



Sound navigational practices

This notice draws attention to navigational practices that should be followed by masters and officers in charge of a navigational watch on ships operating in Australian waters. It also provides information on nautical charts and nautical publications that AMSA considers adequate for the safety of navigation in Australian waters, in accordance with Chapter V of the International Convention for the Safety of Life at Sea (SOLAS).

Sound navigational practices include:

- using a variety of navigational aids;
- not relying solely on any Global Navigation Satellite System for navigation, particularly when navigation can also be conducted visually and/or by radar;
- using radar parallel index techniques wherever possible to monitor the ship's track;
- predicting the track of the ship, taking into account set and drift;
- using soundings, clearing bearings and transits as cross-checks for position fixes and course alteration points;
- fixing the ship's position at frequent and regular intervals, including when a pilot is on board;
- ensuring that the ship has the latest Maritime Safety Information for the area by configuring the INMARSAT SafetyNET Enhanced Group Call (EGC) receiver correctly;
- maintaining awareness of human factors, including fatigue and Bridge Resource Management techniques; and
- cooperating with any available Vessel Traffic Service.

Owners and masters are reminded that:

- new ship personnel are to be given proper familiarisation with their watch-keeping duties and with the ships' navigational equipment (see sections 6 and 7 of the International Safety Management (ISM) Code).
- Australia's Marine Order 21 implements SOLAS Chapter V navigational requirements for ships operating in Australian waters. It gives effect to:
 - Regulation 19, which addresses shipborne navigational equipment and systems;
 - Regulation 27, which provides that nautical charts and nautical publications necessary for the voyage are adequate and up to date; and
 - Regulation 34, which requires planning of the intended voyage.

Voyage planning and execution

Masters or officers in charge of a navigational watch preparing voyage plans should refer to IMO Resolution A.893 (21) Guidelines for voyage planning (and any other IMO guidance) which provides detailed advice on voyage planning.

The components of voyage planning are:

- **appraisal** which involves gathering all information relevant to the intended voyage;
- **planning** of the entire voyage from berth to berth, including those areas requiring a pilot;
- **execution** of the plan; and
- **monitoring** progress of the ship during the execution of the plan.

Masters must ensure that:

- voyage planning takes into account the potential for reasonable unplanned diversions (due to change of commercial orders or emergencies) that may occur during a passage.
- any changes made to the voyage plan are consistent with the IMO guidelines and clearly marked and recorded in the ship's official documents. Where ECDIS is used, the voyage plan should be validated by the route-checking function, using appropriate safety parameters, as applicable for a particular ship.
- prior to commencement of pilotage the voyage plan is plotted on any charts that are delivered via a boarding pilot for a segment of the voyage. The intent to plot the voyage plan on such charts must be noted in the voyage plan.
- unplanned shortcuts to save time and distance, or unplanned deviations from the voyage plan to satisfy tourists or local customs, are not undertaken.

The ships' Safety Management System should reflect the above considerations (see section 7 of the ISM Code).

Responsibility for safe navigation with a pilot embarked

Masters and officers in charge of a navigational watch remain responsible for the safe navigation of their ships at all times including when a port or coastal pilot is on board. The master should ensure that the bridge remains adequately manned and under the responsibility of a certificated officer in charge of a navigational watch. The bridge team should support the pilot by:

- maintaining a good lookout and situational awareness;
- providing expertise in the use of bridge equipment and systems;
- continually monitoring the pilot's actions and promptly seeking clarification as necessary and/or calling the master. The officer in charge of a navigational watch must take whatever action is necessary before the master arrives to maintain the safety of navigation; and

- discussing, agreeing and communicating to the entire bridge team, any change to the ship's voyage plan advised by the pilot. In case of any required change, the original voyage plan should be amended and documented; the amended voyage plan must then be followed.

Nautical charts and nautical publications

1. Nautical charts for Australian waters

Australia's official nautical charts and nautical publications are issued by the Australian Hydrographic Service (AHS) on authority of the Australian Government.

a. Using appropriate charts

An appropriate nautical chart is one of a suitable scale for the navigational task at hand, noting that the scale determines the level of detail that is provided.

