

SECTION XII

U.S.S. GRAMPUS (SS207)

Gunfire Damage

Off Truk
17 May 1942

Class.....SS198
Builder Electric Boat Co., Groton, Conn.
Commissioned..... 23 May 1941
Length (Overall) 307 ft. 2 in.
Beam (Extreme) 27 ft 3 in.
Submergence Depth (Designed Maximum)(Axis)..... 250 ft.
Displacements
 Standard 1475 tons
 Emergency Diving Trim..... 1990 tons
 Submerged..... 2359 tons
Draft (Mean, Emergency Diving Trim)..... 16 ft. 9 in.
Type of Propulsion Diesel Electric Reduction Drive
Main Engines (4) General Motors 16-248
Main Motors (4) and Generators (4)..... General Electric Co.

References:

- (a) C.O. GRAMPUS conf. ltr. A16-3/SS207, Serial No. 04 of 17 June 1942 (Report of War Patrol Number Two).
- (b) C.O. GRAMPUS conf. ltr. L11-1/SS207, Serial No. 05 of 30 June 1942 (Report of War Damage).

Photographs Nos. 12-1 through 12-3 (furnished by C.O. GRAMPUS),

12-1. On the night of 17 May 1942, while conducting a surface patrol off Truk during her second war patrol, GRAMPUS was detected by a Japanese patrol vessel and forced to make a quick dive. While passing 30 foot depth, one shell, believed to have been a 3-inch or 4.7-inch common projectile, struck the starboard bulwark of the cigarette deck and detonated approximately three feet beyond its point of impact about two feet above the cigarette deck over the main engine air induction trunk. While no damage of a serious or military nature was caused, and GRAMPUS experienced no difficulty in subsequently evading the enemy, the action has been included in this report to illustrate the shrapnel effect of medium caliber projectiles and the obvious vulnerability of submarines to such attacks. While other U. S. submarines have been more heavily damaged by gunfire attack, this experience of GRAMPUS was chosen since it is the only such action in which photographs of the damage were available to the Bureau.

12-2. The damage report, reference (b), submitted by the Commanding Officer while the ship was undergoing repairs by OTUS (Ex-AS20) at Fremantle, W.A., is clear and comprehensive, and is therefore reproduced below in lieu of the usual narrative.

Fleet Post Office
San Francisco, California
30 June 1942

From: The Commanding Officer
To: The Chief of the Bureau of Ships

Subject: War Damage Inflicted upon U.S.S. GRAMPUS, Report of.

Reference: (a) BuShips ltr. C-FS/L11-1(374); C-EN28/A2-11 of April 17 1942.

Enclosure: (A) Photographs of subject damage.

1. At 1906 (ZT) on May 17, 1942, the U.S.S. GRAMPUS surfaced on course 270° T., about twenty miles North West of the North pass to Truk Island in approximate Latitude 08°-02'-00" North and Longitude 151°-30'-00" East. This vessel had been conducting submerged patrol in assigned area. There was a moderate sea from the North East with a surface wind of about eight knots, estimated visibility 4,000 yards. At 1910 sighted a light astern that appeared to be a flash of a searchlight. At 1912 changed course to 340° T., and headed away. At 1917 echo ranging was heard on bearing 270° relative. Nothing sighted upon careful observation. At 1927 changed course to 000° T., and went to standard speed on two engines. At 1941 slowed to listen with sound gear. At 1947 simultaneously sighted and picked up with sound a vessel approximately 1500 yards on the starboard beam identified as a Japanese patrol vessel of about 500 tons. Immediately thereafter, the patrol vessel illuminated with its searchlight. The bridge was cleared and a quick dive was made to escape. At

1949 while at 30 foot depth, a sharp crack was felt in the vicinity of the bridge. The ship was checked quickly for leaks but no flooding was detected. The ship was ordered to run silently at deep submergence. At 1952 upon reaching 100 foot depth, the explosions of three depth charges were felt which were evidently close by. Between 2001 and 2005 eight depth charges were felt and screws and echo ranging heard on sound gear from three different sources. At 2044 one explosion was heard at a long range. Shortly afterwards lost contact with enemy. At 2125 surfaced on course 320° T.

2. A survey of the ship revealed that the following damage had been sustained: (1) Large shell hole approximately 4 feet in diameter in the starboard bulkhead of the cigarette deck. (2) Wooden gratings on cigarette deck splintered. (3) Cigarette deck above engine induction dished in and riddled with shrapnel holes. (4) .50 caliber machine gun mount blown off its foundation and a number of shrapnel holes in the mount. (5) Shrapnel hole about 1/2" in diameter in R.D.F. antenna loop shafting. (6) Port bulkhead and bridge structure including shelter space riddled with shrapnel leaving holes in plating varying from 3 inches in diameter to 1/4" in diameter. (7) Both after radio antennae carried away. None of the damage suffered was of a serious or military nature.

3. The best estimate of the size of the projectile used was of about 4.7" in diameter. It was evidently a high explosive shell with an instantaneous fuze. The shell pierced the bulkhead and exploded approximately three feet beyond its point of impact just above the engine induction. The fragmentation was small with a wide dispersion. The heaviest plating penetrated by the projectile and the shrapnel was 5 pound galvanized iron plate.

4. The damage was repaired by the repair force of the U.S.S. OTUS at Fremantle, W.A.

E. S. HUTCHINSON

Copies to:
COMINCH
BUORD

12-3. The damage to GRAMPUS as the result of this attack was superficial (Photos 12-1, 12-2 and 12-3) and she remained on patrol in the TRUK area until 5 June, when she departed for Fremantle, W.A., arriving on 17 June. The nature of the damage indicates that a 3 or 4.7-inch common projectile was employed. The larger Japanese anti-submarine vessels, such as frigates and large gunboats, usually were provided with one or more 12 cm./45 caliber guns(4.7-inch) with common projectiles having bursting charges ranging from 4 to 7 pounds of TNT or picric acid. Smaller anti-submarine vessels, such as the PC-13 Class, usually mounted one 8 cm./40 caliber gun (3-inch) with common projectiles having bursting charges ranging from 1 to 1.5 pounds of TNT or picric acid. Special flat-nosed anti-ricochet projectiles were frequently used by the Japanese for anti-submarine work.

~~CONFIDENTIAL~~

12-4. Had the projectile struck a foot or so lower, or had GRAMPUS been a second or two slower in diving, serious damage would have resulted.

12-5. For other cases of gunfire damage to U.S. submarines, attention of the reader is invited to the following briefs of damage in Appendix I: SWORDFISH (SS193), 7 February 1943; SKATE (SS305), 6 October 1943; NAUTILUS (SS168), 19 November 1943; BOWFIN (SS287), 28 November 1943; ROCK (SS274), 29 February 1944; RONQUIL (SS396), 17 November 1944; BERGALL (SS320), 13 December 1944; POGY (SS266) 19 April 1945; MUSKALLUNGE (SS262), 8 August 1945.