

YourNavy

What sank the Thresher

All 129 men died aboard the submarine 50 years ago

By Bruce Rule and Norman Polmar

Beginning with the pioneer nuclear-propelled submarine Nautilus, which went to sea in January 1955, the Navy has built 200 nuclear submarines of all types. These undersea craft have been manned by several hundred thousand sailors and have traveled more than a hundred million miles.

They have demonstrated that nuclear propulsion is safe, efficient and of tremendous value for undersea craft. However, there

[ANALYSIS]

have been several accidents and collisions, none involving nuclear issues, and two U.S. nuclear submarines have been lost — the attack submarines Thresher in 1963 and Scorpion in 1968.

The Thresher, which sank 50 years ago, on April 10, 1963, with the loss of all 129 men on board, remains the world's worst submarine disaster in terms of lives lost. And, her loss remains controversial, a half-century later.

The Thresher had departed Portsmouth Naval Shipyard in Maine, where she was constructed from 1958 to 1961, for post-overhaul trials April 9, 1963. On board under Lt. Cmdr. John Harvey was a ship's company of 108 men and, for the sea trials, four additional Navy officers and 17 civilians. The submarine was accompanied by the submarine rescue ship Skylark, which carried a McCann submarine rescue chamber. That device — with divers assisting — could rescue a submarine's crew down to a depth of 850 feet in the event of a disaster. It was the Navy's only submarine rescue system.

The Thresher's test depth was some 1,300 feet with a predicted "collapse" depth of about 1,950 feet.

After diving trials April 9, which were accomplished without signifi-



The Thresher, top right, sank on April 10, 1963. All 129 men on board were killed, and it remains the world's worst submarine disaster. Top left, a view of the sonar dome wreckage and above, a view of the sub's upper rudder.

cant problems, the Thresher and Skylark moved into deep water for the submarine to dive to her test depth. According to her first commanding officer, Rear Adm. Dean Axene, the Thresher had been to her test depth about 40 times before entering the Portsmouth shipyard. The submarine and surface escort could communicate via the UQC, a kind of underwater radio. Its clarity and reliability were poor.

As the Thresher approached her

test depth early April 10, the Skylark received several messages from the submarine: Garbled, they were remembered by Skylark's commanding officer, Lt. Cmdr. Stanley Hecker. They included these words: "Experiencing minor difficulty. ... Have positive angle. ... Attempting to blow. ... Will keep you informed." At some point the number "900" appears to also have been transmitted. Then nothing. The Navy's most advanced submarine was

gone — the world's first nuclear submarine to be lost.

With the submarine's loss established, and the knowledge that there were no survivors, the Navy set up a court of inquiry in Kittery, Maine, where the Thresher had been constructed. After lengthy and exacting hearings of witnesses, and examination of documents and exhibits, the court of inquiry concluded that a flooding casualty in the engine room was the most probable cause of

ABOUT THE WRITERS

■ Bruce Rule in April 1963 was the analysis officer at the Navy's seafloor sound surveillance system evaluation center in the Atlantic Fleet compound in Norfolk, Va., where he analyzed the acoustic events related to the loss of the Thresher. He subsequently testified before the Thresher court of inquiry. Rule then served as the lead acoustic analyst in the Office of Naval Intelligence for 42 years, retiring in 1992, and was a scientific and technical consultant to ONI from 1996 to 2007.

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the Thresher's sinking and that it was most likely that a piping system failure had occurred in one of the saltwater systems, probably in the engine room. It was also concluded that in all probability water affected electrical circuits and caused a loss of power.

Obviously, the use of such terms as "most probable," "most likely," and "all probability" indicated that the exact cause of the disaster was unknown.

Perpetuating a theory

Still, almost a half-century later, the head of the Navy's nuclear propulsion program, Adm. Kirkland Donald, in discussing lessons from "unique and tragic events to remind all of us how our program's fundamental principles keep us successful," perpetuated this theory of a piping failure. The now-retired admiral stated:

"The most likely cause of the [Thresher] accident was the failure of a silver-braze joint in a seawater piping while operating at or near test depth which allowed high pressure seawater spray to short out the electrical equipment and led to a reactor scram [shutdown]."

Yet, back in 1963, none other than Vice Adm. H.G. Rickover, at