

# Revision of ISM Code and STCW 95

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## Introduction

Despite efforts made by governments and international organizations like the International Maritime Organisation (IMO) to tighten regulatory measures, substandard ships and shipping-related practices continue to flourish. Serious ship accidents continue to occur and reports on abuse of seafarers are on the rise as the industry becomes more and more competitive and crews become increasingly multinational<sup>1</sup>. The statistics of the Norwegian Maritime Administration suggests that after several years with a slow trend of improvement of the loss rate the situation for 2005 shows an alarming increase in accidents of 19% for ships in Norwegian waters and up to 35% for ships in external waters. These figures are clearly reversing the slow improvement of the loss rate since the International Management Code for the Safe Operation of Ships and for Pollution Prevention (ISM Code) implementation, and it has returned to the pre-ISM loss ratios. The figures indicate that a great number of accidents are caused by “individual and organizational failures”, clearly indicating that the Safety Management System is failing<sup>2</sup>.

## ISM Code and STCW 95

A number of very serious marine casualties occurred in the 1980s, in all of which human error and poor management methods were identified to be the underlying causes. The ISM Code became mandatory for passenger ships, high-speed craft and tankers in 1998 and for cargo ships and mobile offshore drilling units of more than 500 gross tons in 2002. It is an inclusive safety culture based on safety management and pollution prevention systems. Nothing so wide-ranging could succeed without extensive training<sup>3</sup>.

The International Convention on Standards of Training, Certification and Watchkeeping for Seafarers 1995 (STCW 95) sets the standards of competence for seafarers internationally. One of the main goals in the revision of the STCW 95 was to establish an adequate quality standard for education<sup>4</sup>. Prior to 1978, the standards of training, certification and watchkeeping of officers and ratings were established by individual governments, usually without reference to practices in other countries. As a result standards and procedures varied widely, even though shipping is the most international of all industries. The STCW 95 entered into force on 1 February 1997.

## Different interpretations to the ISM Code and STCW 95

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<sup>1</sup> Hayashi, M. (2001), Toward the Elimination of Substandard Shipping: The Report of the International Commission on Shipping, *The International Journal of Marine and Coastal Law*, Vol. 16, No.3, pp. 501-513.

<sup>2</sup> Sagen, Arne (2006), ISM makes way for self assessment, *Lloyd's List*, 21 June.

<sup>3</sup> Nivas, S. (2007), The ISM Code and onboard training: How to make it work, *Seaways*, July, pp. 23-25.

<sup>4</sup> Sletner, Tor Christian (2000), Quality system for the implementation of STCW-95 in higher maritime education in Norway, *Maritime Policy & Management*, Vol. 27, No. 1, pp. 89-100.

Though many nations provide excellent training, the performance criteria and evidence required for evaluation competence under the STCW Code are open to differing interpretations and this has caused increasing unease. The IMO's Maritime Safety Committee (MSC) meeting in May 2006 accepted a proposal from the STW Sub-committee for a comprehensive review of the Convention and the Code. There is already a wide-ranging debate on different aspects of competency that will shape the STCW agenda<sup>5</sup>.

### **Competence of management and operation**

The Nautical Institute and Institute of Marine Engineering, Science & Technology have set up a STCW Working Group and discussed the following subjects and they are assessment of competence, period of seagoing service, competence assessor, ship handling, leadership training, manning and fatigue, training for new and emerging technologies including ECDIS training, ship safety manager, risk assessment, fraudulent certification, cargo endorsements and tanker operator competence. As to the competence of the assessor, the current practice is that the Code mandates basic instructor and assessor qualifications but these levels are not set against criteria. Most instructors and assessors undergo rigorous national training programmes, but the issues of an international standard and how quality should be assured were raised<sup>6</sup>.

The starting point for the revision of the STCW 95 underlines the importance of establishing a defined level for educational standards. The goal is to ensure that all personnel shall be competent to undertake their duties for the safety of mankind and the environment. Well-defined quality standards for education are definitely required for changes onboard and ashore in technology, operations, practices and working procedures. STCW 95 recognizes the foregoing in order to eliminate accidents and pollution of the environment at sea<sup>7</sup>.

### **Manning**

The International Federation of Ship Masters' Associations believes that the IMO should develop a goal-based standard against which proposed manning levels of vessels of similar size, trade, level of automation and information technology support can be evaluated in a consistent manner. Drawing on scientific studies into fatigue and casualty data analysis, a joint submission of the United Kingdom, Sweden and Spain argues that the costs of accidents outweigh those of inaction<sup>8</sup>. It is impossible to separate fatigue from undermanning and the general fatigue on a ship is directly caused by the manning problems on ships. Regardless of the size of ship or the

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<sup>5</sup> Teo, R. (2006), Training the teachers: Standards in training and assessment beyond STCW 95, *Seaways*, July, pp. 12-14.

<sup>6</sup> Aylott, P. (2007), Working together to improve STCW, *Seaways*, August, pp. 15-16.

<sup>7</sup> Sletner, Tor Christian (2000), Quality system for the implementation of STCW-95 in higher maritime education in Norway, *Maritime Policy & Management*, Vol. 27, No. 1, pp. 89-100.

