

The history of the training ship Kaiwo Maru and her achievements in promoting maritime affairs after retirement

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ABSTRACT

Following the loss of the sail training ship Kirishima Maru at sea with all hands in 1927, two sail training ships, the Kaiwo Maru and her sister ship Nippon Maru, were constructed and launched in 1930. In the decades that followed, these sailing vessels provided apprentice seamen and officer cadets with safe and efficient deck training environments during numerous overseas voyages. During her 59 years of service prior to her retirement, Kaiwo Maru sailed more than 1,460,000 km and provided educational services to 7,708 trainees. After her retirement, she was moored at the Toyama Shinko Port in Imizu City, Toyama Prefecture, where she now hosts events such as full-sail exhibitions and other maritime educational programs. Through these efforts, the Kaiwo Maru increases visitors' knowledge and interest in ships and the sea while contributing to the maritime education of younger generations. This study was conducted as part of efforts to create a digital archive of the Kaiwo Maru's historic maritime heritage and to provide examples of the efficient usage of the accumulated data.

Through our efforts, numerous ship documents related to the Kaiwo Maru's service as an active training ship, such as deck logbooks and illustrations showing construction and repair work, have been digitally preserved. Since these documents, which span the fields of navigation, shipbuilding, and maritime education, among others, are part of our nation's priceless maritime heritage, we began creating a digital archive by photographing various documents on display in the Captain's Office in place, starting with Logbook No. 1, after which all 298 logbooks covering the period from 1930 to 1989, along with various documents since her retirement, were digitalized.

Then, to explore the possibilities of various maritime education effects using the digitalized data, we conducted actual-finding investigations of the Kaiwo Maru's first journeys that we entitled "Maiden Oceangoing Voyage to Truk Island" and the "Challenging Voyage to the Bering Sea".

1. Introduction

The sail training ship Kaiwo Maru and her sister ship Nippon Maru were constructed and launched in 1930 to provide students from 11 merchant marine schools with oceangoing vessels aboard which they could safely practice the skills necessary for crewing sailing ships in the early Showa era. From 1930 to 1989, during which the Kaiwo Maru hosted numerous apprentices and cadets, 298 logbooks documenting her travels and events of interest were created and carefully stored. After her retirement in 1989, Kaiwo Maru was transferred to Toyama Shinko Port, located in Imizu City, Toyama Prefecture, where she was opened to the public at Toyama Shinko North Wharf. Later, she was moved to her permanent moorage at Kaiwomaru Park in the same port, where she has been the star attraction, thus showcasing a priceless part of Japan's national maritime heritage.

In addition to its service as an attraction for public viewing, the Kaiwo Maru also provides a platform for youth education, maritime thought dissemination, maritime public relations, and other projects open to the general public, thus making it a familiar symbol of the local community. Such events include a Sailing Day drill attended and supported by 60 to 70 volunteers and a Marine Experience class for elementary school students, during which they stay overnight on the ship. These events, among others, attract around a million people to the vessel every year.

In the approximately 30 years that have passed since Kaiwo Maru was conveyed to Toyama Port, thanks to the enthusiastic efforts of local citizens, the ship has provided an invaluable forum for the dissemination of maritime ideas as well as a platform for passing on knowledge related to the evolution of maritime technology and seamanship. With the above points in mind, this study was conducted to facilitate and reinforce the value of Kaiwo Maru's historical legacy by not only digitizing the records covering her long sailing history, but also presenting proposals and examples of how her extensive onboard bibliography can be effectively utilized.



Fig. 1 Kaiwo Maru (Moored at Kaiwomaru Park, Imizu City, Toyama Prefecture.)

2. Merchant Marine Schools

In the Meiji era, the Japanese government actively encouraged maritime interests to convert from Japanese-style (benzaisen) coastal sailing ships to Western-style oceangoing vessels. To facilitate this, 11 merchant marine schools, each with different curriculums and methods, were established by local and prefectural governments. Later, however, the administration of all those schools would be transferred to the national government (Table 1).

Table 1 List of merchant marine schools established in Japan.

