

CROWD MANAGEMENT, AN STCW PREREQUISITE. PAPER AT CRUISE + FERRY 97

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According to the STCW Convention and the HSC Code, all crew members onboard ro-ro passenger ferries should be trained in Crowd Management, i.e. to control and effectively evacuate the passengers in case of an emergency.

Although the Convention, as it is written, applies to ro-ro passenger ferries only, IMO has afterwards recommended that the same rules should cover other passenger-carrying vessels as well. Most National Administrations will consequently also require certificates of Crowd Management Training for crew members onboard cruising ships and other passenger ships.

One reason why the IMO, perhaps somewhat hastily, added crowd management training to the STCW convention and HSC Code may be the disaster of the passenger ro-ro ferry *Estonia* in the Baltic Sea, 28 September 1994.

Heavy Emphasis on Crew Capacity

In short, Crowd Management is the ability to assist passengers in an emergency situation; to control passengers in staircases, corridors and passages; to use procedures for preventing panic and other irrational behaviour; and to communicate with, instruct and inform passengers. Crew members shall furthermore be capable of mobilizing passengers to assist and also possess the capacity to convince and calm passengers when an emergency situation is over. To cope with this, the regulations call for knowledge in crisis management and human behaviour, with the training focused on applied psychology for competent assessment of both passenger and crew reactions (fig. 1).



According to STCW: The Crew Must Possess the Ability to Monitor and Manage a Crowd During an Emergency Situation

- The crew must be able to provide passengers with relevant information during an emergency situation. (Once people know why they are required to take certain actions they are more willing to do so.)
- The crew must be able to take a leading role in an emergency situation. (Passengers must have faith in the personnel on the basis of their uniform and their verbal and non-verbal behaviour.)
- The crew must be able to react in a proper way after having assessed the reaction pattern of the passengers.

- The crew must be able to mobilize some of the passengers to assist.
- The crew must be able to convince passengers that an emergency situation is over if this really is the case.

Fig 1. IMO Interpretation of STCW and HSC demands on crew members.

The Nucleus for Chaos Is Inherent in All Emergencies

The reasons for the IMO regulations are obviously past lessons but probably also that passengers often by far outnumber crew members. It is not unusual for vessels carrying three or four thousand passengers to only have a crew of between two and three hundred and for fast ferries carrying close to one thousand passengers to have less than fifty crew to handle an emergency and a possible evacuation. Coping with any emergency situation, with all its inherent possibilities for chaos, naturally calls for very intelligent, effective, knowledgeable and trained behaviour by the crew.

Normally, evacuation plans and drills are aimed to cover all conceivable situations and to guide the crew in coping with ominous situations in an organized manner. Plans, while very important, do not as a rule take into consideration the tendency for real emergencies to develop beyond what was expected. Nor can we plan for what we are unable to imagine. Plans and drills have thus limitations.

The Crowd Management Training is Designed to Cope with The Unexpected

Regarding a crowd's reaction patterns in a crisis or in emotional turmoil, unpredictable behaviour must be regarded as regular. To also cover unexpected situations, the Crowd Management Training is designed to facilitate a flexible approach as well as intelligent and effective improvisations by the crew. To accomplish this, the training aims at understanding the basis for how people react. Such knowledge facilitates for all crew members to read, recognize and understand various types of behaviour and to address the underlying emotional origin, instead of only vainly fighting the behavioural consequences. To gain this deeper insight, the training is designed and supervised by experienced maritime psychologists.

The training covers a full day where the crew members reach an understanding of the psychological basis for how people spontaneously assess and react to stressful information. Crew members learn how passengers reach their personal understanding of what is going on, how they value their opportunities for actions and how emotional consequences may affect their behaviour. The course covers both rational and irrational behaviour together with apathy, panic and various shock reactions. The attendants learn how to understand this kind of behaviour and how to cope with it.


The training also emphasizes various difficulties in managing and evacuating different categories of passengers. Besides dealing with reactions from parents who are separated from their children and children who are separated from their parents, the course deals with managing special passenger categories such as various kinds of disabled persons, elderly people, drunk people, so-called "VIPs" (people who demand special respect and treatment or who challenge the crew members' authority), passengers unable to understand the languages spoken onboard and travellers in groups with guides. Fellow crew members' possible reactions and their impact on passengers are also dealt with.

On the basis of understanding and skilful assessing, crew members learn various strategies for reducing the effect of unwanted or irrational behaviour and to cope with and control it. Findings and examples from real emergency situations and accidents are used in the training.

Special Emphasis on Information for Officers

The course is somewhat different for officers because most officers do not deal physically with passengers in emergency situations. Therefore their version of the course is more focused on information and how to manage an emergency situation or evacuation through alarm signals and loud speaker systems.

