

MARINE ACCIDENT REPORT

COLLISION SS ARIZONA (U. S. REGISTRY)
AND MV MEIKO MARU (JAPANESE REGISTRY)
WITH LOSS OF LIFE
August 2, 1965

RELEASED: January 31, 1968

NATIONAL TRANSPORTATION SAFETY BOARD

Department of Transportation

Washington, D. C. 20591

NATIONAL TRANSPORTATION SAFETY BOARD
Department of Transportation

MARINE ACCIDENT REPORT

Adopted: December 29, 1967

Released: January 31, 1968

COLLISION SS ARIZONA (U.S. REGISTRY)
AND MV MEIKO MARU (JAPANESE REGISTRY)
WITH LOSS OF LIFE
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ACTION BY NATIONAL TRANSPORTATION SAFETY BOARD

This accident was investigated by the United States Coast Guard under the authority of R. S. 4450 (46 USC 239) and the regulations prescribed by 46 CFR 136. The Marine Board of Investigation was conducted in a public proceeding in Portland, Oregon, beginning 27 September 1965. The Board also reviewed and entered into the record exhibits from a Maritime Accident Inquiry Court convened at Yokohama, Japan, on 19 May 1966. No representatives of the Coast Guard participated in the proceedings of the Japanese Maritime Accident Inquiry Court.

The Coast Guard report of the investigation of the accident and the Commandant's action thereon is included in and made a part of this report for the convenience of the public. By publication of this report, the National Transportation Safety Board does not adopt portions of the Coast Guard report which are concerned with activities within the exclusive jurisdiction of the Department of Transportation and the Coast Guard.

The Department of Transportation Act, effective April 1, 1967, assigned the responsibility to the National Transportation Safety Board for determining the cause of transportation accidents, and reporting the facts, conditions, and circumstances related to such accidents. Accordingly, the Board has considered those facts in the Coast Guard report of this accident investigation pertinent to its statutory responsibility to make a determination of cause.

The National Transportation Safety Board finds that the cause of the accident was excessive speed used by the master of the SS ARIZONA and the immoderate speed used by the master of the MEIKO MARU.

Neither master slowed his vessel to a moderate speed under conditions of dense fog and the darkness of night in a heavily trafficked area, and neither stopped and navigated with caution when the fog signal of another vessel was reported forward of the beam and the position not ascertained.

The masters of both vessels were navigating by radar to the exclusion of the Rules of the Road and the requirements of good seamanship. Neither was properly utilizing the radar to best advantage by plotting the relative motion of the targets. Radar properly used as an aid can contribute greatly to safe navigation.

However, as illustrated so dynamically in this accident, failure to employ radar properly can lead to disaster.

The Safety Board further concludes that the master of the SS ARIZONA had ample reasons to believe that the collision was with another vessel and that his failure to initiate an immediate search for survivors, in accordance with the traditions of the sea, may have caused the death, by drowning, of possible survivors.

BY THE NATIONAL TRANSPORTATION SAFETY BOARD:

Joseph J. O'Connell, Jr. 12/29/67 2:00 p.m.
Joseph J. O'Connell, Jr. Date Time
Chairman

Oscar M. Laurel 12/29/67 1:55 p.m.
Oscar M. Laurel Date Time
Member

John H. Reed 12/29/67 1:50 p.m.
John H. Reed Date Time
Member

Louis M. Thayer 12/29/67 3:00 p.m.
Louis M. Thayer Date Time
Member

Francis H. McAdams 12/29/67 1:50 p.m.
Francis H. McAdams Date Time
Member



DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

Address reply to:
COMMANDANT (MVI-3)
U.S. COAST GUARD
WASHINGTON, D.C.
20591

5943/ARIZONA -
MEIKO MARU
A-13 Bd
21 NOV 1967

Commandant's Action

on

The Marine Board of Investigation convened to investigate the collision of the SS ARIZONA and Japanese M/V MEIKO MARU on 2 August 1965 with loss of life

The record of the Marine Board of Investigation convened to investigate subject casualty has been reviewed and the record, including the Findings of Fact, Conclusions and Recommendations, is approved subject to the final determination of the cause of the casualty by the National Transportation Safety Board and the following comments.