	DATE	Merchant Marine School
1	1879 (Meiji 12)	Hakodate Merchant Marine School
2	1881 (Meiji 14)	Toba Merchant Marine School
3	1897 (Meiji 30)	Awashima Merchant Marine School
4	1897 (Meiji 30)	Oshima Merchant Marine School
5	1898 (Meiji 31)	Hiroshima Merchant Marine School
6	1901 (Meiji 34)	Yuge Merchant Marine School
7	1902 (Meiji 36)	Saga Merchant Marine School
8	1906 (Meiji 39)	Toyama Merchant Marine School
9	1907 (Meiji 40)	Oki Merchant Marine School
10	1908 (Meiji 41)	Kojima Merchant Marine School
11	1908 (Meiji 41)	Kagoshima Merchant Marine School

To become licensed mariners, apprentice sailors and cadets must acquire practical experience on actual sailing vessels. However, since only five of the original 11 maritime schools possessed training ships at that time, students from schools without such vessels received training on commissioned or chartered commercial sailing vessels (Table 2), often under very harsh conditions aboard small ships and under poor training conditions.

Table 2 Merchant marine school training ships (Meiji to Showa eras).

	Ship Name	Tonnage	Sailing Rig	Propulsion	Affiliation
1	Hakodate Maru	358	Three-masted barquentine	○	Hakodate Merchant Marine School
2	Amaki	300	Three-masted barque	○	Toba Merchant Marine School
3	Geibi Maru	195	Brigantine	○	Hiroshima Merchant Marine School
4	Bocho Maru	270	Three-masted barquentine	○	Oshima Merchant Marine School
5	Kirishima Maru	997	Four-masted barquentine	○	Kagoshima Merchant Marine School

As a result, there were numerous accidents in which students, crew members, and vessels were lost during training (Table 3). Most notably, the Kirishima Maru, operated by the Kagoshima Prefectural Merchant Marine School, was lost at sea during a storm, along with all 53 of the students and crew aboard her at the time. In response to this tragedy, the school decided to build two large sail training ships.

Table 3 Merchant marine school training ships and maritime accidents (Taisho era).

	Date	Accident	Name of Vessel	Tonnage (Register Tonnage)	Official Number	Signal Letters	Length (Shaku)	Breadth	Depth	Rigging	Launch	Merchant Marine School
1	March 5, 1908	Collision / Wreck (Suo yashima offshore)	T.S. KAIHEI MARU	265.44 (210)	7457	JNPV	105, 00 (31.82 m)	24.15 (7.32m)	11.85 (3.59m)	Three-masted barque	May.1904 KomatsuShisa	Oshima Merchant Marine School
2	November, 1910	Missing (Noto offshore)	SHIPPO MARU	266 (250)	789	HPLB	107, 60 (34.24 m)	24, 00 (7.27m)	13, 40	Two-masted brigantine	Oct.1877 (Musashi Sinagawa)	Awashima Merchant Marine School (consignment)
3	March 2nd, 1917	Aground / Wreck (Minami Torishima)	T.S. YAMAGUCHI MARU	323 (261)	12966	LKQH	119.40 (36.18 m)	24.70 (7.48m)	12.50 (3.79m)	Three-masted barque	July.1909 (Osaka)	Oshima Merchant Marine School
4	April, 1922	Missing (GENKAI Nada)	NISHIBETSU MARU	182 (167)	563	HDHB	99, 55 (31.17 m)	20,40	10,55	Three-masted brigantine	1873 (Tokyo)	Awashima Merchant Marine School (consignment)
5	Feb. 24, 1925	Aground / Wreck (Kozu Shima)	T.S. BOCHO MARU	270	Unknown	Unknown	Unknown	Unknown	Unknown	Three-masted barquentine	1923 (Unknown)	Oshima Merchant Marine School
6	March 12, 1925	Aground / Wreck (Suruga Wan)	T.S. AMAKI	300 (193)	19992	NFGK	111, 6 (33.82 m)	27,1	13,0	Three-masted barque	Jan. 1917 (Toba)	Toba Merchant Marine School
7	March 9, 1927	Missing (Imbosaki offshore)	T.S. KIRISHIMA MARU	997 (772)	24242	RHMT	169, 5 (51.36 m)	40,0	19,0	Four-masted barquentine	Nov. 1918 (Toba)	Kagoshima Merchant Marine School

