday.

The Kazan will feature more advanced equipment and weaponry than the Severodvinsk, which has been under construction since 1993.

Graney class nuclear submarines are designed to launch a variety of long-range cruise missiles (up to 3,100 miles or 5,000 km), with conventional or nuclear warheads, and effectively engage submarines, surface warships and land-based targets.

The submarine’s armament includes 24 cruise missiles and eight torpedo launchers, as well as mines and anti-ship missiles.

Next Bulava Launch Scheduled for Summer

Global Security Newswire, Jan. 27, 2011

Concerns about the safety of a Russian submarine prompted Moscow to delay until summer the 15th test flight of its experimental Bulava submarine-launched ballistic missile, the Xinhua News Agency reported (see GSN, Dec. 16, 2010).

“The launch was supposed to be done in December last year, but heavy ice in the White Sea would make it unsafe. The launch will be conducted in this summer,” Interfax quoted missile designer Yuri Solomonov as saying.

The Bulava is designed to carry up to 10 nuclear warheads as far as 5,000 miles. Seven of the missile’s 14 trial launches to date have been successes, including a pair of tests conducted in October.

Advancements gained in the Bulava missile’s development has benefited work on land-based strategic delivery systems, the expert said.

“Approximately half of what was realized in the Bulava was applied to the RS-24 Yars missile as well,” according to Solomonov.

Still, the Bulava missile’s current design is not suitable for deployment on land, he said.

“It would be nonsense to say that the Bulava could be used by ground-based systems in its present form. No one is speaking about such an option,” Solomonov said.

Russia would keep the land-based Topol-M missile on active duty for 20 years or longer, he said, adding the Defense Ministry would produce analyses necessary for the weapon’s life extension (Xinhua News Agency, Jan. 27).

Taiwan Goes To Sea In Steel Coffins

By Jens Kastner, Asia Times, Jan 28, 2011

TAIPEI - To score against his domestic political opponents, gain leverage in negotiations with Beijing, and assure Washington that his country remains committed to defending itself, Taiwan’s President Ma Ying-jeou presents himself as a commander-in-chief who insists on a military with the highest standards.

Yet despite the appeal Ma’s style has to the general audience, a glimpse behind the scenes of Taiwan military affairs sometimes reveals neglect that on the daily basis puts Taiwanese

Built in the World-War-II era, they are the oldest serving submarines of any navy on the planet, and unsurprisingly, they are beginning to fall apart. While Ma’s Kuomintang (KMT) government wastes its breath by persistently requesting the fanciest weapons the US has on offer, the clock ticks. The more often the age-old Guppies leave their port, the likelier is the day they will become steel coffins for their crews. Their deaths - or indeed even more so their rescue - could then well bring about weighty repercussions for Taiwan’s political fate. ell bring about weighty repercussions for Taiwan’s political fate.

While China’s People’s Liberation Army Navy (PLAN) has roughly 60 submarines under its command, Taiwan’s navy has four.

Although the administration of former US president George W. Bush in 2001 announced an arms-sales package that included eight boats, procurement has proved difficult as the US ceased building diesel subs in the 1950s, and the remaining manufacturing countries have little interest in putting their lucrative relations with Beijing into jeopardy for coming to Taiwan’s aid.

The US at one stage offered to arrange the procurement of fairly priced vessels decommissioned by the Italian Navy, but Taiwan somewhat stubbornly insisted on new ones. Moreover, a program to locally build submarines has so far been unable to get the support of Taiwan’s Ministry of National Defense (MND). But nonetheless, what has been by far the biggest factor keeping Taiwan from obtaining decent submarines is a lack of consensus among the island’s notoriously feuding political parties. And while those bicker, the state of the subs the Taiwan Navy operates has become severe.

Two of the Taiwanese subs are Dutch-built, modified Zwaardvis-class attack submarines, each accounting for 25 years of service. The other two boats are US-built Guppies, the oldest operational submarines in the world. Just how spine-chillingly antiquated these subs are is illustrated by the story of their development. The US Navy obtained the Guppy technology by testing and reverse engineering captured Nazi U-boats. This is the state of technology that Taiwan still sends to plough the seas in 2010.

Neither the Sea Lion nor the Seal - as the Taiwanese Guppies are named - are equipped with torpedoes, as the boats are used exclusively for training. During naval exercises, the Guppies are assigned to simulate PLAN subs, allowing surface ships to practice

anti-submarine warfare (ASW) techniques. After an overhaul in the early 1960s, the boats could dive to 125 meters, yet by the late 1990s, a commander wouldn't have dared to exceed a depth of 60 meters. Now, because of the growing fear of accidents, the Guppies stay on the ocean's surface as much as they can.