1. Reliance upon radar in periods of reduced visibility in areas of heavy traffic to the exclusion of the statutory Rules of the Road and the Radar Annex to those Rules cannot be condoned.
2. The recommendations in the Radar Annex clearly caution the prudent mariner that the statutory requirement for proceeding at a moderate speed may mean that where there are "radar indications of one or more vessels in the vicinity, 'moderate speed' should be slower than a mariner without radar might consider moderate under the circumstances."

REMARKS

1. The mariner who fails to properly utilize radar can expect to be held accountable for this failure in the same manner as for any other neglect or disregard of the requirements of good seamanship. This proper utilization may in certain instances call for plotting targets, analyzing the information and taking prompt, early and positive action as recommended in the Radar Annex to the International Rules of the Road.

W. J. SMITH
Admiral, U. S. Coast Guard
Commandant



TREASURY DEPARTMENT
UNITED STATES COAST GUARD

Address reply to:
Officer in Charge,
Marine Inspection
618 Second Avenue
Seattle, Washington 98104

5943/142-65
9 January 1967

From: Marine Board of Investigation
To: Commandant (MVI)

Subj: SS ARIZONA, O.N. 266534; collision on 2 August 1965
with the M/V MEIKO MARU, O.N. 86824, with loss of life

FINDINGS OF FACT

1. At approximately 0209, 2 August 1965, the SS ARIZONA, O.N. 266534 outbound from Yokohama, Japan, on the high seas and in an approximate position; Lat 34°43.5'N, Long 139°13.8'E collided with a then unidentified vessel incurring structural damage to her stem and forebody estimated to amount to \$173,167.00. At approximately the same time and in the same vicinity, the Japanese M/S MEIKO MARU bound from Yokkaichi to Chiba, Japan, was in collision with a then unidentified vessel which sheared off and sank the stern section and capsized the forebody of the MEIKO MARU, resulting in one surviving, injured, crewmember and apparent loss of lives of the remaining 18 crewmembers of the MEIKO MARU.

2. Vessel data:

Name:	ARIZONA	MEIKO MARU
Official Number:	266534	86824
Nationality:	U. S.	Japan
Trade:	Mariner type ocean cargo	Coastal bulk tankship
Gross Tons:	12,711	995
Net Tons:	7564	
Length:	563.6'	68.38 meters
Breadth:	76.3'	10.2 meters
Draft: (Approx)	24'05 Fwd, 28'08 Aft	
Propulsion:	Geared turbine	Diesel
Horsepower:	17,500	1,150
Home Port:	San Francisco, Cal.	Yokohama, Japan
Built:	1953	1961
Owners/Operators:	States SS Corp. San Francisco, Cal.	Meiwa Kaiun Kabushiki Kaisha, Yokohama, Japan
Last Inspection:	22 January 1965 Portland, Oregon	Unknown
Master:	H. G. SORENSEN	Hiromitsu SAKACHI



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Marine Board of Investigation ltr 5943/142-65 of 9 January 1967

3. Sueyoshi MACHIDA, 1770 Naneki-cho, Set agaya-Ku othyo, Japanese citizen, age 43, the Second Mate and deck officer on watch aboard the MEIKO MARU is the sole known survivor, and was injured. Exhibit 9 lists the identity of the remaining 18 crewmembers who are either dead or missing and presumed to be dead. There were no injuries to crewmembers of the SS ARIZONA.

4. The weather at the time of the casualty was described as smooth sea, light airs and a dark night. Visibility was poor because of fog and had been getting worse. Estimates of visibility ranges from zero at the time of collision to several hundred yards at times prior to collision. Official Japanese weather bureau reports, Exhibit 59, indicate dense fog for the period. Tide tables, Yokohama Reference Station, indicate low slack water at 0157 LZT. The tide was flooding at the time of the collision. H.O. 95 Sailing Directions for Japan, Vol. II, states that at time of flood, current sets WSW, dominating the opposing ocean current of one knot average for August. The force of the WSW current is not stated.