Smaller scale charts are used to depict large areas. They are suitable for overall voyage planning and ocean transit purposes. Small scale charts have reduced levels of detail on aids to navigation, dangers, coastal features and infrastructure (particularly where larger scale charts exist). Significant depth detail is omitted. This makes small scale charts unsuitable for navigation in areas less than 30 metres depth, adjacent to the coast or near charted hazards. Small scale charts show the limits and identity of larger scale charts. Whether in paper or electronic format, small scale charts are neither intended nor suitable for coastal navigation.

Large scale charts should be used when navigating closer to the coast, reefs and other offshore hazards. These charts cover smaller areas and provide more detail on depth, dangers, aids to navigation and coastal features. Generally, Australian charts provide continuous coverage at a scale of 1:150,000 or larger when navigating within 24 nautical miles of land or major offshore features (except in particularly remote areas).

For coastal navigation, including when navigating near charted hazards, the largest scale charts produced should be used.

When using Electronic Chart Display and Information Systems (ECDIS) with Electronic Navigational Charts (ENC), officers in charge of a navigational watch should be familiar with the use and operation of ECDIS and electronic charts.

b) Australian nautical charts

Australian (AUS series) paper charts are available from chart agents worldwide. The series is also partially reproduced by the UK Hydrographic Office (UKHO) and covers major Australian shipping routes and commercial ports. Mariners should refer to AUS charts 5000 and 5001 or the online Australian chart index at: www.hydro.gov.au for details of available AUS series charts. Mariners should not assume that chart coverage does not exist simply because it is not indicated in the British Admiralty chart catalogue or if the UKHO has not reproduced an AUS series chart.

The Australian (AU) series of ENC replicates the content of paper charts on a grid-based scheme of 1, 10 and 30 degree squares; additionally, there are separate ENCs for each port. These are available in Australia through the AusENC service, internationally through the UKHO's Admiralty Vector Chart Service, as well as other services affiliated with the International Centre for ENC (IC-ENC). Details of available Australian ENC are provided at: www.hydro.gov.au.

Full ENC coverage of the Australian charting area is now available, along with services to distribute and update these charts. The Australian Raster Navigation Chart service (which was established in 1997 as an interim solution) has been withdrawn since July 2014.

c) Chart accuracy and reliability

The accuracy and reliability of a nautical chart depends on the quality of hydrographic and topographic surveys and other relevant information, noting that charts are made up from diverse sources of supplied information of potentially widely differing quality.

Whilst all larger scale AUS paper charts carry a Zone of Confidence (ZOC) diagram, Australian ENC have a selectable layer containing Categories of Zones of Confidence (CATZOC). The ZOC diagram or CATZOC layer enables mariners to assess the limitation of the hydrographic data from which the chart was compiled and the resulting degree of risk associated with navigating in a particular area. A more detailed explanation can be found in Seafarers Handbook for Australian Waters (AHP 20).

2. Nautical publications for Australian waters

AHS publishes the nautical publication Seafarers Handbook for Australian Waters (AHP 20). It contains important information to assist ships to operate safely in Australian waters. AHP 20 includes relevant information required by foreign-flagged and Australian ships operating in Australian waters to comply with requirements of international conventions (e.g. SOLAS and MARPOL) and applicable national domestic regulations.

Many of the AUS series nautical charts make reference to AHP 20 as the key publication to refer to for further information. Such information includes but is not limited to: compulsory pilotage areas, mandatory ship reporting requirements, limits of particularly sensitive sea areas and designated shipping areas in the Great Barrier Reef Marine Park.

In addition to onboard carriage of lists of lights, sailing directions, notices to mariners, tide tables and all other nautical publications necessary for the intended voyage, the carriage of AHP 20 is considered necessary for safe navigation in Australian waters.

Port State Control inspections

AMSA's port State control inspectors will routinely check for:

- documented voyage plans and adherence to such plans;
- availability and appropriate use of nautical charts, updated and corrected to the latest available updates and notices to mariners;
- use of largest scale charts for coastal navigation; and;
- carriage and use of up to date nautical publications, including AHP 20, necessary for the intended voyage.

Further information

Marine Orders www.amsa.gov.au

Australian charts and the Seafarers Handbook for Australian Waters (AHP 20) www.hydro.gov.au

IMO Resolution A.893 (21) Guidelines for voyage planning www.imo.org

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