<sup>8</sup> Lloyd's List Correspondent (2007), IMO finally wakes up to fatigue problems, *Lloyd's List*, 22 January.

flag, the undermanning problem is universal in its effect. There is overwhelming evidence that fatigue causes many accidents at sea and in port, in addition to the general reduction in safety<sup>9</sup>.

To reduce fatigue, hours of work and rest at sea need to be sufficiently balanced so that seafarers are adequately rested before performing their duties. Equipment specific and generic training is raised. Medical fitness is another perennial issue. The standards should not only reflect the need for seafarers to be healthy but also fit enough to carry out their duties. As a time when people working ashore are expressing more and more of an interest in staying fit, eating healthily and maintaining well being, may be it is time for the medical fitness standards to address more than just an instantaneous assessment of fitness as an absence of ill health<sup>10</sup>.

### **Documentation and paper work**

Apparently different views were strongly expressed on the changes of the ISM Code in different occasions. One of the leading loss prevention experts in shipping, Eric Murdoch, of Standard P&I Club listed some problems on the ISM Code and they are that an excessive emphasis on paper; some systems imply failure to manage safety because of excessive concentration on control without effective auditing; the Code is flawed and does not promote a risk-based management; and the role of the superintendent is diminished to checking the ship's machinery<sup>11</sup>.

The independent group of experts of the MSC under the IMO was highly critical of an excessive paper-based bureaucracy. They based their findings on a questionnaire-type survey of subjective views and opinions, because the data available on the code's impact on safety and pollution prevention were either lacking or incompatible to allow for reliable analysis<sup>12</sup>. The responses indicate that greater efficiency improvements could be achieved through streamlining and reducing paperwork, increased use of information technology and integration of shipboard documents for the ISM Code and the International Ship and Port Facility Security (ISPS) Code<sup>13</sup>.

### **Safety culture**

The operational effectiveness of the ISM Code is studied by the Seafarers International Research Centre of Cardiff University, Wales and job insecurity, fear of accountability and criminalization, and shipboard hierarchy were identified as major obstacles. The study suggested that top priority should be given to bring about a common understanding, at all levels of company and shipboard personnel, of the principles of occupational health and safety self-management<sup>14</sup>. The group of experts of the Maritime Safety Committee concluded that respondents who had embraced a

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<sup>9</sup> Lloyd, M. (2008), Manning and fatigue, *Seaway*, July, pp. 27-29.

<sup>10</sup> Giddings, I. (2006), Revising STCW: An opportunity for the Institute, *Seaways*, December, pp. 8-9.

<sup>11</sup> Brewer, James (2007), Murdoch calls for ISM overhaul to put a lid on 'human error', *Lloyd's List*, 13 September.

<sup>12</sup> Bievre, Aline de (2007), Cracking the code presents IMO with a tough challenge, *Lloyd's List*, 25 July.

<sup>13</sup> Lloyd's List Correspondent (2006), Thinktank says cut ISM code paperwork, *Lloyd's List*, 3 May.

<sup>14</sup> Bievre, Aline de (2006), Study shows risk assessment is a matter of perception, *Lloyd's List*, 20 September.

safety culture “as a positive step toward efficiency” reported evidence of tangible safety benefits<sup>15</sup>.

## **Technology**

The International Chamber of Shipping and the International Shipping Federation, with the support of BIMCO, submit that the issue of fatigue cannot be dealt with by the revision of Assembly Resolution 890 alone. They suggest, among other things, that further consideration is given to advances in technology, and in particular to the integration of bridge systems and its possible effect on reducing fatigue<sup>16</sup>. AIS and ECDIS have arrived well in advance of available appropriate training. The introduction of the ISPS Code required various measures to be taken, including training<sup>17</sup>. There is a strongly held view that assessment processes should make far greater use of simulations. Simulation is a powerful teaching and learning educational tool and does not necessarily involve the use of capital intensive simulators<sup>18</sup>.

## **Conclusion**

People in the shipping industry demand review and changes on both the STCW 95 and ISM Codes. It was agreed in the IMO and shipping industry that a further review of the STCW 95 was necessary to resolve inconsistencies and to ensure that it will meet the new challenges facing the shipping industry today and in the years to come. To update the ISM Code and STCW 95, it may be difficult to implement all possible updates and/or changes at the same time. A priority of the order of updates enables the launch of the marine safety management in a practical manner.

A study should be carried out to identify the problems and determine the priorities of changes for the ISM Code and STCW 95. The results of the study may assist flag states to formulate relevant shipping policy in relation to marine safety management in safe operation of ships, pollution prevention and standards of training, certification and watchkeeping for seafarers.

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<sup>15</sup> Bievre, Aline de (2007), Cracking the code presents IMO with a tough challenge, *Lloyd's List*, 25 July.

<sup>16</sup> Lloyd's List Correspondent (2007), IMO finally wakes up to fatigue problems, *Lloyd's List*, 22 January.

<sup>17</sup> Giddings, I. (2006), Revising STCW: An opportunity for the Institute, *Seaways*, December, pp. 8-9.

<sup>18</sup> Lewarn, B. (2008), STCW Review: Challenges for maritime educators and trainers, *Seaways*, February, pp. 24-26.