5. The ARIZONA was equipped with a Raytheon Mariner Pathfinder Radar having a 16" scope with range scales of 1 mile, 2 miles, 8 miles, 20 miles and 40 miles. This radar has a gyro repeater bearing circle for true bearings and relative motion. The chassis is fitted with a collapsible canvas blackout hood and is located to starboard and slightly abaft the steering stand in the wheelhouse. Captain Henry SORENSEN was the sole operator of the radar and was stationed at the set during the greater part of the period leading up to and surrounding the collision. No graphical plot of targets was being made. The radar was reported in excellent operating condition.

The MS MEIKO MARU was equipped with a Japanese radar having an estimated 10 inch scope, equipped with range scales of 1 mile, 3 miles, 15 miles and 30 miles, a fixed relative bearing circle and movable bearing cursor for relative motion presentation. At times leading up to and surrounding the collision, Captain Hiromitsu SAKACHI was the sole operator of the radar, which at collision was set on the three mile scale (photograph 9, Exhibit 60).

6. The SS ARIZONA departed from the port of Yokohama, Japan at 2242 LZT. A Japanese pilot was employed leaving the harbor area. He departed from the vessel at 2326 LZT. The vessel's sailing draft was logged as 28'04" aft and 25'04" forward. The midnight weather log entries indicate visibility was eight miles with a calm sea. Under "Course" the bridge logbook indicates "master conning." At 2400 LZT, departure was taken from Kannon Saki Light bearing 324° True, with a radar range

of two miles. At this time the engines were placed on full ahead with an engine speed referred to as "14 nozzles." The Third Mate, Jack C. DAVIS, relieved the watch at approximately midnight. Numerous small fishing vessels were observed during this watch. Lights ashore were visible during the watch and the shoreline was clearly discernible by the master on radar. At 0032 LYT the vessel's speed was increased from 14 nozzles to 18 nozzles and at 0033 LYT Captain SORENSEN fixed the vessel position by radar range as approximately 4 miles off Joga Shima Light. Prior to this SORENSEN had observed by radar that a large ship was approximately 1500 feet abaft of the ARIZONA's starboard beam. The ARIZONA at this time was on course 230° True. Approximately ten minutes later, SORENSEN estimated by radar observation that this large vessel was a mile away and proceeding in the same direction. Sometime during the next hour SORENSEN hauled the ARIZONA's course slightly left to 220° True, as the large vessel on the starboard side seemed to be on a slightly converging course and was gradually overtaking the ARIZONA.

7. The bow lookout, Henry HAHN, Z-222061, reported a navigation light visible on the port bow, which the master identified as Oshima Light. By radar it was determined to be five miles away. At 0147 LYT this same light was abeam to port 115° visually, at a radar range of 4.0 miles. The course made good from the departure fix at 0033 LYT to the 0147 LYT was 228°. The speed was 17.9 knots.

8. Testimony from witnesses indicates that at this time visibility was closing in, particularly on the port side. One witness described it as "patches of fog." Fog signals were being sounded every two minutes by the ARIZONA using the automatic timer.

9. Captain SORENSEN stated that at 0148 LYT he again ordered a change of course to the left at 210° True, to avoid the overtaking ship on his starboard beam. The gyro course recorder trace does not bear out this statement, as 220° is the recorded base course. SORENSEN continued to conn his vessel by radar navigation. Except for momentary switching to 1 mile, 2 miles, and 20 mile scales, the radar was left on the 8 mile scale according to SORENSEN and was on the 8 mile scale at collision. The mate on watch acted as a lookout and handled the various administrative duties on the bridge. Captain SORENSEN occasionally left the radar scope to make whatever visual or audio observations that were possible.

10. At 0209 LYT, while the ARIZONA was proceeding at over 17 knots on a course of 220° True, a collision occurred. Captain SORENSEN rang full astern and after satisfying himself that

way was off the vessel he rang stop and sounded the general alarm. The noise and force of the collision was not great and opinion on the bridge was that they might have collided with one of the many small wooden fishing vessels that frequented the area. This opinion was partially based on the alleged lack of any nearby radar targets ahead of the ARIZONA.