So must Taiwan's navy really resort to submarines of such a biblical age for its ASW drills? Apparently, it must.

"A simulator can be used as an alternative. But training in a real environment is also necessary", says Arthur Ding, a cross-strait military-affairs expert at Taipei's National Chengchi University.

It is hard to imagine how sailors who grew up with mobile phones and game consoles would feel in a submarine welded together in the 1940s. However, Wang Jhy-perng, a military analyst with the Association for Managing Defense and Strategies and a former officer on Taiwanese submarines, can tell a thing or two about it.

Out of his nine years on board Taiwanese subs, Wang served as an officer for about a year each on the Guppy-class Sea Lion and Seal. In an interview with Asia Times Online, he recalls that although the crew members always did their best to keep the Guppies neat and clean, the conditions on the boats were light years from those of modern subs. Wang describes the mechanical noise at any given time in the vessels as deafening, but what was all but unbearable was the air quality. "Needless to say it is loud, but the lack of air purification systems was simply outrageous", Wang says.

On a more upbeat note, Wang tells of the usual reaction of visiting active-duty personnel of the US Navy. "The Americans were very keen on taking a Guppy out to the sea because they could only see these old vessels in their favorite Hollywood movies."

Reportedly, veteran US navy sailors who once served upon the two Guppies have long been trying to persuade Taiwan to return the submarines to the US for display in a museum.

Apart from these anecdotes, however, to the submarine crews, the daily routine is rather grim, and this not only because the average monthly salary of those on board is as low as US\$1,100. "As the Taiwanese subs are constantly involved in drills, they often spend as much as 27 days per month at sea", Wang laments. "This brings about a lot of physical and mental stress for the sailors."

Every time the two Guppies leave Kaohsiung's Tsuoying naval base, which is their mother port and the Taiwan's naval headquarters, both Naval Command and Fleet Command bite their nails as the crew of 80 - in addition to 20-odd sailors who are normally on board for training - take on significant risks. For someone like Wang who has served on the vessels, it is just too easy to imagine how accidents could come about. He describes the scene as vividly as if he has lived it in nightmares. "On a dive, the crew could notice the vessel gaining depth faster than it should. As soon as one of the old welding seams cracks open due to outside pressure, sea water rushes in like a sword."

Wang further expounds that by the time the vessel reaches a depth of 20 meters, it could well tilt, and the mobility of its control fins could become suppressed. In theory, the crew could close off the compartment where the leak occurred, as the boat is divided into nine of them. But after decades of service, the Guppies' hulls have become fragile and are covered with multiple deformations, so this could prove a difficult task in an emergency.

"Then, the communication systems would fail, and all the crew could do is grab metal tools to bang on the hull," Wang adds.

The peacetime death of a crew of a hundred healthy young men will have a deep impact on any nation - on the military, the political landscape and society as a whole. Psychologically, a submarine accident affects a people more than the crash of an airplane because the thought of having so many die a slow, grisly and - seemingly until the last minute - still avoidable death on the ocean floor while their families pray at the pier is hard to bear, even to those who are not related to the victims.

If one day Tsuoying naval base was to lose contact with a Guppy, the navy command would almost immediately turn to the US for help. However, the US Deep Submergence Rescue Vehicle (DSRV) and Submarine Rescue Chambers (SRC) are likely to be located at San Diego, California, a long way from the waters off Taiwan. "A C-5 transport aircraft could fly the DSRV; that would take at least 50 hours", estimates Wang. "The support ship, however, would likely need 11 days to make it".

By that time, Wang says, domestic and international TV crews would have long set up station at Tsuoying. China's Taiwan Affairs Office spokesman would have held a press conference in far away Beijing, offering the dispatch of two PLAN submarine-rescue ships, which could be on the scene shortly after what China calls "their Taiwanese compatriots" requested help.

When the island's TV screens are bombarded by news coverage with computer-generated animations depicting the men on Taiwan's Guppies banging the hull in two hundred meters of water, and footage showing their wives and children weeping in despair on the shore, the question of how President Ma could politically afford to refuse Beijing's offer would be a rhetorical one. So would the question of whether a rescue by the PLAN would have a significant impact on how the Taiwanese see the KMT's Beijing-friendly policies.