Construction of Kaiwo Maru and Nippon Maru began at the Kawasaki Shipbuilding Corporation Shipyard in Kobe City, Hyōgo Prefecture, in January 1929, and the Kaiwo Maru was launched during a ceremony on Feb. 14, 1930. After completion of construction and outfitting at the shipyard, the vessel was handed over to the school on May 19, 1930. In the years that followed, the shipyard would continue providing maintenance services for the vessel.

3. Kaiwo Maru investigation

In 2016, a survey of the Captain's Office and other areas of the Kaiwo Maru was conducted, during which we identified 298 deck logbooks and numerous other official records that required preservation via digitization. Of these, a combined volume containing the first nine logbooks of the vessel dedicated to the Kaiwomaru Park that was printed and emblazoned with the words Navigation Training Center, Training Ship Kaiwo Maru was the first to be digitized. After that, all of the remaining logbooks (298 total) and many other shipboard documents deemed to be irreplaceable records of Japan's maritime history were carefully digitized.

3.1 Digitization work (Onboard Kaiwo Maru)

Since Logbook No. 1 is on permanent display in Kaiwo Maru Cadets Hall No. 1, we digitized it in place using a tripod-mounted digital camera and natural lighting from the vessel's skylight, as shown in Fig. 2.



Fig. 2 Logbook digitization aboard the Kaiwo Maru in Cadets Hall No. 1 (camera setup).

3.1.1 Kaiwo Maru Logbook No. 1

The cover of the first logbook of the Kaiwo Maru is inscribed in Japanese with the words “Institute for Nautical Training, Training Ship” and the vessel specifications (Fig 3.) On each of the inside pages, various notations for entries are printed in Japanese. However, the first official entry of the Logbook, written in English on June 13, 1930, reads "04:00 Light air & fine weather (abbreviation) Round made. All's well", as shown in Fig. 4.

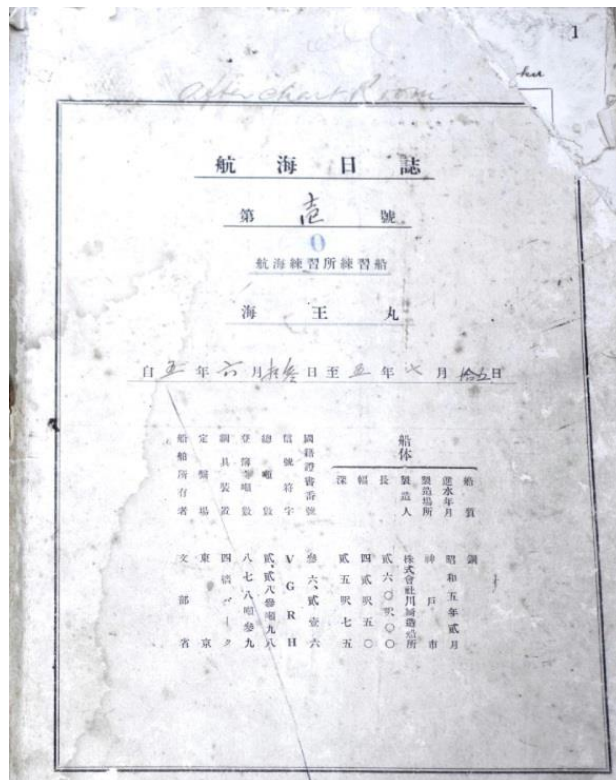


Fig. 3 Front cover of Kaiwo Maru Logbook No. 1 (1930).