11. The position of the ARIZONA was fixed by radar at 0220 as Latitude 34°43.5'N, Longitude 139°13.8'E. By comparison of this position with his recollection of the radar picture at the time of collision, SORENSEN believed that the vessel's position had not substantially changed since collision.

H. G. SORENSEN stated that at no time did he observe on radar a pip indicating the other vessel with which the ARIZONA collided, either before, at the time of collision or subsequently.

12. The lookout, Henry HAHN, Z-222061, stationed on the fore'st'le head heard a whistle signal estimated at approximately two points quite a distance off the starboard bow. He did not note the time but estimates it to have been around 0130 LZT. He immediately reported the signal to the bridge by telephone and it was acknowledged by Captain SORENSEN and interpreted by radar as being an overtaking vessel approximately one mile on his starboard beam. No other fog signals were heard and no lights from then on were seen ahead until HAHN observed two lights suddenly loom up out of the fog, dead ahead and immediately thereafter the collision occurred. He did not recall the color or relative position of the lights but believed if they had been other than white he would have recalled it. The suddenness of their appearance caused HAHN to be scared and to jump back. HAHN believed they had struck a fishing boat and reported this to the bridge by telephone and that he had observed debris on the forec'astle head consisting of broken bits of red glass and what appeared to be wire antennae and insulators. At daybreak, after the collision, a large section of debris was observed below the waterline which seemed to be fouled on the vessel's forefoot. It appeared to be metal plating and a large turn-buckle attached to a large diameter piece of wire similar to a mast shroud. When this was reported to the master, he backed the vessel down and the debris fell clear.

13. The helmsman, Norman CARLSON, Z-1145801-D1, recalls that he was steering course 220°, that the rudder was amidship at the time of collision but that the ship's head fell off rapidly to the left following collision from 220° to 150°.

14. Immediately following the collision, deck lights were turned on, the general alarm was sounded, and the crew was mustered at their stations. The ship's searchlight was also manned. The master ran to the starboard bridge wing and looked over the

side. He saw nothing but did note that although the engines were going full astern, the ship still had a way on. Shortly thereafter and by the time the deck floodlights were turned on, the ARIZONA was dead in the water. The master went forward and examined the bow of his ship. At that time there did not appear to be any damage other than some long scratches on both sides of the stem at the 24 foot waterline of the ARIZONA. The ARIZONA remained in this area until 1831 LZT, 2 August 1965, underway with no way on in dense fog. Search was limited to use of the vessel's searchlight.

15. In the meantime, the radio operator of the SS ARIZONA listened in vain for any distress messages from the other vessel. At 0240 LZT the master of the ARIZONA contacted the Japanese Maritime Safety Bureau and reported a collision with an unknown object during fog. They in turn requested the ARIZONA remain in the area of the collision. At 0535 LZT, in response to a request from the Japanese Maritime Safety Agency, the master of the ARIZONA advised that visibility was zero with intermittent fog. The ARIZONA remained in the area of the collision until excused by the Japanese patrol vessel at 1231 LZT, 2 August, when she resumed her voyage to Subic Bay. However, a short time later upon request by the Japanese Government, the ARIZONA returned to Yokohama to assist in the investigation by the Japanese Government.

16. Evidence of the navigation of the M.S. MEIKO MARU is limited to the testimony of Sueyoshi MACHIDA, the second mate on watch and sole surviving crewmember, and post salvage photographs and survey report of the MEIKO MARU furnished by the Japanese Marine Accident Inquiry Court. The MEIKO MARU departed in ballast from the port of Yokkaichi, Japan, at 1400 LZT, 1 August 1965 bound for Chiba, Japan. MACHIDA in his first statement given on 3 August 1965, testified that he stood watch from 0000 - 0400 with Boatswain Kenichiro TOKAJI and deck hand Kunio KAMINAKA. Upon reporting to the bridge KAMINAKA took over the wheel and TOKAJI stood at his right. The master, Hiro-mitsu SAKACHI remained on watch at the conn scanning the radar which was located abaft and to port of the wheel. MACHIDA stationed himself at the center open bridge window as lookout. The vessel was on full speed approximately 10 knots. MACHIDA had no knowledge of the vessel's course and was not informed of it by the master. He believed the radar to be on 3 mile range and the master remained constantly at radar and sounded fog signals. He heard fog signals ahead several times and reported them to the master. A collision occurred suddenly at about 0300 LZT throwing him overboard and rendering him unconscious. At the time this statement was given MACHIDA was hospitalized, suffering from injuries sustained in the collision and complained of a headache.

