

A Brief History on Reporting Weather Observations by Ships

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Lieutenant Matthew Fontaine Maury of the US Navy was the first man to realize the scientific and commercial values of weather information collected by ships. In his early days, he made great effort to extract weather and oceanographic information from shipmasters' logbooks (which were used primarily for recording events they encountered at seas) and then instituted a reporting system among the US shipmasters to gather further information on sea conditions and observations. As a result of his initiative, the first International Meteorological



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Conference was held in 1853 at Brussels to discuss international collaboration and to standardize the system for reporting weather observations at seas by ships. With a large number of countries agreeing to adopt a uniform standard for the sharing of marine weather information, observations taken by ships were recorded in meteorological logbooks in a consistent format. In step with the inclusion of additional reporting parameters, the logbook format also evolved over time.

In the early years, most of the weather observations recorded in meteorological logbooks or extracts of meteorological logbooks were sent to the weather authorities by the ship captains or owners, and a small number of them were transcribed by the officers on board the ships when they came into the harbour. In Hong Kong, the Observatory began collecting the meteorological logbooks of the ships arriving from abroad from 1888 onwards. The first Port Meteorological Officer was appointed in 1892 with the specific duty of visiting ships in port to collect the weather observations recorded in meteorological logbooks.

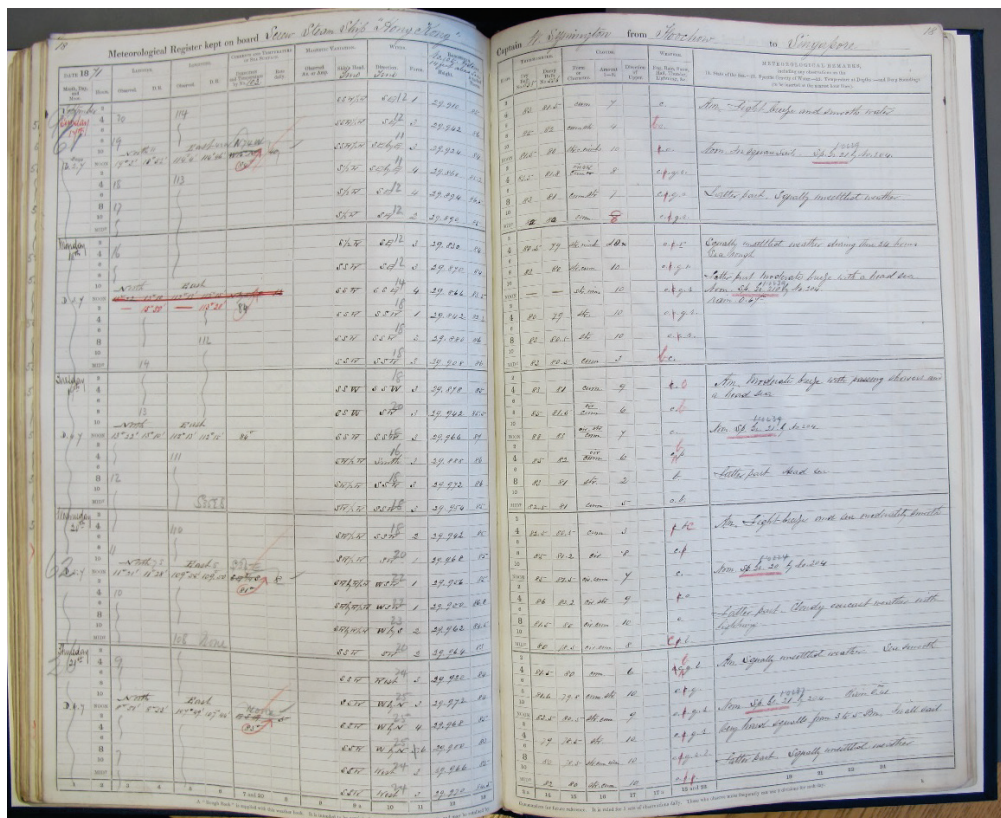
The invention of wireless telegraph in the 1900s opened up a new era for the reporting of ship weather observations. As early as 1906, British ships sent observations to the UK Met. Office by radio, while a number of transatlantic liners commenced a similar service of reports in 1909. In Hong Kong, with the advent of wireless technology, weather observations made on board the British naval fleets were transmitted to the Observatory by wireless telegraphy starting in 1908. With more coastal wireless

telegraphy stations established in Hong Kong, ships sailing close to Hong Kong could make use of radio waves to transmit weather reports to the Observatory, providing timely weather information over the seas for reference by the forecasters. Nowadays, weather observations made by the ships can also be sent to the weather authorities around the world via satellite communication links¹.

Furthermore, with the volume of ship weather observations increasing significantly in recent decades, a huge amount of human resource is required to digitize and quality-check the marine weather observations for electronic archival and scientific studies. As such, the hardcopy logbooks have gradually been replaced by electronic logbooks² since 2013. As at December 2015, 55 out of 62 in the fleet of Hong Kong Voluntary Observing Ships have been installed with electronic logbooks.

