



AD HOC INTERSESSIONAL MEETING OF
THE STW WORKING GROUP RELATING
TO THE COMPREHENSIVE REVIEW OF
THE STCW CONVENTION AND CODE

1st session
Agenda item 3

STW/ISWG 1/3/7
6 August 2008
ENGLISH ONLY

REVIEW OF CHAPTER II OF THE STCW CONVENTION AND CODE

Training requirements for bridge resource management, leadership and managerial skills, situational awareness, and decision-making

Submitted by Australia, India, New Zealand, the United States and the
Institute of Marine Engineering, Science and Technology (IMarEST)

SUMMARY

<i>Executive summary:</i>	This document proposes amendments to chapter II of the STCW Code to address training requirements for effective bridge resource management, leadership and managerial skills, situational awareness, and decision-making as identified by STW 39
<i>Strategic direction:</i>	5
<i>High-level action:</i>	5.2
<i>Planned output:</i>	5.2.2.1
<i>Action to be taken:</i>	Paragraph 7
<i>Related documents:</i>	STW 39/7/3; STW 39/7/7; STW 39/7/46 and STW 39/WP.4

Introduction

1 The Maritime Safety Committee (MSC), at its eighty-fourth session, approved the Sub-Committee on Standards of Training and Watchkeeping (STW) recommendation to convene an *ad hoc* intersessional working group in September 2008 to continue to make progress on the comprehensive review.

2 The Sub-Committee on Standards of Training and Watchkeeping, at its thirty-ninth session (3 to 7 March 2008), established a working group on the comprehensive review of chapters I, II, III, VI and VIII. The working group considered the proposals contained in STW 39/7/7 (Singapore) and STW 39/7/3 (Australia *et al.*) and agreed that competence requirements relating to Bridge Resource Management (BRM), Leadership and Management skills, Situational Awareness and Decision-making, needed to be placed in tables A-II/2 for the management level. The working group agreed to forward the submitted proposals to the *ad hoc* Intersessional Working Group and invited Governments to submit new proposals.

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3 Furthermore, the working group also recognized the possibility of including the competence requirements for Bridge Resource Management, Leadership and Management skills, Situational Awareness, and Decision-making, in tables A-II/1 for the operational level.

4 The proponents of this document believe that BRM should be a requirement at the operational level, since the officer in charge of the navigational watch is responsible for assessing how the bridge watch resources are being allocated and used during his/her watch. In addition, we believe that basic situational awareness principles should be included at the operational level, as part of the BRM training.

5 Regarding the master, he/she is ultimately responsible for bridge watch resources, but more importantly, he/she is responsible for allocation of resources for all vessel operations. We believe that this particular issue can be addressed under the competence Leadership and Managerial skills. In addition, we believe that management level personnel should also receive situational awareness and decision-making training.

6 In light of the foregoing, we propose additional competences to be added to tables A-II/1 and A-II/2 of the STCW Code as set out in the annex.

Action requested of the Group

7 The Group is invited to consider the proposals contained in this document when reviewing tables A-II/1 and A-II/2 of the STCW Code.

ANNEX

**PROPOSED AMENDMENTS TO THE SEAFARERS' TRAINING,
CERTIFICATION AND WATCHKEEPING (STCW) CODE**

**Part A
Chapter II**

Section A-II/1**Table A-II/1**

Specification of minimum standard of competence for officers in charge of a navigational watch on ships of 500 gross tonnage or more

1 In table A-II/1, under the competence “Maintain a safe navigational watch”, in column 2 delete “Thorough knowledge of effective bridge teamwork procedures”.

2 Insert the following new competences into table A-II/1 under the function “Navigation at the operational level.”

Function: Navigation at the operational level

Column 1	Column 2	Column 3	Column 4
Competence	Knowledge, understanding and proficiency	Methods for Demonstrating competence	Criteria for evaluating competence
Apply Bridge Resource Management Principles on board ship	Knowledge of Bridge Resource Management principles, including: <ul style="list-style-type: none"> .1 allocation of resources .2 assigning of duties .3 allocation of tasks to be performed in a clear order of priority .4 collation, processing and interpretation of essential information from equipment and team in making operational decisions 	Assessment of evidence obtained from one or more of the following: <ul style="list-style-type: none"> .1 approved training .2 approved simulator training 	Communications amongst the team are effective and comply with established procedures Decisions and actions maximize navigational safety
Situational awareness	Knowledge of the specific/critical information required for maintaining a safe navigational watch Ability to collect information about the environment (position, weather, traffic, etc.) critical to the navigational watch	Assessment of evidence obtained from one or more of the following: <ul style="list-style-type: none"> .1 approved training .2 approved simulator training 	Collection and interpretation of information is carried out in a timely manner Decisions and actions ensure the safety of navigation, protection of the marine environment and safety of the ship and persons on board

