Engine-room Resource Management (ERM)

Introducing a new DVD on ERM

A visual aid for training

The Maritime Human Resource Institute, Japan

The Maritime Human Resource Institute, Japan is a dedicating organization to maritime societies worldwide and the Institute recognized that production of an educational visual aid on Engine room Resource Management (ERM) would make significant outcomes and organized an expert panel to consider the issue of producing a DVD and the DVD was completed as I introduce today. This DVD has been put down in the official draft of IMO model course 7.04.

Background to Introduction of ERM into the STCW Code

Recent causality analysis of maritime incidents has clearly shown that there is often a:

➢ Lack of observance of BRM/ERM Principles
➢ Lack of communication

Recent analyses of marine casualties indicated that many of the fundamental elements of Bridge Resource Management (BRM) and Engine-room Resource Management (ERM) were not being practiced. In addition, it was also clearly evident that a lack of communication was a prominent factor in marine casualties.

What does this mean?

Using technical skills only cannot prevent incidents.

Operation skills

Maintenance skills

This means that even though seafarers have excellent technical skills and expertizes, they were effectively not used due to a lack of communication or inobservance of BRM/ERM principles.

What is necessary to improve the situation?

The practice of BRM/ERM including the human element non-technical skills of:

- ➢ communication
- ➢ leadership
- ➢ teamworking
- ➢ cooperation
- ➢ situational awareness
- ➢ decision making

In this context, IMO reached a conclusion that it was imperative to introduce BRM and ERM including human elements into the STCW Code as non-technical skills in order to prevent maritime incidents.

> # *The purpose of the DVD*
>
> ## The Maritime Human Resource Institute, Japan aims to:
>
> - Assist in developing ERM Training Methods
> - Provide an interpretation on;
>   - ➤ ERM,
>   - ➤ ERM Requirements, and
>   - ➤ ERM Principles
>
>   based on the new competence table A-III/1
> - Motivate trainees

Unlike BRM, with regard to ERM, development of training methods and specific application methods to the requirements of ERM are expected in the near future. The institute therefore decided to produce an audio visual aid using actual footages in order to explain what ERM is, what ERM principles are, and what human elements in practicing ERM are, based on the new competence table.
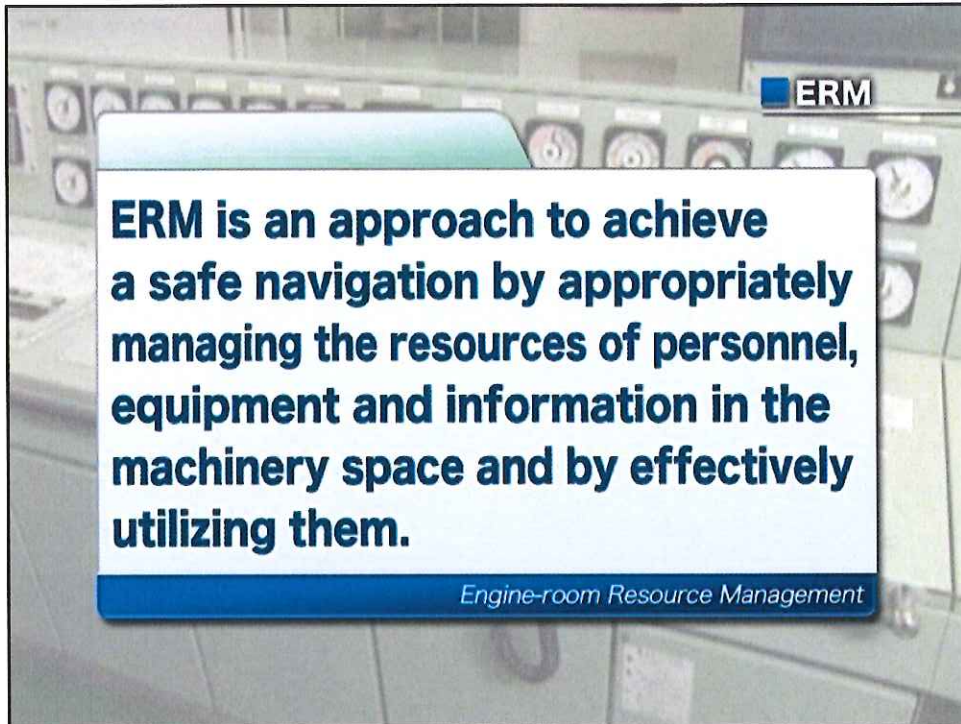
Engine-room Resource Management