Marine Board of Investigation ltr 5943/142-65 of 9 January 1967

On 10 August 1965, MACHIDA continued his statement and offered the following refinements. He reported at the bridge at 2345 LZT, 1 August. The master ordered MACHIDA to keep a sharp lookout. Courses had been previously plotted on the chart by the master. At 0000 LZT the master fixed the MEIKO MARU position by radar, bearings of MIKOMOTO SHIMA, IROZAKI and TSUMEKISAKI. Course was believed to be 50°. Weather was dense fog, visibility 50 meters. The master sounded fog signals at intervals of approximately 3 or 4 minutes. He didn't know what scale radar was on. Visibility became much worse. MACHIDA heard a fog signal 30 to 35 degrees on port bow and reported it to the master who then ordered 5 degrees starboard. 15 minutes later he reported a fog signal from another vessel abeam and master ordered 10 degrees starboard change. No other signals were heard during the watch. 10 to 20 minutes later the master suddenly ordered "starboard", MACHIDA went to port wing, heard the master order "hard starboard" and simultaneously saw the bow of another vessel running over the MEIKO MARU. Collision time was not ascertained. MACHIDA corrected his testimony on MEIKO MARU's speed to that of half speed, 7 or 8 knots, when he relieved watch and 20 minutes later rang slow, 5 knots, on master's order. MACHIDA had no knowledge of the vessel's navigation situation and considered the master should have taken emergency action either gaining or reducing speed to avoid collision.

In a third statement taken on 14 August 1965, MACHIDA further refined his previous statements to the effect that the master at about 0000 LZT hours plotted the vessel's position and when MACHIDA glanced at the chart the MEIKO MARU was on course line North 50° East, 3 miles southeast of MIKOMOTO SHIMA, that the MEIKO MARU was then half speed, 7 to 8 knots, that he heard the fog signals 30 to 35 degrees port bow at 0140 LZT hours, that since relieving the watch he, MACHIDA, did not check the chart on which the master marked vessel's position.

In his fourth statement taken on 5 September 1966, MACHIDA further refined previous statements in that he described seeing the telegraph on $\frac{1}{2}$ speed when coming on watch. That the master called him to the chart room from his position of lookout and showed him chart No. 80 with the vessel's plotted position, that after 1 hour 30 minutes he reported a fog signal 30 degrees to port and course was changed to N 55°E, that five minutes later course resumed, that 10 minutes later another whistle signal was reported and course changed 10 degrees starboard, that 3 minutes later course N 50°E resumed, that 15 minutes later the master ordered starboard followed by collision within a minute, that the helmsman was desperately turning the wheel, that he estimates the MEIKO MARU's bow to have swung as much as 30 degrees to starboard, that no telegraph was rung during his watch, and that he places the collision at about 0200 LZT.

17. The second mate MACHIDA, was knocked off his feet by the force of the collision. When he recovered consciousness, he was floating in the sea. He was rescued some ten hours later.

18. Post salvage photographs of the MEIKO MARU, Exhibit 60, show the following conditions: radar switches on AC100V with scale switch set at 3 mi; ship's clock stopped at approximately 0209 LST; wheelhouse telegraph handle off of the scale at full astern and engine room response indicator off the dial at full ahead; engine room answering telegraph handle broken and on half astern, bridge pointer on line between dead slow astern and finished with engine; wheelhouse steering stand rudder indicator at hard right. Telegraph cables were severed and torn adrift by collision.

