## Abstract of innovation points

Tremendous improvements have been made in promoting and modernising the functions, operations and the techniques used in navigation onboard ships. However, the grievances that one hears from the sailors of the hardships that they have to endure at their work are not those that one may regard as minor.

Generally they complain often of weariness and fatigue due to stress and hardship at work due to extensive and monotonous working hours. They complain also about cramp living conditions, continuous exposure to noise, direct exposure to elements of the nature, comestibles offered onboard ships, and also of personal difficulties that result from hierarchy of work. In general, a human factor refers to the physical or cognitive properties of an individual or of the social behaviour that is specific to humans and influences functioning of technical and technological systems as well as human-environment equilibriums.

The recognition and study of human factors in sailing and the maritime activities is important for safety because it can be the cause of serious human errors on the levels of physical behaviour and socio-cognitive decision-making. This study reveals that improvements in new technology on board ship reduce the fatigue and stress of the sailors and staff onboard ships. However, it is not possible to gain the real benefit of development in the field of new technology due to the lack of improvement in the Human Factor of seafarers. There should be also be a parallel horizontal development of the human factor in the new technology.