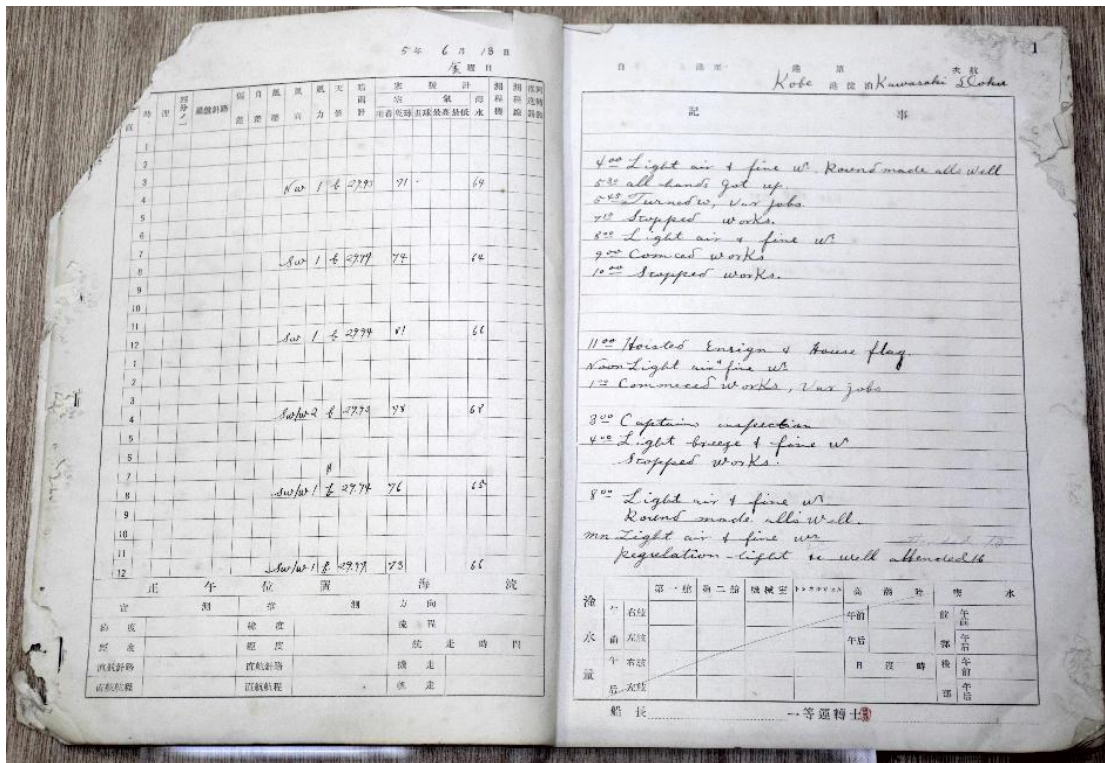


Fig. 4 First official entries in the Kaiwo Maru Logbook No. 1 (1930).