Naval Divers' New Feat

'Aquanauts' on board INS Nireekshak better 2007 record

Thehindu.com, Feb 16, 2011

A group of naval divers on board INS Nireekshak, the Navy's only diving support and submarine rescue vessel, set a new national record last week by diving to a depth of 233 metres in the seas off Kochi coast, bettering a record of 218 metres attained by Navy divers in March 2007.

While Lieutenant Commander Abhijit Sangle and Chief Petty Officers (CPO) K.K. Singh and Shriom Singh 'locked out' in the submersible diving capsule — the bell in diving parlance — to execute the deepest dive on February 7, Leading Seamen Clearance

Divers M.K. Prusty and Narender Kumar partnered in the mission by exposing themselves to the depth conditions in the ship's Deck Decompression Chambers (DDC), an essential instrument of saturation diving.

'Want to see the sky'

"We just want to see the sky," said the divers with an unmistakable nasal twang — brought about by strained vocal chords due to enduring stay under pressure — as they emerged from a claustrophobia-inducing DDC on Wednesday after vegetating in it for about 13 days, the time taken to decompress the chamber back to atmospheric pressure.

They looked scruffy and hassled, but a steely resolve to conquer greater depths gleamed in their eyes. "I have done over a dozen dives, big and small, but will love to do it all over again," said Lt. Cdr. Sangle.

For CPO K.K Singh, the latest feat was a race against himself. He was part of the team that dived down to 218 metres.

"As you dive deeper, water pressure increases by one atmosphere [1kg/sq cm] every 10 metres of descent, causing 'decompression sickness' and nitrogen narcosis. Breathing air under pressure forces nitrogen into blood and body tissues. On ascent to the surface, the pressure is released and nitrogen returns to a gaseous state forming bubbles throughout the body causing paralysis or death. Saturation diving, conducted using a host of modern scientific devices, helps overcome these issues," explained Commander A.P. Golaya, Commanding Officer of the Southern Naval Command-based INS Nireekshak.

Saturation divers — often called 'aquanauts' — of the Navy deliver the goods under tremendous pressure, literally and figuratively. Prior to a mission, they are pressurised to the required depth in the on-board DDC till their bodies are saturated with specially prepared breathing gas, a mix of helium and oxygen.

The bell, brought to the same pressure, is then mated to the DDC and the divers move into the same, which is then lowered through a 'moon pool' up to the desired depth to enable one or two divers to swim out to accomplish the task.

Two-way communication

An umbilical chord coupled to the bell supplies breathing gas and hot water to keep the divers warm at such depths. The chord also provides for two-way communication.

"On completion of a task, the divers re-enter the bell, close the hatch and return to the support ship under the same pressure. This procedure is repeated until the task is achieved. Later, the DDC is gradually restored to normal pressure over several days as needed, as the divers continue to remain inside," said Commander Golaya.

INS Nireekshak, a 3,600-tonne ship that was commissioned into the Navy in 1995, is capable of diving up to 300 metres.

The vessel is retrofitted with a Dynamic Positioning System which helps it maintain position over the location of dive; a submarine rescue bell; two DDCs; and associated systems.

The ship has salvaged many historical wrecks. Manned by a complement of 120 personnel including 30 divers, it took part in the latest edition of the India-U.S. salvage exercise 'SALVEX-2010' off Port Blair earlier this year.

General Dynamics Awarded \$60 Million To Produce More Affordable Virginia-Class Submarines

PR Newswire, Feb. 11, 2011

General Dynamics Electric Boat has been awarded a \$60 million U.S. Navy contract modification that funds continued design efforts to make Virginia-class submarines more affordable. Electric Boat is a wholly owned subsidiary of General Dynamics (NYSE: GD).

Initially awarded in 2008, the overall contract – known as Block III – calls for the procurement of eight submarines through FY 13, and has a potential value of \$14 billion. The last Block III ship is scheduled for delivery in 2019.

Under the terms of the modification, Electric Boat will continue to develop and implement cost-reduction design changes, an effort called Design For Affordability (DFA). This work will enable the Virginia-class program to reduce acquisition costs by 20 percent in time for the FY 12 submarines.

The most significant design change implemented in Block III is the modification of the submarine's bow, replacing the sonar sphere with a large aperture bow array and the 12 vertical-launch missile tubes with two Virginia Payload Tubes, each carrying six missiles. This redesign will save more than \$40 million per ship, beginning with the submarine North Dakota (SSN-784).

The DFA effort is supported by Electric Boat's engineering and design organization, which comprises more than 3,000 employees. Possessing proven technical capabilities, these employees are engaged in all facets of the submarine life cycle from concept formulation and design through construction, maintenance and modernization, and eventually to inactivation and disposal.