Scenario Based Reaction Time Analysis for Seafarers

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Abstract : Human factor has been one of the elements that cause vulnerabilities which can be resulted with accidents in maritime transportation. When the roots of human factor based accidents are analyzed, gaps in performing cognitive abilities (reaction time, attention, memory...) are faced as the main reasons for the vulnerabilities in complex environment of maritime systems. Thus cognitive processes in maritime systems have arisen important subject that should be investigated comprehensively. At this point, neurocognitive tests such as reaction time analysis tests have been used as coherent tools that enable us to make valid assessments for cognitive status. In this respect, the aim of this study is to evaluate the reaction time (response time or latency) of seafarers due to their occupational experience and age. For this study, reaction time for different maneuverers has been taken while the participants were performing a sea voyage through a simulator which was run up with a certain scenario. After collecting the data for reaction time, a statistical analyze has been done to understand the relation between occupational experience and cognitive abilities.