Chapter 15

The Place of High Speed Crafts (HSCs) in Maritime Transportation

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ABSTRACT

Transportation involves all concepts of distance, speed, and time. Maritime transportation is one of the oldest methods of transportation. Continuous demand for high speed in shipping has led to the emergence of High Speed Craft (HSC). The growing number of HSCs has necessitated the development of new safety concepts for such vessels and waters where they navigate. The navigation on HSC requires great/high attention. Safety of navigation is very important for preventing accidents and marine pollutions. The main causes of accidents in HSCs are related to bridge personnel and bridge operations. It is observed that human factor and safety of navigation are prominent.

INTRODUCTION

Transportation systems have been evolving for centuries in accordance with the technology. Speed is very important and affects distance-time values of transportation. The revolutionary means that technology provides to transportation is speed. Continuous demand for high speed in shipping has led to the emergence of HSC.

This chapter aims to reveal the place and the importance of HSCs in the maritime transportation. For this purpose, the authors will describe maritime transportation, speed, types of HSC, international regulations about HSC, navigation on HSC and HSC accidents in order.
BACKGROUND

HSC with new technologies and advantages has started to be seen more and more in maritime transport. The common features of HSCs are comfort, safety, loading-unloading-cruising speed, lightweight construction, peculiar design, and advanced technology (Garbatov, Rudan, & Guedes Soares, 2010; Okasha, Frangopol, Saydam, & Salvino, 2011). It is considered that the number of such vessels will increase (Yousefi, Shafaghat, & Shakeri, 2013).

MARITIME TRANSPORTATION

Transportation involves the activities for cargo and passengers to reach the destination at the possible lowest cost both in time and when they are needed (Bullock, Haddow, & Coppola, 2018; Gudehus & Kotzab, 2012, p. 623). Transportation is one of economic, social, cultural, political, military, geographical, psychological, and environmental fundamental blocks that affects the society continuously (García-Olivares, Solé, & Osychenko, 2018). It has a central role in healthy and sustainable community (Watkins, 2018). Transport activities are as old as the history of mankind and have always been a part of life (Grazia Speranza, 2018). Societies that carry out these activities well have always been one step ahead of others. The use of wheel in pictures about the development of civilization and the fact that locomotive is one of symbols of the Industrial Revolution show how important transportation is for humanity (Kılıç, 2017).

Transportation is a strategic sector consisting of demand and supply components (Teodorović & Janić, 2017). It shapes the economy with its role in the production of goods and services (Čanci & Güngören, 2013). Transportation plays critical and key role in logistics management. Improvements in transportation make a big difference in country trade volume by providing competitive advantage (Kherbash & Mocan, 2015); disruptions damage the economy (Kara & Çiğerlioğlu, 2018). Therefore transportation field is one of important and decisive dynamics in economic development and improvement (Vickerman, 2018). From another point of view, transportation is vital in accessing catastrophe areas after natural disasters for providing assistance and evacuating people (Edrissi, Nourinejad, & Roorda, 2015). The need for transportation is indispensable and escalates every year (Sumalee & Ho, 2018). Types of transportation system according to the environment and the technology used are (Baykal, 2012, p. 1); roadway, railway, waterway (maritime), airline, and pipeline (Čanci & Erdal, 2003, p. 25).

About 71% of the world is covered with water (Rodrigue, 2017). People have been inspired by floating tree pieces on the water (Baykal, 2011, p. 2; Rossi & Russo, 2017, p. 217). They have used the lifting force of water since the Stone Age for various purposes, such as going somewhere to find food and gaining advantage in war (Drobetz & Johns, 2018).

Sea is a kind of water mass. Sea and sea related activities have always been in the forefront of the development of humanity and the increase in the level of prosperity (Cleveland & Morris, 2014; Fernández-Macho, González, & Virto, 2016). Great civilizations were generally established and developed on the coasts where maritime trade and transportation were intense (Árt, 2014). Therefore marine civilizations have a special place in the history of world (Gürdeniz, 2015, p. 427). Today, approximately 40% of the world’s population lives within 100 km of the coasts (United Nations, 2017). Sea areas, called “Blue Homeland” (Ertürk, 2018; Gürdeniz, 2015, p. 13), have provided economic, political, military benefits and continue to provide them (Gürdeniz, 2013, p. 31). Maritime trading activities are increasing rapidly and dynamically (Chintoan-Uta & Silva, 2017).