

# Chapter 5 Crew training and competency

## Introduction

5.1 The human factor is a major contributor in up to 80 per cent of marine accidents. There is scope for both seafarers and shore operators to implement practices which would enhance the safety of shipping (Sub 1, *Submissions* p. 38). Concerns about crew training and competency exist within the context of a growing shortage of suitable qualified personnel (Sub 16, *Submissions* p. 152, Exhibit 1).

5.2 This chapter begins with a discussion of relevant findings of previous parliamentary inquiries. It goes on to outline developments and continuing issues in crew training and competency and to make a recommendation concerning fatigue.

## Previous parliamentary reports

5.3 The 1992 report, *Ships of Shame— inquiry into ship safety* noted that forged qualification certificates and the failure to produce a required certificate were of concern (HORSCTCI 1992, p. 33).

5.4 That report also raised the problems of crew sizes that were too small to properly operate and maintain a vessel and linguistic barriers between crew members (HORSCTCI 1992, p. 35) or between crews and Australian pilots (HORSCTCI 1992, p. ix).

5.5 The 1992 report noted that: 'The level of training of both officers and ratings, though purporting to comply with International Convention on Standards for Training, Certification and Watchkeeping (STCW) requirements, is in many cases insufficient to ensure the safe operation of a large ship.' (HORSCTCI 1992, p. 33)

5.6 Like its predecessor, the 1995 report, *Ships of Shame—A Sequel: Inquiry into ship safety* raised the issue of language barriers (HORSCTCI 1995, pp. 6–7).

## Developments

### Revised International Convention on Standards of Training, Certification and Watchkeeping

5.7 The original International Maritime Organization (IMO) Convention on Standards of Training, Certification and Watchkeeping (STCW) came into force in 1984. According to the Australian Maritime Safety Authority (AMSA), there was a lack of precision in the requirements and standards which led to varying interpretations. The level of compliance also posed a problem. In 1992 the IMO instituted a review of STCW. As a result, a revised version was adopted. The revised International Convention on Standards for Training, Certification and Watchkeeping (STCW95) came into force worldwide on 1 February 1997. STCW95 will be fully implemented by 1 February 2002 (Sub 1, *Submissions* p. 32).

5.8 The revised convention is notable for two reasons. First, the standards of training, certification and watchkeeping were rewritten in a competency based format. This was designed to maximise uniformity of application. Second, the convention adopted control arrangements so as to ensure compliance. Flag states are required to demonstrate to the IMO that their training and certification systems comply with the convention. Compliant flag states must submit appropriate information to the IMO by 1 August 1998. They will be placed on the White List of compliant states. The ships of non compliant flag states may be detained under port state control arrangements (Sub 1, *Submissions* p. 32).

5.9 The committee received evidence that, in the light of STCW95, AMSA was reviewing its port state control program and domestic standards of training and operations. It was also assisting Pacific Island countries to implement the convention (Sub 1, *Submissions* p. 33).

5.10 AMSA's submission to the IMO for Australia to be included on the White List (of STCW95 compliant countries) was lodged in July 1998.

## **International Safety Management Code**

5.11 The adoption of the International Safety Management (ISM) Code (see chapter 3 of this report) constituted another development in addressing the problem of human error in ship incidents. The expansion of regional port state control programs is expected to consolidate these initiatives.

## **Bridge resource management training**

5.12 Bridge resource management refers to effectively using all the available resources on the bridge, including human resources. It involves sound communication between the pilot and ship personnel (*Transcripts*, p. 35). Since 1994 bridge resource management courses have been conducted in Australia. As of 1998 almost all serving masters, senior deck officers and pilots have completed these courses (Sub 1, *Submissions* p. 37). The Marine Incident Investigation Unit noted that since July 1995 there have been no incidents of Australian ships grounding (Sub 19.01, *Submissions* p. 188).

## **Fatigue**

5.13 According to Mr MacGillivray, STCW95 does not go far enough in the area of fatigue (*Transcripts*, p. 91). He argued that:

A man may have been on a ship for 12 months or more, working in substandard conditions with very short turnaround times, having no recreation, not being able to contact his family on a routine basis, perhaps even not having been paid. The fact that he has worked the previous day in accordance with the STCW in terms of hours of work pales into insignificance. (*Transcripts*, p. 91)

5.14 Mr MacGillivray's argument underlines the importance of addressing safety problems in a comprehensive and wide ranging manner. Individual regulations and other solutions are important. However, their effectiveness will ultimately be decided by the quality of the industry's safety culture.

5.15 The International Labour Organization (ILO) 180 Convention concerning Seafarers' Hours of Work and the Manning of Ships is expected to apply to all ships entering European Union ports. Key features of this convention include the following.

- hours of work and rest periods
- use of drills
- compensatory rest periods if a seafarer is called to work
- the posting of a schedules for each position, and the posting of the flag state's minimum hours of rest in the working language(s) of the ship and in English
- provisions for seafarers under 18 years old
- crewing levels
- responsibilities of ship owners and masters

5.16 In 1994 AMSA commissioned a study on the fatigue, stress and occupational health of Australian mariners. The study involved a survey of mariners. It made several recommendations relating to issues such as rest, communication with family and working conditions such as pollution (Sub 1, *Submissions* pp. 39–40).