This DVD comprises two parts which are the part of interpretation on ERM and actual footages of entering/leaving port. In the former part, ERM and the background of mandating ERM using manga illustrations and actual footages are presented. The actual footages shows realistic situations on ship's entering and leaving port and this part consists of five chapters containing several topics to be learned and the topics are interpreted after the each chapter ends.   In addition, the text containing interpretation on ERM and all dialogue of the footage which is used in the DVD is embedded.

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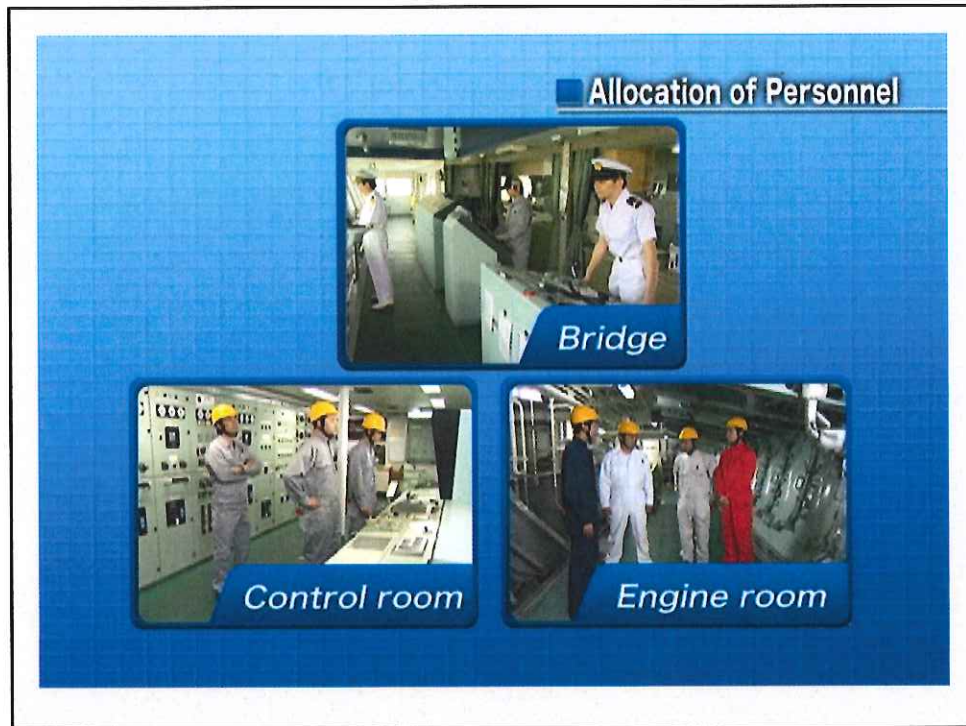
This footage shows allocation of personnel on bridge, control room and engine room.

Thank you for listening.

Management of Resources

Personnel management

Equipment management

Information management

For example, this display expresses there are three types of managements in the resource management.

BRM/ERM principles to maintain watchkeeping

1. Ensuring proper arrangements of personnel
2. Consideration of any limitation in qualification of fitness
3. Understanding of roles, responsibility and team roles
4. Utilizing information, equipment and personnel
5. Understanding of functions and operation of equipment
6. Understanding information and how to response to information
7. Sharing information
8. Maintaining an exchange of appropriate communication
9. Notifying any doubt

Engine-room Resource Management

Thank you for listening.