19. Photographs, Exhibit 60, show the forebody of the MEIKO MARU floating capsized when discovered. Salvage photos show the hull is indented commencing at the main deck fashion plate port side and the stern section is sheared off immediately aft of the engine room forward bulkhead. The concave rounded indentation extends into and to the top of the superstructure in the vicinity of the port bridge wing. This indentation at the level of superstructure top penetrates nearly to the vessel's centerline. From that point the line of shear tends generally aft and to starboard. The missing stern section comprises the main engine room, machinery spaces, crew accommodations and stores. The stern section is not known to have been recovered. The Board has received no information on the cost of the material damage to the MEIKO MARU.

20. Chemical and physical tests of paint samples taken from the SS ARIZONA and the MS MEIKO MARU after collision were conducted by the Japanese Police Scientific Investigation Department at the direction of the Yokohama Maritime Safety Agency (Exhibit 58).

21. William B. SLATER, employed as third mate aboard the SS ARIZONA and who holds a license as master, stated that he stood the 2000 to 2400 watch prior to collision. He had turned in but was awakened by a slight bump or jar from the collision. That very shortly thereafter the general alarm rang while he was getting dressed. Arriving on the bridge, the first thing he did was to glance at the radar scope. He observed on both port and starboard sides a considerable number of small pips which he interpreted to be fishermen. None of these pips were very close to the ARIZONA. On the starboard bow were pips of two large vessels and abaft the starboard beam, also well clear of the ARIZONA, was another pip which SLATER interpreted to be another ocean going vessel.

22. Original form CG 2692 and forms 924E (total 18) were forwarded by OCMI, Seattle letter 5943 dated 7 July 1966.

CONCLUSIONS

1. From the above facts it is concluded that:

a. The SS ARIZONA and the M/V MEIKO MARU were in collision at 0209 (-9 ZD) on 2 August 1965, on the high seas in the vicinity of Oshima Island, Japan. The approximate position was Latitude 34°43.5'N, Longitude 139°13.8'E. The indent in the MEIKO MARU conforms generally to the configuration and damage markings on the bow of the SS ARIZONA. Paint sample comparison, Exhibit 58, indicates intermingling of hull paint from the ARIZONA and MEIKO MARU. Foreign debris found on the bow of the ARIZONA immediately following collision resembles material from the MEIKO MARU. Evidence of time and position from both the ARIZONA and MEIKO MARU place them in collision.

b. There were no injuries of any consequence to any crewmember of the ARIZONA. Eighteen of the nineteen crewmen of the MEIKO MARU were killed or are still missing and presumed dead. The sole survivor of the MEIKO MARU suffered injuries that required hospitalization for an unknown period of time, but estimated to be at least six months. The concentration of crewmembers of the MEIKO MARU within an area bounded by the damage perimeter and the lack of any warning contributed to the high loss of life aboard that vessel.

c. Prior to collision radar targets and observed fog signals from other vessels were not positively identified as to course and speed by any semblance of navigational plot made by either the ARIZONA or MEIKO MARU. Captain SORENSEN of the ARIZONA and Captain SAKACHI of the MEIKO MARU were the only persons having knowledge of radar presentation leading up to and surrounding collision. Evidence points to neither master having undue concern for radar targets they observed until in the jaws of collision and then only by Captain SAKACHI who apparently had observed the target of the ARIZONA and just prior to ordering "hard starboard" had anticipated collision. The alleged failure of Captain SORENSEN to detect the MEIKO MARU on radar is concluded to have resulted from human error in that he dismissed a fog signal properly reported by the lookout as coming from the starboard bow and erroneously concluded it to have been the signal of a vessel on his starboard beam which he had observed on radar. Since small fishing vessels and another vessel 2000 yards to starboard were readily detected it must be assumed that the radar was functioning properly and would have shown this target on the corresponding range scale. The radar was apparently on 8 mile range setting most of the time for the 30-40 minute period prior to the collision to maintain surveillance of vessels to starboard. The closing speeds of the two meeting vessels would put the MEIKO MARU on the 8 mile scope for approximately 15 to 20 minutes. A short lapse of alertness by Captain SORENSEN at this critical point would account for his failure to detect or interpret a target as being the MEIKO MARU.