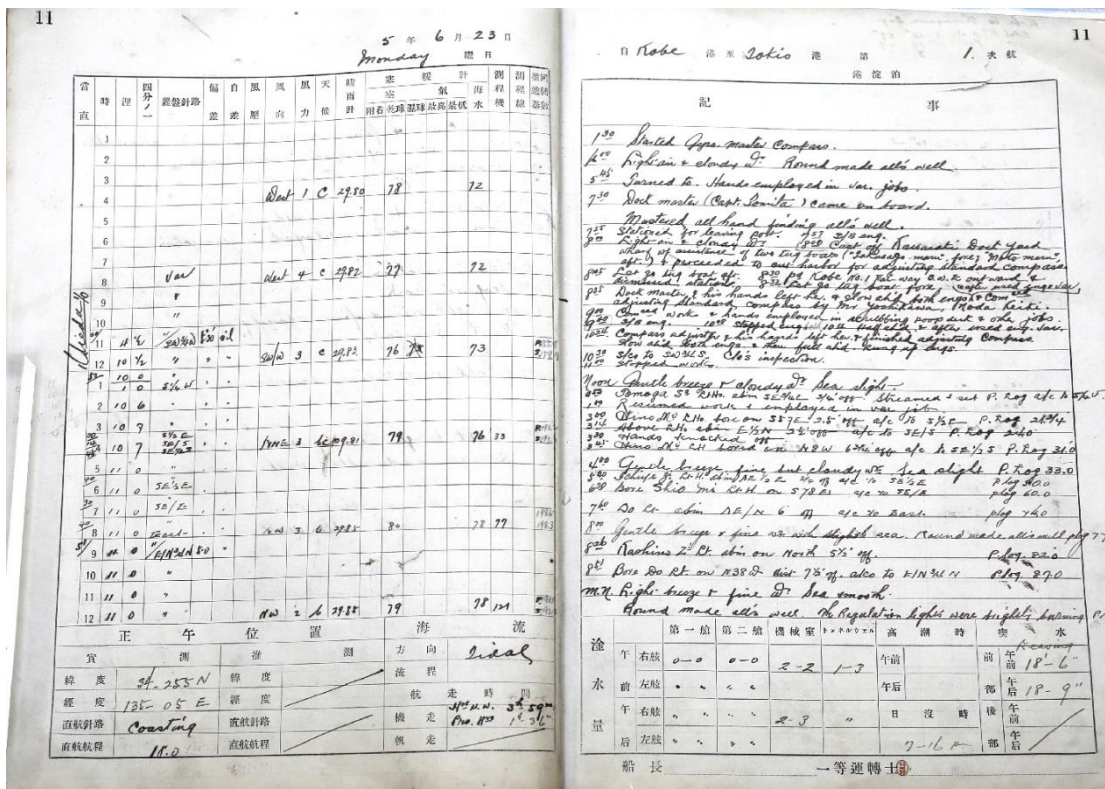


Fig. 5 First official entries in the Kaiwo Maru Logbook No. 1 (1930).
(Kaiwo Maru left the shipyard in Kobe for Tokyo)

Since logbook entries in began June 13, it is presumed that adjustments to each part of the ship continued even after delivery was completed. If you read the logbook of this period, you can get a glimpse of how shipboard life

began aboard the Kaiwo Maru.(Fig.4)

Shown is a page from the logbook on the day the Kaiwo Maru left the shipyard in Kobe for Tokyo.(Fig.5)

3.1.2 Kaiwo Maru (maiden voyage 1930)

Kaiwo Maru's maiden oceangoing voyage was from Oct. 4 to Dec. 6, 1930. The ship was commanded by Captain Kichitaro Miyamoto and manned by 16 officers and engineers, 41 crewmembers, and 91 students from the 11 merchant marine schools listed in Table 1. The ship's logbook showed that she departed from Tokyo, stopped at Yokohama, and after being assisted to sea by the tugboat Takara Maru, set all sails, and then departed for Truk Island at 13:20 on Oct. 8, as shown in Figs. 6 and 7. The total distance of this voyage was 4250 miles.