## **Language**

5.17 The International Transport Workers' Federation (ITF) argued that significant progress had been made in securing English as the maritime language. For example, STCW95 included greater English language requirements. There was also wide agreement for the International Convention for the Safety of Life at Sea (SOLAS) to require the use of English for such situations as bridge communications, ship to shore and pilot exchanges in the absence of a common first language (Sub 17, *Submissions* p. 157).

## **Initiatives in the Asia Pacific region**

5.18 The Department of Workplace Relations and Small Business informed the committee that the Transportation Working Group of the Asia Pacific Economic Cooperation forum (APEC) organised assistance for APEC countries, such as China, Indonesia and the Philippines, to help them to meet the requirements of STCW95. For example, Australia was involved with APEC funded projects in the Philippines and Indonesia (Sub 19, *Submissions* pp. 180–1).

## **Continuing issues**

### **Uniformity and level of standards**

5.19 The committee recognises that Australian crews are well trained, and that Australian institutions provide a high level of training to both Australian and foreign seafarers. The committee believes that it is very important that this high standard be maintained.

5.20 In this inquiry the committee received little evidence relating to the standard of training provided to foreign seafarers. However, it notes that safe shipping is highly dependent on well trained crews and it welcomes the introduction of STCW95.

## **Certificates**

5.21 The committee is concerned at reports of the continued availability of false certificates and the lack of appropriate certificates held by some crew members (*Transcripts*, p. 87).

5.22 The committee notes that the issue of recognition of foreign certificates is complex and supports the IMO's continued monitoring of training regimes (*Transcripts*, p. 70).

## **Language**

5.23 The Chartered Institute of Transport in Australia Incorporated commented that language problems may impede the impact of the ISM Code (Sub 15, *Submissions* p. 147). The committee notes that there have been developments on this front, but further work needs to be done to ensure the scope for communication errors is minimised.

## **Fatigue**

5.24 The committee received evidence that fatigue on the job was a significant source of concern in the industry.

5.25 The ITF argued that the physical and psychological effects of fatigue included the following:

- loss of concentration and diminished decision-making powers
- loss of alertness and extended reaction times
- impaired coordination of control skills
- tiredness, depression and irritability
- poor sleep quality and disrupted sleep patterns
- increased dependence upon drugs, tobacco or alcohol
- loss of appetite, gastro-intestinal problems
- increased risk of infection
- higher incidence of cardiovascular disease
- increased accident and mortality rates (ITF, p. 4)

5.26 *Stella Maris* expressed concern that seafarers on foreign ships (particularly flag of convenience vessels) were abusing drugs in an effort to stay awake (*Transcripts*, p. 89).

5.27 According to the ITF, independent research showed that '...the performance of people who had been awake for between 18 and 24 hours was similar to those with a blood-alcohol level of 0.05.' (ITF, p. 4) The performance of people who had been awake for 26 hours was equivalent to that of a person with a blood-alcohol level of 0.1 (ITF, p. 4).

5.28 Long hours can be particularly dangerous when combined with the following (ITF, p. 5).

- little time available for continuous sleep
- disruptive work patterns
- long tour lengths
- poor shipboard conditions
- noise and vibration
- poor weather

5.29 A report by the ITF described fatigue as 'endemic within the shipping industry—even under the best-regulated registers.' (ITF, p. 2)

5.30 The report was based on the findings of an ITF survey of 2500 international seafarers. Some of the findings were as follows (ITF, pp. 7–8).

- Almost 55 per cent of seafarers surveyed said that their working hours presented a danger to their personal health and safety.
- One third of respondents reported that they worked, on average, at least 12 hours per day.
- More than 5 per cent of respondents reported that they worked, on average, more than 15 hours per day.
- Almost two thirds of respondents reported that they worked, on average, at least 60 hours per week.
- One quarter of respondents reported that they worked, on average, at least 80 hours per week.
- Generally, senior staff worked the longest hours.

5.31 A study undertaken by AMSA reported that Australian seafarers described the quality and duration of their sleep as being fair to very poor. Approximately half the workforce said that they had less than six hours sleep each day (AMSA 1997 (b), p. 106).

5.32 The continuing issue of fatigue is of concern to the committee, and worthy of further analysis and action by AMSA and the IMO.

### 5.33 **Recommendation 10**

**The committee recommends that:**

- **the Australian Maritime Safety Authority promote international monitoring of seafarers' excessive hours of work in the interests of ameliorating and alleviating fatigue**
- **the Commonwealth investigate and report to Parliament on ratifying International Labor Organization Convention 180 (Seafarers' Hours of Work and the Manning of Ships Convention, 1996).**

## **Navigation Amendment (Employment of Seafarers) Bill 1998**

5.34 The *Navigation Act 1912* includes provisions relating to the employment of seafarers.

5.35 The Navigation Amendment (Employment of Seafarers) Bill 1998 would amend the employment related provisions of the *Navigation Act 1912* so as to avoid inconsistencies with the *Workplace Relations Act 1996* and the concept of company employment for seafarers in the Australian shipping industry (Exhibit 9, p. 1).