Column 1	Column 2	Column 3	Column 4
Competence	Knowledge, understanding and proficiency	Methods for Demonstrating competence	Criteria for evaluating competence
	Ability to monitor and report changes and/or critical information throughout the voyage Ability to identify possible future threats throughout the voyage		

Section A-II/2

Table A-II/2

Specification of minimum standard of competence for masters and chief mates on ships of 500 gross tonnage or more

3 In table A-II/2 under the competence “Establish watchkeeping arrangements and procedures”, delete the Knowledge, understanding and proficiency “Effective bridge teamwork procedures”.

4 In table A-II/2,” under the function “Controlling the operation of the ship and care for persons on board”, delete the competence “Organize and manage the crew”.

5 Insert the following competences into table A-II/2 under the function “Controlling the operation of the ship and care for persons on board.”

Function: Controlling the operation of the ship and care for persons on board

Column 1	Column 2	Column 3	Column 4
Competence	Knowledge, understanding and proficiency	Methods for Demonstrating competence	Criteria for evaluating competence
Apply Leadership and management skills	<i>Authority and assertiveness</i> Ability to take command as the situation warrants Ability to provide clear instructions and direction <i>Ability to provide and maintain standards, goals and procedures</i> Organization, Planning and Coordination	Assessment of evidence obtained from one or more of the following: .1 approved training .2 approved simulator training	Communications are clear, understood and consistently successful Standards and operating procedures are established and maintained in compliance with international regulations and guidelines The crew are allocated duties and informed of expected standards of work and behaviour in a manner appropriate to the individuals concerned

Column 1	Column 2	Column 3	Column 4
Competence	Knowledge, understanding and proficiency	Methods for Demonstrating competence	Criteria for evaluating competence
	<p><i>Ability to encourage crew participation in planning and task development</i></p> <p><i>Development and maintenance of a clear Plan, including:</i></p> <ul style="list-style-type: none"> .1 goals and parameters for successful task completion .2 the need for and process for modifications .3 feedback to suggestions and questions <p><i>Workload management</i></p> <p>Ability to prioritize tasks among crew according to qualification and ability</p> <p>Ability to properly assign duties and responsibilities as resources permit</p> <p>Knowledge of stress and fatigue symptoms¹</p>		<p>The order of task priority, the work performance and task completion times are relevant to the nature of the tasks</p>
Situational awareness	<p><i>Systems awareness</i></p> <p>Handling of system changes, including:</p> <ul style="list-style-type: none"> 1. Monitoring and reporting changes in systems' states 2. Acknowledging entries and changes to systems <p><i>Environment awareness</i></p> <p>Handling of environment changes, including:</p> <ul style="list-style-type: none"> 1. Collection of information about environment (position, weather, traffic) 2. Sharing information about the environment with others 	<p>Assessment of evidence obtained from one or more of the following:</p> <ul style="list-style-type: none"> .1 approved training .2 approved simulator training 	<p>Information obtained is correctly interpreted and analysed taking into consideration the circumstances and conditions</p> <p>Decisions to make changes and adjustments are carried out in a timely manner</p>

¹ The IMO "Guidelines on Fatigue" may be of assistance in the preparation of courses.

Column 1	Column 2	Column 3	Column 4
Competence	Knowledge, understanding and proficiency	Methods for Demonstrating competence	Criteria for evaluating competence
	<p>Use of outside resources when needed to maintain situation awareness</p> <p><i>Anticipation of future events</i></p> <p>Ability to:</p> <ol style="list-style-type: none"> 1. Discuss time constraints with crew 2. Discuss contingency strategies 3. Identify possible future problems 		
Use of appropriate decision-making principles	<p>Knowledge and ability to apply decision-making [techniques][principles]:</p> <ol style="list-style-type: none"> 1. Problem identification 2. Gathering of information 3. Identify alternative course of actions 4. Risk assessment of the alternatives, including consequences, pros and cons 5. Selecting and implementing a course of action 6. Evaluating the outcome of the decision 	<p>Assessment of evidence obtained from one or more of the following:</p> <ol style="list-style-type: none"> .1 approved training .2 approved simulator training 	<p>Actions are identified and carried out in accordance with established principles</p> <p>The problem causes are identified and actions are designed and carried out to ensure overall safety and security of the ship, and avoid pollution of the marine environment</p>