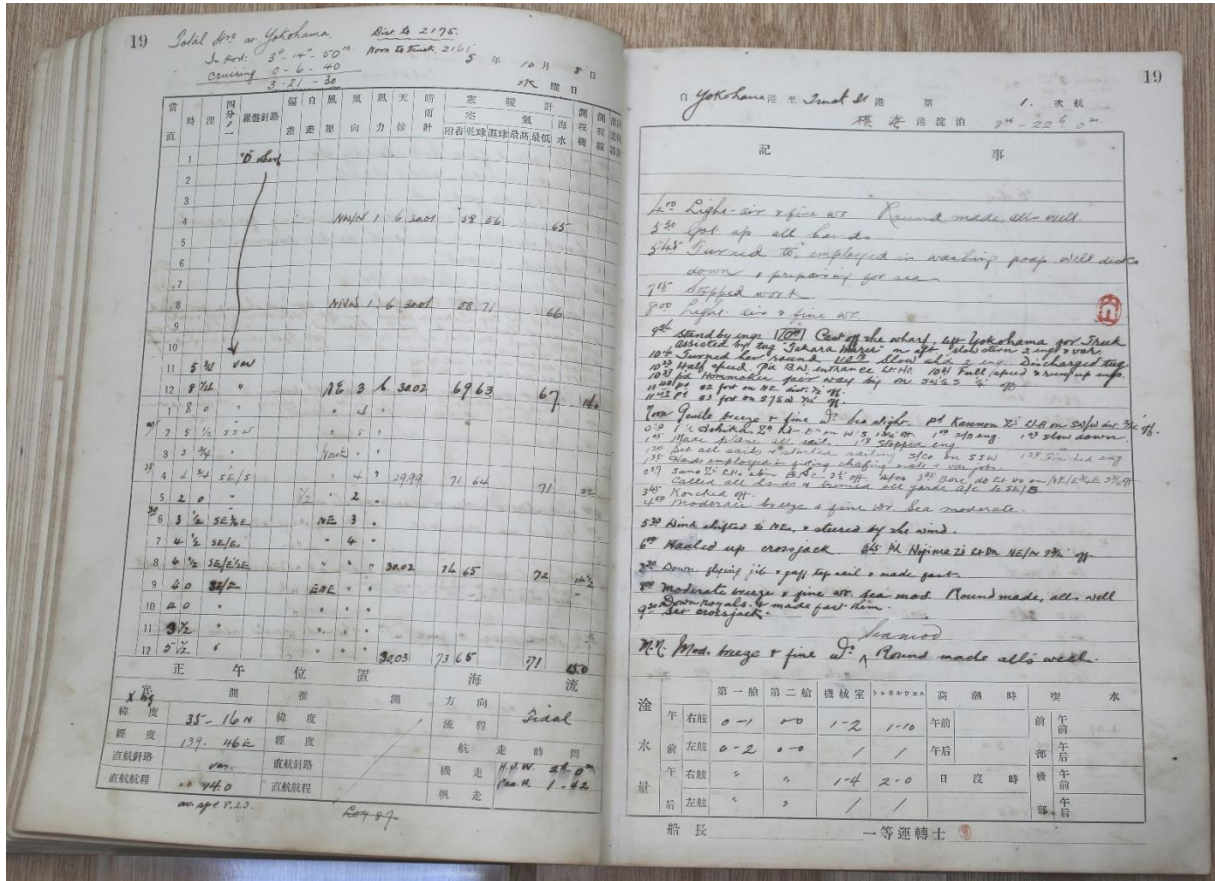


Fig. 6 Kaiwo Maru logbook (start of her maiden overseas voyage).

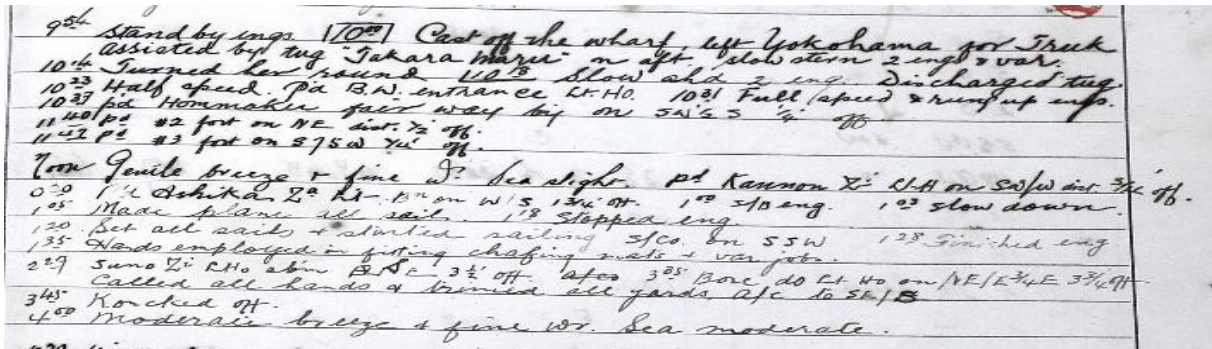


Fig. 7 Enlargement of the entry showing the start of the maiden overseas voyage of the Kaiwo Maru (1:20 (13:20) Set all sails & started sailing).