5.36 The amendments provide for the *repeal* of '...a large number of employment related provisions in the *Navigation Act 1912* dealing with the following matters:

- the Marine Council and its functions;
- prohibition on demanding or receiving fees for the supply of seamen;
- prohibition (except as prescribed) on using the crew of a ship engaged in overseas voyages for handling cargo or ballast while the ship is in an Australian port;
- requirements to enter a prescribed form of 'articles of agreement' covering conditions of employment; and
- detailed procedures for the discharge of seamen from service on a ship and methods for paying their wages. (Exhibit 9, p. 4)

5.37 The main functions of the Marine Council:

... have been to deal with issues concerning the suitability of seafarers for employment at sea and standards of accommodation. Under company employment it is the responsibility of the employer to determine these matters and there is no need for a Government appointed body to perform such tasks. (Exhibit 9, p. 1)

5.38 The committee received conflicting views about the implications of these changes, and they are outlined below.

### ***Position of the Maritime Union of Australia***

5.39 The Maritime Union of Australia (MUA) argued that the changes undermine safety standards at a time when there is an international trend towards regulation.

5.40 The MUA argued that the abolition of the Marine Council will mean that there is no independent third party to determine the suitability of seafarers. The Marine Council has been able to deregister seafarers that commit crimes that may impact on the industry. Seafarers have been required to hold certificates of competency for the level of work they undertake. This has been similar to the system administered by the United States Coast Guard (Sub 11.01, *Submissions* pp. 244–5).

5.41 The MUA argued that the Marine Council has played a role in ensuring that accommodation standards on Australian vessels are adequate. (Sub 11.01, *Submissions* p. 245)

5.42 The Bill removes an obligation on the Master of the ship (acting on behalf of the owner) to enter into Articles of Agreement with seafarers. The MUA argued that there would be nothing to prevent seafarers being provided to ships by labour hire firms. It was argued that these firms may have little understanding of the industry and may have little incentive to ensure that crews are well trained, and that this action would also remove AMSA's ability to independently check the training records of individual crew members. (Sub 11.01, *Submissions* pp. 245–6)

5.43 The Bill removes the prohibition on demanding a fee from seafarers in return for employment. The MUA argued that this could lead to jobs being filled on the basis of ability to pay rather than merit. (Sub 11.01, *Submissions* p. 246)

5.44 The Bill removes the right of seafarers to paid sick leave ashore regardless of the cause of the illness. The MUA argued that this will '...encourage seafarers to continue to work when ill or injured causing a safety risk to the rest of the crew.' (Sub 11.01, *Submissions* p. 247)

5.45 The MUA argued that repatriation rights are under threat (Sub 11.01, *Submissions* p. 247).

5.46 The MUA argued that the amendments may threaten Australia's ability to comply with STCW95 (regulations 1/5, 1/6, 1/7, 1/8, 1/9, 1/10) (Sub 11.01, *Submissions* p. 247).

5.47 The MUA argued that the amendments may mean that Australia does not comply with ILO Convention 22 (Seamans Articles of Agreement Convention), which Australia has ratified (Sub 11.01, *Submissions* p. 247).

5.48 The MUA argued that as it stands, the *Navigation Act 1912* does not preclude a more enterprise focused approach to employment (Sub 11.01, *Submissions* p. 247).

### ***Position of the Commonwealth***

5.49 The Department of Workplace Relations and Small Business argued that: 'The proposed measures will not affect qualifications, competency and welfare of Australian seafarers.' (Sub 19.02, *Submissions* p. 252)

5.50 The Department of Workplace Relations and Small Business argued that: 'It will continue to be the responsibility of employers to ensure their ships are crewed by properly qualified seafarers and it will still be an offence under the Navigation Act s.16 for unqualified persons to perform duties of master, officer or seaman.' (Sub 19.02, *Submissions* p. 252)

5.51 The Department of Workplace Relations and Small Business argued that AMSA would still have the right to inspect evidence of qualifications (Sub 19.02, *Submissions* p. 252).

5.52 The Department of Workplace Relations and Small Business argued that the current prohibition on placement fees '...does not reflect the current world practice of ship management and crewing agencies' (Sub 19.02, *Submissions* p. 253).

5.53 The Department of Workplace Relations and Small Business argued that the amendment to sick leave is a matter for employers and seafarers to negotiate (Sub 19.02, *Submissions* p. 253).

## **Conclusion**

5.54 The major development in the area of crew training and competency has been the implementation of the revised Convention on Standards of Training, Certification and Watchkeeping.

5.55 The committee notes that there are several continuing competency and training issues. Of particular concern to the committee is the level of fatigue. Other issues include uniformity of standards, language barriers and continued availability of false certificates of crew qualifications.

5.56 The committee notes the strong differing opinions regarding the Navigation Amendment (Employment of Seafarers) Bill 1998, and looks forward to these issues being debated in Parliament.