Issuing inaccurate information through the public address system, communication of insufficient information or informing in a faulty manner may create an unmanageable situation for the rest of the crew. Therefore the officers learn about various pitfalls and their expected consequences in passenger and crew reactions. Officers are even taught a good and structured way of giving information and they are supplied with a checklist (fig. 2) which should be kept on the bridge for their guidance.

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Informing Passengers in Case of Emergency

- **Information to passengers must be given high priority**
- **Be prepared for stress reactions from passengers and crew members**
- **Control the information**
 - The crew must be more well informed than the passengers.
- **Never lose your credibility**
 - Introduce yourself (title and name) and keep your voice under control.
 - Talk slowly and clearly. Inform without being talkative. Avoid technical language.
- **The messages must agree with what the passengers themselves are experiencing**
 - Report everything that the passengers can perceive or understand themselves.
- **Do not make light of real risks**
 - Passengers may expect that the truth is being kept from them.

1. Tell what has happened
2. Give your appraisal of the situation
3. Give details about what measures have been taken
4. State the expected outcome
5. State whether the situation has been reported ashore
6. Point out that the crew is trained for the task and that the passengers must follow their instructions
7. State the point in time for the next announcement

- **Give information frequently**
 - Every 10 to 15 minutes during an active phase. Every half hour or hour during a more stable phase. Restrict yourself to instructions and information only.
 - Specify the precise time for the next announcement and keep the time punctually.
 - Repeating previous information is also informative.
 - Uncertainty is the worst state.
- **Help passengers find their relatives and travel companions**

Fig 2. Officers' bridge checklist for information to passengers.

Alarm Signals Are Not Sufficient

During the course, time is reserved for a thorough discussion with the officers about the timing and use of alarm signals. Most accidents have taught us that alarm signals, together with distress calls, often are transmitted too late. Hesitations in using alarm signals are understandable because of their consequences onboard, their impact on passengers, the stress they cause and the difficulties in reversing the arising situation. This discussion is aimed at understanding the psychological dynamics behind the reasons for delay in order to be able to cope with undue hesitations in a rational way.

Experience shows, for example, that alarm signals seldom cause panic among passengers. On the other hand, alarm signals are mostly not immediately understood. They give no guidance to the passengers and must therefore be followed by vocal instructions and information.

The normal reaction among passengers when an alarm signal sounds is a sudden interruption in whatever activities they are involved in. Most people will turn their faces and start looking at the device which produces the alarm signal. After some moments of silence most of them will start discussing the signal and questioning each other in order to investigate possible interpretations, rule out misunderstandings and to reach a joint conclusion regarding its significance. This rather slow reaction pattern is formed by a mix of surprise and disbelief together with a reluctance to be intruded upon by something stressful and potentially dangerous in whatever pleasurable activities they are involved.

The alarm signal as such gives no guidance to the passengers about what they are supposed to do. Past experience shows that most passengers don't look at instruction posters and if they do, they are not able to remember what the posters said. Experience seems also to show that the International General Emergency Alarm signal is too complicated. Seven short (or more) and one long signal are not spontaneously regarded by most people as a distress alarm. Moreover, the signal is long and may be misinterpreted if someone only hears parts of it.

Passengers may believe that five or six short signals followed by a long signal denote something else than a General Emergency Alarm. Furthermore the signal does not form a rhythmical pattern or a melody like other familiar signals such as the fire-brigade's or the ambulance's. Furthermore it is not continuous as most other signals but instead repeated. Besides this, the General Emergency Alarm signal is not easy to distinguish for people who are unable to count, such as small children.

Using only alarm signals, leaves passengers alarmed and usually confused. They are left on their own to evaluate the situation and to find out what is expected of them. Therefore alarm signals by themselves may create a disorganized situation if people evaluate the situation differently and follow one another in a variety of actions. The officers are therefore informed that alarm signals immediately must be complemented by vocal messages giving instructions and more information.

A vocal message can give passengers directives and information and assure that all perception of the situation and options for actions are in line with the current situation and what is wanted by the Command Team. The importance of directives, instructions and information through the public address system directed to the passengers is heavily stressed in the Crowd Management Course because this is the most effective means to handle masses of passengers.

Passengers must have instructions for rational action. Otherwise they are left to themselves to find out what to do in an unfamiliar environment and this may result in a variety of irrational behaviour. People also tend to forcefully react in line with their own perceptions of a distressful situation and therefore the crew must take charge of the passengers' understanding. The means for this is to give adequate information. Information alone is, however, seldom sufficient onboard vessels because merely understanding a situation will not always lead passengers to rational actions if they are unfamiliar with the onboard environment.

When sounding alarms, the best way is therefore to immediately use the public address system to complement the alarm signal. In this case the message should be reversed, with instructions first, followed by information, i.e. actions primary, understanding secondary.

Responsibility Increases the Coping Potential

The course also emphasizes the importance of the crew's behaviour. As stated in IMO documents derived from the STCW Convention and the HSC Code: "The passengers must have faith in the personnel on the basis of their uniform and their verbal and non-verbal behaviour." The course therefore deals with both responsibility and authority as means for crowd management.

