

## **ITF SSAWG Statement on Automation**

### **Proposed SSC Policy Statement – March 26, 2018**

#### **Background**

Autonomous ships, however they are defined, raise many complex and difficult issues. It is recognized they may impact employment opportunities, training, safety, security, the ship /shore interface and interactions with ports, pilotage, responses to incidents and the marine environment. It is essential that highly automated ships are capable of at least a level of safety comparable to conventional ships. And, that any future progression to unmanned ships is an evolutionary process effectively managed through effective collective bargaining and political involvement at the national and international level to ensure safety and avoid serious disruptions to the industry including its impact on seafarers.

#### **General Statements**

Noting the views of professional seafarers as well as the shipowners whose investments in technology will shape the future. It is believed that unmanned ships in international shipping are a distant possibility for numerous economic and technical reasons. In the foreseeable future it is anticipated that international shipping will focus on gaining efficiency through Information and Communications Technology, digitalization and automation to support onboard human decisions and improve performance on both the bridge and in the engine room.

It is anticipated the application of automaton technology will be an evolutionary progression as it is introduced in commercial usage in the operating environment. The first phase will be the development of semi- autonomous systems to support and supplement ship board functions in conjunction with onboard human supervision and intervention. Experience will determine what functions are capable of being performed routinely with little human intervention and what functions require higher levels of human involvement. There will be a natural progression to higher levels of semi-autonomous systems where their use was proven safe and economically justified. The progression will be user experienced and demand driven, rather than technology driven by suppliers.

At the same time sensor technology with data exchange technology and communication links to permit shore based monitoring of shipboard functions will be further developed to allow greater levels of shore based management of ship board functions, performance and efficiency. The reliability, safety and economic benefits in actual commercial usage will determine the future extent and feasibility of remote control. Again, the progression will be user experienced and demand driven, rather than technology driven.

## **Assumptions**

In later phases ships may be capable of operating in dual mode relying on semi-autonomous systems under routine circumstances with higher levels of onboard human involvement under non-routine circumstances such as high traffic, congested waters, heavy weather, equipment failure, or unforeseen circumstances. Actual user experience will determine at what point it may be economically feasible and technically justified to phase in shore based rather than onboard human involvement for higher level decisions. The reliability, safety and economic benefits in actual commercial usage will determine the future role of remote operation.

At this time the focus should be on identifying functional requirements for various operating scenarios and ensuring that the semi-autonomous systems managing those functions have an appropriate balance between automation performance and human supervision to ensure that the systems are safe and reliable. It could have a near term significant impact on seafarers working conditions and ship safety and efficiency.

It is believed that the introduction of automation technology will follow the same pattern as past transitions to newer technology in the maritime industry, such as sail to steam, steam to diesel, coal to oil, and radar and ECDIS. It will be an evolutionary process over a time period that should allow for human adaptation, education and training to new circumstances.

Having fully autonomous unmanned ships as the primary goal at this time is an unrealistic distraction from what could be a productive advancement in working conditions, safety and efficiency through technology.

## **Planned Actions**

- By June 2017, in time for the ITF maritime meetings in Capetown, have the ITF Maritime Automation Forum website established with basic information, and begin developing and loading more advanced content.
- By the end of the first quarter of 2018: conduct a comprehensive assessment of the use and challenges of autonomous ships. Involve other affected ITF sections and establish cooperation with other organizations/companies, such as ICS, IMEC, IFSMA, IMPA, P&I clubs, with similar concerns.
- Develop for the Congress 2018 factual arguments to support ITF positions and identify maritime governments and industry organisations for affiliates to lobby. Our lobbying efforts will concentrate on potential supporters of the ITF position, including FOC and labour supply countries.
- By the end of 2018: participate in an automation cross-sectional conference.
- From 2017-2020 participate in the expected IMO scoping exercise on autonomous systems to advocate for provisions consistent with ITF policies and positions.

- From 2020-2025 participate in the expected IMO sessions amending, revising and drafting a new international regulatory framework for ships utilizing autonomous systems to advocate for provisions consistent with ITF policies and positions.