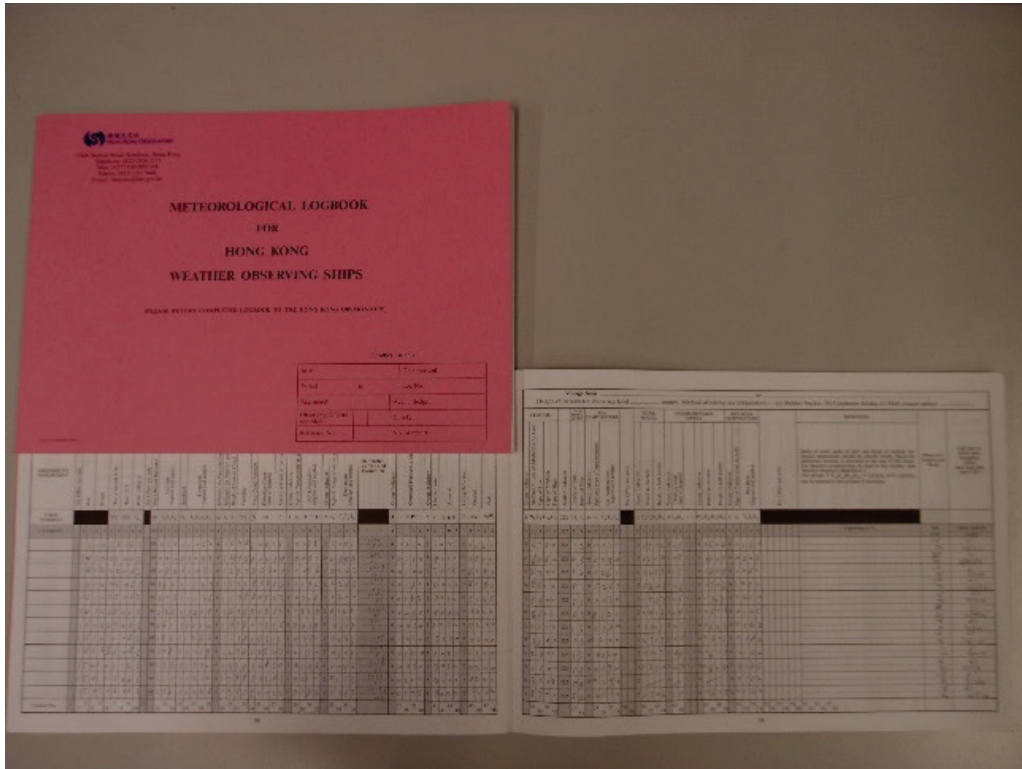
References:

- [1] C.W. Wu: Issue No 17 HKO e-Bulletin for the Marine Community - Communication System used by Hong Kong Voluntary Observing Ships - Inmarsat C
- [2] C. W. Wu: Issue No 15 HKO e-Bulletin for the Marine Community - Automation of weather observation - Electronic meteorological logbook

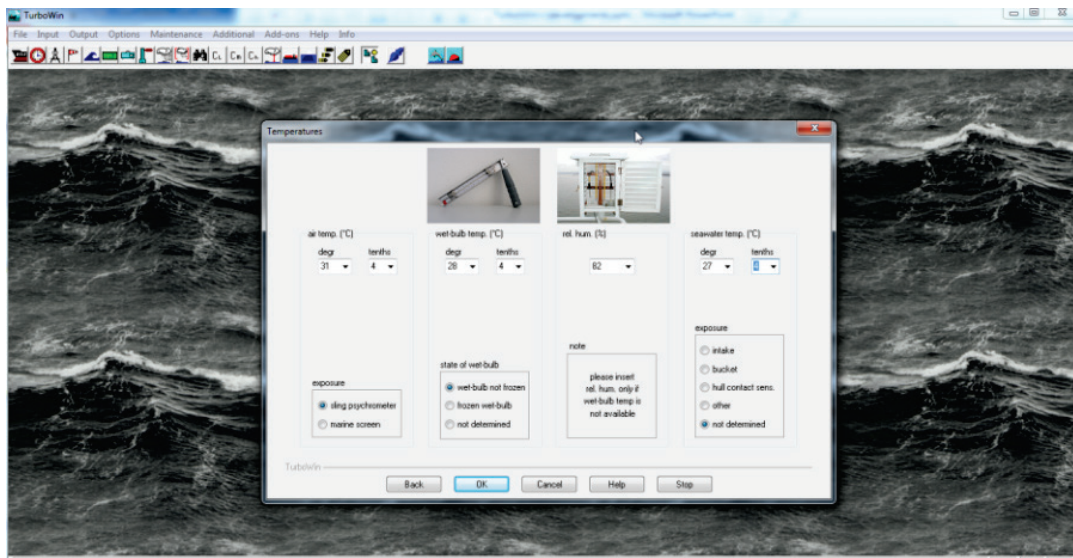


National Meteorological Archive, Met Log 2830, SS Hong Kong, 1871

(Courtesy of UK Met. Office)



Logbook currently in use by Hong Kong Voluntary Observing Ships



Electronic logbook (TurboWin) being used by Hong Kong Voluntary Observing Ships