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This manga illustration shows an example of situational awareness that the third engineer on machinery rounds found heavy objectives placed on the floor and he was thinking he had to lash them since heavy weather was coming.
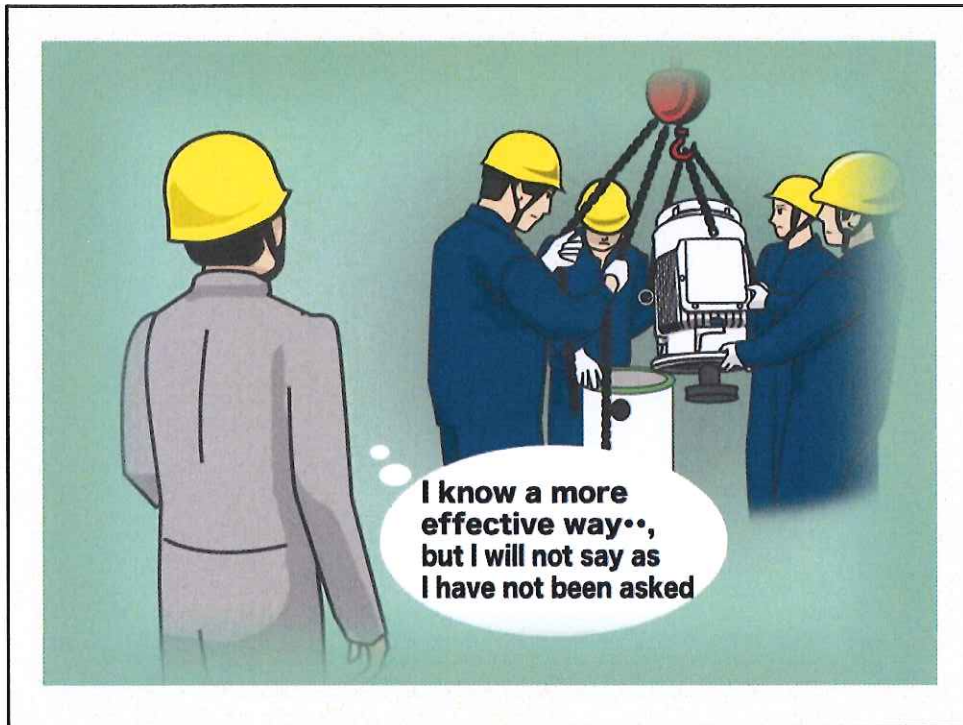
This illustration shows an example of lack of communication that even though the veteran who was watching the maintenance work knew more effective way, he said nothing since he was not asked.
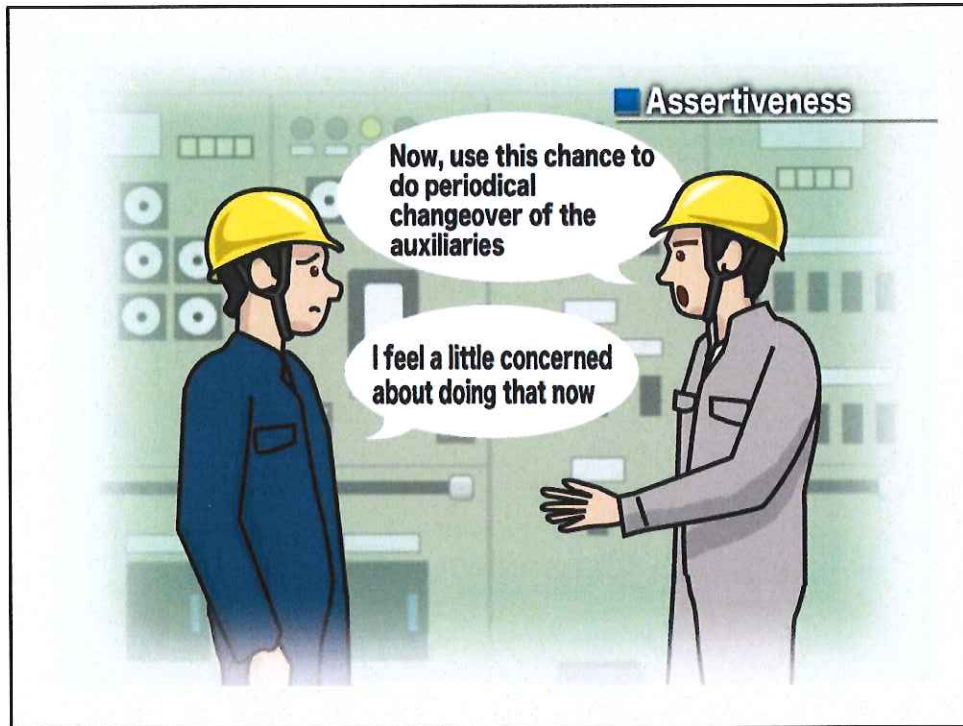
This illustration shows an example of assertiveness. The first engineer is telling to the third engineer that they should make changeover of the auxiliaries utilizing this chance. But the third engineer expresses his concerns to do that since the ship is under standby condition.