The sense of responsibility is important because it is an established psychological fact that responsibility increases a person's capacity to withstand stress. Crew members must therefore be constantly aware of their responsibilities towards the passengers in emergency situations. This awareness, in combination with their training, will help them to overcome their own emotional turmoil and stress and to react and act in a more rational way.

The same dynamics also lie behind some parents' extraordinary capacities when they are together with their children and also behind why some passengers voluntarily approach the crew and offer their assistance. They probably volunteer for two different reasons. Firstly because they feel that they can help, and secondly because having a role and a responsibility helps them to overcome their own stress. Doctors, nurses, policemen, seafarers and fire-fighters on leave together with other professionals are often especially prone to cope with their stress in this constructive manner, and they should also be welcomed by any small crew as a valuable reinforcement.

Authority Is a Prerequisite in Crowd Management

The course also deals with the problem of authority because the great majority of crew members are catering personnel. Many of them are employed because they possess other desirable characteristics than those which are useful in Crowd Management. Often they are employed because of their service-mindedness, their friendliness and because of their attractive personal appearance. Many catering crew are therefore quite young, usually good looking, often female, but without badges of rank and therefore lacking inherent authority. Furthermore they work in a position onboard which is not commonly regarded as superior and their uniforms may not be designed to suggest authority.

In an emergency situation, the catering personnel constitute the better part of the "troops" and are expected to be in charge of the passengers. Besides this, the passengers are expected to trust them, to follow their instructions and to lean on them for guidance and rescue. To be able to summon passengers, to handle the various difficult passenger categories mentioned earlier, to persuade someone to slide down a MES or to enter a lifeboat, everyone needs lots of authority. Therefore the course deals with various aids in achieving authority. Besides the authority of uniforms and other signs identifying them as crew members, one means of projecting authority is being able to make one's voice heard

above others. Small megaphones are therefore important equipment. They need not be used constantly, however, because they will also function as symbols of authority.

Another important focus in the course is how to gain superiority of information for the crew. If passengers and crew members share the same information originating from the public address system, difficulties can arise about who is the best to judge and interpret the information. Especially difficult situations can arise when the noise level in an open area is high, and a certain crew member is unable to hear loudspeaker messages while passengers can.

Crew members might be bewildered and rapidly lose their authority if they are late in understanding or hearing instructions and information from the bridge. They should therefore be equipped with portable radio telephones and an information channel of their own. The portable radio telephone need not be used at all times because it also functions as a symbol of authority, and using an earphone gives passengers the impression that the crew is better informed.

Experience from The Estonia Disaster

In the Crowd Management Course we utilize all available experiences from past emergencies and accidents in order to draw conclusions and to learn about the behaviour of passengers and crew members. The disaster with the *Estonia* bears in this sense all the distinctive features of an unthinkable situation and constitutes in every detail the worst possible scenario.

The Estonia accident happened in the middle of the night and in weather that was near storm and increasing. From the start of the accident, at about 0115hrs, until the ferry had disappeared from the water surface at about 0155hrs was only 40 minutes. Most passengers and crew members were asleep and was alarmed by metallic blows followed by a list of about 5 degrees. From the start of the accident until the list were too severe to allow people to get out any longer took only about 15 minutes.

Nevertheless, as many as about 300 people made it to the outside deck, of whom 137 survived. Most of them who made it were half naked or not properly dressed. Those who managed to get into liferafts were drifting in the storm until daybreak for between four and seven hours before being rescued. Many died during these hours from exhaustion and cold. The water temperature was 12 degrees Celsius and the air temperature only 9. As many as 852 people lost their lives.

From the survivors' statements we can learn about the activities of crew members and the reaction patterns of both crew and passengers. We have reports on panic, paralysis, shock, inability to understand, inability to find purposeful action, exhaustion, altruistic and heroic behaviour, just to mention some. This is thoroughly dealt with in the accident report,

which will be published this summer, in order to gain all possible experience from this accident for use in Crowd Management Training programmes.

The participants in the Crowd Management Course are thus able to gain insight, from this worst of all scenarios, into what kinds of behaviour a crew must be able to manage, but also what happens if a Command Team is unable to lead the evacuation. We can learn about improvisations, the impact of alarm signals, spontaneous attempts to organize, collective and individual efforts, when and under what circumstances an organization may break down and also about the assistance by volunteer passengers.

The aim of the course in Crowd Management is not to prepare a crew for unmanageable scenarios but to mentally prepare every crew member so that they are able to manage the passengers in an organized and controlled way. They should be clear about what expectations society and passengers have upon them and deeply feel the responsibilities they have as crew members onboard a passenger ship.

In order to handle unexpected situations they must also gain insight into a variety of reactions and with the help of their own imagination be able to visualize and prepare themselves for what they might face, if and when an emergency situation should arise.