

ARRIVAL OF THE SMARTEST MARINE ENGINEER

Introduction:

It is said that if we don't change we will perish. IMO Secretary General Mr. Kitach Lim says "Be Bold, make a difference and create something of lasting significance."

Since decades, marine engineers were considered to be the brightest and smartest of all type of engineers. As the shipping scenario is now reaching a new dimension, like nothing that we all have experienced in our seagoing careers. It's necessary for the training Institutes and shipping companies to gear up for this technological challenge. As the first Autonomous vessel will start operations in 2020, time is apt for training each one of the marine engineers to the latest requirements.

The Way Ahead:

Training of Marine engineers is conducted at pre sea and post sea levels.

- a) **Systematic changes to be adopted in Pre – sea training** – As the period of pre-sea training varies from institute to institute, we need to plan changes, as best as possible.
- 1) **Longer time for training** – As we add newer topics, the losses of training time needs to be capped.
- 2) **More visits on ships during Afloat training** – the most important phase of Institute training is visiting new sailing ships which come to port. Interaction with ship staff and learning about latest development in machinery and automation is of prime importance.
- 3) **Simulator Training** – More realistic training on simulators which can be regarding operation, maintenance and troubleshooting of latest machinery.
- 4) **Animated Videos** – Utilising animated videos for teaching machinery operations is needed, but they should never replace hand – on training.
- 5) **Theory** – Should cover latest regulations and upcoming requirements in depth.

- 6) **Electrical & Electronics** – Marine engineering industry is in transformation – with advanced technology developments resulting in new systems and equipment to comply with needs of increased efficiency & reduced emissions. All leading to digitalisation and increased use of Electrical and Electronic systems. Hence more emphasis to be given in these topics.
- 7) **History of machinery** – Understanding of makers and type of machinery and their difference is important for onboard operation.
- 8) **Risk Assessment & Personal Safety** – With accidents occurring on ship resulting to injury and loss of life, more emphasis to be given about dangers of not following laid down procedure and safety culture needs to be inculcated.
- 9) **Mentoring** – Periodic Interaction with sailing Chief Engineers open the avenues of understanding about reality onboard ship.
- 10) **Brain Storming Sessions** – Interaction and active participation between Marine faculty and cadets about problems and troubleshooting on machinery. These can be conducted weekly.
- 11) **Tracing Pipelines** – Mimic pipeline diagrams can be traced at pre sea level for all types of ships.
- 12) **E-Learning**– Machinery manuals, videos and animation of machinery can be given to trainees through the E-learning site.
- 13) **Communication and Personality Development**- The communication and personality need to be greatly improved, so that they are easily fit into the engine room team, and not have complexes.
- 14) **Teaching Methods** – to be interactive and practicals to be added in theory classes for better understanding. Use of models will assist in theoretical training.
- 15) **Flexibility** – of the Institute and faculty to adopt the changes taking place of technology. Faculty play the most important part in the life of the cadet. Dedication and commitment of the faculty can mould the career of the engineer.
- 16) **Multi National crew – adjustment**– has been always a challenge for Indians.

During selection at Institute– The detailed entry level tests can be carried out to select the best engineers; Attitude, Aptitude, Mental Agility, Technical and Physical tests can be included.

Attributes of the candidate be checked during training:-

- 1) Devotion and awareness about the marine field.
- 2) Coming from Electrical background – Diploma Electrical & Electronics, BE Mechanical & Automation, BE Mechanical Electronics.
- 3) Patience.
- 4) Communication capability.
- 5) Mental & physical fitness.
- 6) Willingness to learn.
- 7) Sense of Responsibility.

Post Sea Training

After the completion of relevant training, at the pre sea Institute, additional upgradation courses should be held by shipping companies, with regard to ship and company relevant specialised training. The training can be held for latest developments in regulations and technology, automation, and soft skills like teamwork.

Conclusion

As the role of a marine engineer is changing to an operational one with trouble shooting experience, we all need to push ourselves to new limits. With regulations related to Air pollution, development in fuels for combustion, saving the planet from environmental destruction, the marine engineer has to change and it has to begin at the Training Institutes. Let's make the Indian Marine Engineer, the Smartest and Most Techno Savvy, who can perform his duties efficiently onboard the latest ships which are yet to be built.