3.2 Collection of images related to Kaiwo Maru

During our Kaiwo Maru boarding survey, we were able to obtain a wide range of digital images of shipboard

locations not open to the public, a wide variety of nautical equipment, and various other significant artifacts, such as collision mats, commemorative albums, and historical photographs. Following the onboard survey, we proceeded with research aimed at the collection of other materials and were able to obtain digital copies of a large number of commemorative graduation albums and personal photographs showing Kaiwo Maru's activities from around 1930 to its retirement. Some of those images are shown below.(Fig.8, Fig.9, Fig.10, Fig.11)

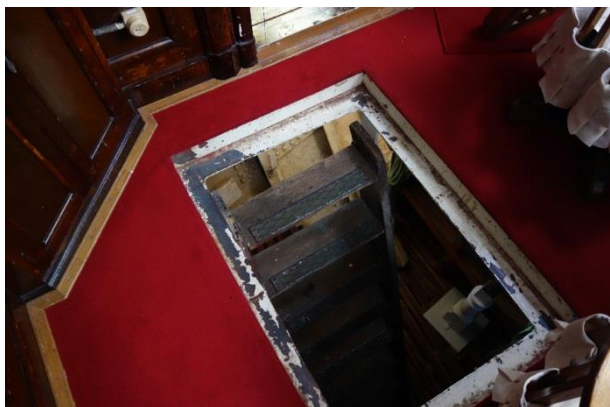


Fig. 8: Hatchway entrance to Kawa Maru storage lockers. Historical records, such as logbooks, are stored in these lockers.



Fig. 9: Collision mat placed in front of the ship's stern officer's salon.



Fig. 10 Kaiwo Maru under full sail (1932).

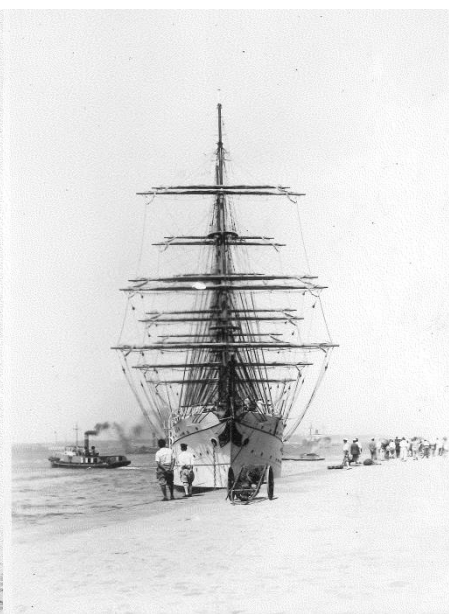


Fig. 11 Kaiwo Maru prior to departure from Yokohama Port on her sixth overseas voyage in May 1932.

3. Results and Discussion

Over its 59 years of service, the Kaiwo Maru played an active role in teaching young mariners how to observe the everchanging seas and their surrounding maritime environments while also serving as a practical training platform for numerous apprentices seeking to become safe and efficient sailors and officers. Herein, we discussed the construction of the Kaiwo Maru and her sister ship Nippon Maru and showed that after retiring from active service, the two vessels now have second careers as museum ships; with Kaiwo Maru permanently moored in Imizu City, Toyama Prefecture, and Nippon Maru moored in Yokohama City, Kanagawa Prefecture.

As the star attractions of both those seaside parks, the ships provide excellent forums for disseminating

maritime ideas and passing on historical maritime knowledge to young people.

In addition, we explained how 298 logbooks and other documents stored on the Kaiwo Maru were digitized and how the digitization process can be effectively utilized by students interested in maritime technology. As an example, photographs showing the first official entries into the Kaiwo Maru Logbook No. 1, as well as the start of her maiden overseas voyage, were shown. Furthermore, by researching the record of the first ocean voyage to Truk Island and the challenge of the vessel's voyage through the Bering Sea, we were able to gain an understanding of the painstaking efforts and ingenuity that when conducting various training evolutions onboard the ship.

By studying the records showing the experiences of apprentice sailors and officer trainees serving aboard the Kaiwo Maru obtained through the digitization of the vessel's logbooks, we will make available the ship's nearly six decades of active service to future marine education efforts, facilitate the dissemination of maritime ideas, and pass on historical knowledge of advancements in maritime technology and seamanship as experienced by sailors of that era. Since our ultimate goal is to more firmly establish the legacy of the Kaiwo Maru by presenting proposals and examples of how to use her historically precious onboard bibliography, we intend to continue our efforts to collect images and materials related to this vessel and use them in our future activities.

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