Organization and Evaluation of Effectiveness of Container Traffic on Northern Sea Route

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ABSTRACT

This article is devoted to issues connected with organization of containership traffic via Northern Sea Route (between the countries of Northern Europe and the Far East). The experience of cargo transportation along the Russian Arctic Coast is reviewed in this article. The problem about change of modern freight traffic of container and the technologies of seaway container transportation is discussed. The peculiarities of traditional seaway container international transport corridors are examined. The problems and risks of transporting containers by traditional international transport corridors are discussed. The possibilities and problems of Northern Sea Route commercial usage are examined. The main advantages and disadvantages of using Northern Sea Route as container transport passage are shown.

KEY WORDS: Northern Sea Route, international transport corridor, ice-classed ships, containerization, containerships

INTRODUCTION

Northern Sea Route (NSR) is the shortest sea route between Europe and the Far East. It goes through the seas of the Arctic Ocean and partially the Pacific Ocean. Using NSR it is possible to halve the length of arterial sea routes between the countries of the Northern Europe and the Pacific Rim compared to the traditional route running through the Suez Canal. This factor is now of great interest to the economics of many countries of the world.

The container turnover in sea ports in Russia has reached the level of 4.6 mln TEU in 2011, 5.1 mln TEU in 2012, 5.7 TEU in 2013. During the last 10 years the container turnover in Russian sea ports has increased 3.5 times (Perspectives, 2013).

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In the 80s of the XX century there was a transition from complicated scheduled cruises to line hauls between major transport nodes (hubs).

The containerships of larger size were needed for line hauls. In the 90s years of the XX century the containership of Panamax Class with the holding capacity of up to 5000 TEU was considered to be standard. In 2013, however, the containership of ULCV Class (Ultra Large Container Vessel) with the holding capacity of more than 18000 TEU started running.

Today, approximately 90% of non-bulk cargo worldwide is transported by containers. A rather rough competitive activity can be seen in this sphere of the economics. The reduction of the cost of container transportation by sea can be achieved by the following means:
- The usage of the scale effect (building of the bigger vehicles);
- The reduction of the fuel consumption (making better full-formed ships and using more efficient machinery plants);