d. The base course of the ARIZONA was the approximate reciprocal of the base course of the MEIKO MARU and that the two vessels were nearly head and head except during periods of minor course adjustments by each vessel. That the minor course adjustments were of little significance by reason of the failure to maintain radar plot; that failure to employ radar to its best advantage by either vessel, particularly as related to range scales used for speeds of vessels and traffic conditions involved, contributed to the collision.

e. That the speed of 17 knots or better by the ARIZONA was excessive for the conditions of visibility and was a major cause of collision.

f. That the MEIKO MARU was most probably making a speed of 10 knots. This is concluded from the first testimony of the sole survivor and the apparent dynamic force of the collision which swung the bow of the ARIZONA to port 70° notwithstanding her rudder being amidship and completely severed the MEIKO MARU. This speed is also concluded to have been immoderate and a major cause of collision.

g. That the force of the collision capsized the fore body of the MEIKO MARU, rolling it under the keel of the ARIZONA and severed and sank the stern section of the MEIKO MARU.

h. That the angle of collision was about 70° measured from the bow aft on the port side of the MEIKO MARU.

i. That the visibility leading up to and surrounding the time of collision was near zero, and that both vessels had been navigating in dense fog, the ARIZONA for at least 15 minutes prior to collision and the MEIKO MARU for at least an hour.

j. That there is no evidence of malfunctions of machinery or any navigational equipment on either the ARIZONA or MEIKO MARU.

k. That both the SS ARIZONA and MS MEIKO MARU, having heard forward of their beam the fog signal of another vessel the position of which was not ascertained, neglected to stop and navigate with caution.

l. That all personnel on watch on both vessels properly executed all duties assigned to them by their respective masters who were exercising conn.

m. That Captain SORENSEN admittedly was away from the radar at times between 0147 and 0204 LZT for the purpose of listening to fog signals and discussing this with the mate Mr. DAVIS; that he repositioned himself at the radar at about 0204 LZT and concentrated his attentions on a target which he placed at 1.1 miles on his starboard side, during which period collision with the undetected MEIKO MARU was imminent.

n. That the ARIZONA proceeded for as much as one mile beyond the point of collision before coming to a stop and drifting; that no subsequent engine maneuvers were made until 0410 when maneuvers were made due to other vessels' close approach as indicated on radar and that an effective search for wreckage or possible survivors of this collision was not conducted by the ARIZONA.

o. Captain SORENSEN and Third Mate DAVIS deny having seen any target on radar which could have been the MEIKO MARU before, during or after collision, however, Third Mate William B. SLATER upon arriving on the bridge following collision states he observed several small pips on radar interpreted as fishing vessels on both port and starboard sides and two large pips on the starboard bow interpreted as large vessels. The Board accepts the testimony of SLATER as being most reliable and concludes that one of the pips interpreted as being a fishing vessel could have been the capsized low freeboard hulk of the MEIKO MARU.

p. The failure of Captain SORENSEN and Captain SAKACHI to proceed at moderate speed under conditions of dense fog and extremely reduced visibility in a heavily trafficked area constitutes evidence of negligence.

q. That there is no evidence that any personnel of the Coast Guard or any other government agency contributed to this casualty.

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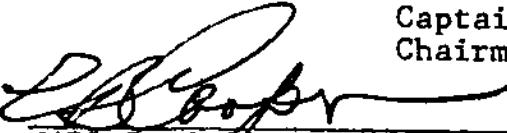
q. That there is no evidence that any personnel of the Coast Guard or any other government agency contributed to this casualty.

RECOMMENDATIONS


1. Based on the above findings the Board recommended further investigation under the provision of R.S. 4450 in the matter of License No. 292 119 held by Henry G. SORENSEN.
2. The Board recommends that a copy of this report be furnished to the U. S. Department of State for further transmittal to the Japanese Government.
3. The Board further recommends that no other action be taken and the case be closed.



H. A. PEARCE, JR.
Captain, U. S. Coast Guard
Chairman



EARL B. COOPER
Captain, U. S. Coast Guard
Member



W. T. SODE
Commander, U.S. Coast Guard
Member and Recorder

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