



Marine Department
Hong Kong Special Administrative Region

Vessel Traffic Centre

The Vessel Traffic Centre (VTC), located at the outer island of the Hong Kong-Macau Ferry Terminal in Central, was established in 1989 to provide the Vessel Traffic Services (VTS) to vessels to facilitate their arrivals, berthing/unberthing and departures as safely and expeditiously as possible.

The VTS system was a monitoring and regulating system for vessels navigating in the waters of Hong Kong. Vessels participating in the VTS would receive navigational information and advice from the VTC through the Very High Frequency (VHF) radio network.

The VTS system was upgraded in 2002 with the latest technologies to cater for the anticipated traffic growth for the next decade. Twelve radars are now employed in the system to provide radar surveillance coverage of the Hong Kong navigable waters. The radar system is designed to automatically track a maximum of 4,000 moving targets and 1,000 stationary targets at any one time. The information tracked will be relayed via microwave link to the VTC for central processing and displayed on electronic monitors as traffic images.

To ensure effective vessel monitoring, the waters of Hong Kong are divided into three sectors, namely Eastern Approaches, Harbour and Western Approaches. A VHF channel is assigned to each sector to facilitate communication with vessels. Sector consoles are manned by Vessel Traffic Regulators (VTRs). The VTRs are required, amongst other things, to identify and monitor the movements of traffic images by comparing the reported position against the position of targets measured



Vessel Traffic Centre

by the VHF direction finders as shown on the electronic monitor. After identifying an image, the VTRs will assign a tag to it with a coded message bearing the name of the ship and other relevant information.

In addition, there are 12 Closed Circuit Television (CCTV) system cameras installed at various strategic locations, e.g. areas of heavy traffic, to provide real



Traffic Regulation Console

time visual vessel images.

The VTS system is also capable of receiving and displaying information of vessels transmitted by their own Automatic Identification System (AIS).

Trip history of visiting vessels are recorded by the VTS system which is linked with the database of the Vessel Traffic Management System for generating invoice for collecting revenues, e.g. port facilities and light dues, port clearance fees, etc. The ship information is made

available to non-government agencies and organizations through data-lines and modems; and uploaded to the department's webpage

<http://www.mardep.gov.hk/en/pub_services/arridepa.html> for public enquiry.

Moreover, it is also the source of statistical analysis for port developments, traffic control strategies, traffic safety enhancement and maritime security.

The VTC, manned by some 60 staff, operates round the clock in shifts throughout the year and is the focal point of contact of the department. It also works closely with other government agencies in response to marine incidents occurred within the waters of Hong Kong.

January 2007