Assertiveness

This footage also presents third engineer's assertiveness against the first engineer's instruction in the actual situation

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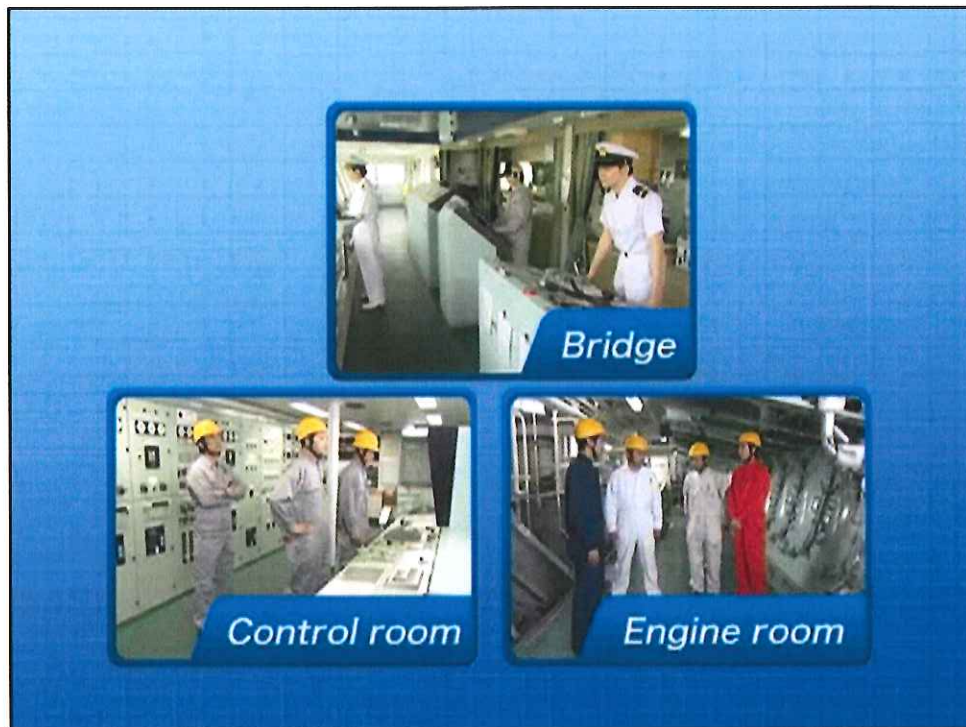
This footage also presents a review of the ERM principles related to assertiveness against the first engineer's instruction in the actual situation

> ## *Proposed learning outcomes of the DVD*
>
> ➢ Understanding of ERM, ERM Requirements and ERM Principles based on A-III/1 of STCW
>
> ➢ Lessons learned through the DVD can be applied to other similar situations

Although ERM is not a competence that we can define from one aspect, it can be considered as an approach that is a process to achieve safe navigation associating many situations from one case. This DVD provides us with lessons for the purpose and the concept of producing this DVD was to impressively give lessons in order to allow trainees to understand ERM, ERM requirements and ERM principles as well as the trainees can apply lessons learned through this DVD to other similar situations. Especially, communication issues are hi-lighted entirely and basic ideas on communication and actual communication scene are interpreted.

The main tenets of ERM

➢ ERM is an approach to achieve safe navigation, managing personnel, equipment and information

➢ Human elements such as Communication, Leadership, Situational Awareness and others are indispensable in practicing effective ERM

The main tenets of ERM is that ERM is an approach to achieve safe navigation managing personnel, equipment and information, and then
Human elements such as Communication, Leadership, Situational awareness and others are indispensable in practicing effective ERM

The integration of the non-technical skills of ERM to achieve safe and efficient shipboard operations

➢ ERM can be a means to integrate non-technical skills and technical skills

➢ ERM can be applied to maximise technical skills

Only by technical skills concerning operation skills and maintenance skills cannot achieve safe navigation. In order to achieve safe navigation, non technical skills as human elements represented by communication are to be collaboratively utilized and ERM can be means to integrate non technical skills and technical skills.
I wish you all here to utilize this DVD as much as possible at your maritime institutions.

Thank you for listening

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&

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Thank you for listening.