Crude Oil is one of the most important commodities in the world trade. It is also virtually the only raw material traded widely on all continents with its price being the result of the market game. 89.76 million barrels per day were produced in 2012 and 90.16 million barrels a day in 2013. The following year its daily supply increased to 91.96 million barrels, with an average daily production of 92.

**Falling oil prices**

According to the experts’ estimates in the second half of last year Brent crude oil prices fell down by more than 52.5%. In December 2014 Brent prices already developed below $ 60 per barrel, while in October it was 79 dollars, and a month earlier - the average price was 87 dollars per barrel. Mid-December 2014 bought Brent crude oil prices fall to 59 dollars, and WTI (West Texas Intermediate) oil to 54.05 US dollars per barrel. This has been the lowest price since May 2009 as the BBC reported referring to the decrease in China’s economic activity together with maintaining a high supply of oil producers. At the beginning of January this year US WTI crude was offered at the price below $ 50 with delivery in February 2015. This has been the lowest price of this commodity since April 2009 - Bloomberg reported. In December 2014 the rate per crude oil barrel was 3.95 dollars smaller than the one predicted for the summer. This has been the biggest difference in prices since 2010. The world demand for this strategic product has been slowing down since 2009 Bloomberg found out stating that the US companies, nonetheless, bring out more than ever before. Additionally, the price war between members of the Organization of Petroleum Exporting Countries (OPEC) broke out. As, working on the energy market geopolitics, professor Jeff Colgan, from the Watson Institute for International Studies at Brown University remarked that organization was not until recently perceived as a cartel. As it is predicted by the International Energy Agency the oil consumption will increase by 0.9 million barrels per day in 2015, whereas in 2014 the increase of 1 million barrels per day was noticeable. Despite the decline in oil prices, it was announced in December 2014 by Abdullah Salem el-Badri, general secretary of Opec, Mohammed al-Sada, Oil Qatar Minister and Aleksander Nowak, Russia’s minister of energy, that no reduction in this strategic raw material was on the way.

**Oil Shipped Around the World**

In the global perspective, in over 9 548 million tons of cargo transported in 2013 by the sea, more than 1755 million tons of crude oil were there. In 2010 tankers transported nearly 1788 million tons out of about 8409 million tons of cargo, while in 2006 respectively - 7 700 and 1783 million tons.

About 3.6 billion tons, 41% of which being liquid fuels, are transported to and from the ports in the European Union every year. In 2013 in the Baltic Sea Region about 840 million tons (18% more in comparison to 2004) were transported by sea. It includes about 305 million tons of liquid cargo, of which there were 280 million tons of crude oil and petroleum products (in 2008 there were merely about 70 million tons).

**Maritime transport in the Baltic Sea Region**

The services shape the ship traffic in the Baltic Sea, which increases the risk of collision and environmental disaster in certain areas. Daily traffic in the Baltic ranges from 1 800 to about 2 000 ships. The largest intensity of the traffic takes place in the Danish Straits being among the most crowded

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1. Dr hab. Marek Grzybowski prof. Maritime University Gdynia (Poland), President of the Polish Maritime Cluster.
3. Article reviewed.
11. Shipping Review and Outlook, Clarkson Research Services, Spring 2014, p. 11.
marine waters in the world. On the Baltic sea routes there is monthly an average number of 3 500 (in the big freezing season) to 5 500 units (in the summer time). Half of them is made up of the ships carrying general cargo and dry bulk, tankers -17% and the passenger ones – 11%.14

In 2004-2013 the total supply of goods in the Baltic increased by about 18%, mainly due to the increased demand for general cargo together with the increased supply of liquid cargo in the eastern part of the region. In 2004. The contribution of western Baltic Sea ports to the general cargo volume was about 60%, while in 2013 it was decreased to about 47%.15 The process was caused, among other things, by the increased activity of Russian ports, including the fuel ports located in the Gulf of Finland. Oil transport in the region has increased from 40 to over 240 million tons since the end of the construction of two Russian deep-water oil terminals in Primorsk and Ust-Luga, which added to the supply of crude oil by the ports of the Baltic countries.16

As predicted, next years should bring the expected steady growth of maritime transport of crude oil and products in this area. However, the forecasts should not ignore the possibility of reducing the supply via pipeline, both for technical and the geopolitical reasons, which will result in a significant increase in the Baltic sea transport to customers in Central and Eastern Europe.

Russian Oil in the Baltic Sea Region

After a social and political change period, the Russian economy growth was driven mainly by the increased export of energy resources. Since the end of the economic crisis in 1998, thanks to the rise in oil prices, the privatization of the oil companies and investment opportunities, there's been the growth in production and exports. So far, the Russian economy seriously depends on oil and gas exports. According to World Bank data, the export of oil and gas gives more than 70% of the revenue of the budget of the Russian Federation, which makes a significant effect on the value of the ruble and its weakness as a result of a decrease in oil prices on world markets.17

There are approximately 40 fuel terminals in the Baltic Sea. Some of them will be developed, which in turn may lead to a further increase in tanker traffic in the Baltic. There has been a tendency in recent years towards a significant increase in the transportation of crude oil and fuels in the general marine cargo statement. Since the year 1995 the transportation of oil in the Baltic Sea has more than doubled. In the years 2004-2013 the supply of oil in the 10 largest fuel ports rose from 1877 to 242.7 million tons.

What the maritime transport development causes is the natural diversity of both suppliers and supply directions. Russia wants to reduce its dependence on transit countries sent the loads to Russian ports, thereby achieving a much more favorable market position. This promotes the reduction of oil price differentials of different oil types. Construction of Russia’s sea transshipment terminals and pipelines bypassing transit countries to reach Russian ports, has been expanding Russian pipeline system as well as increases revenues from exports. The Baltic Pipeline System-2 (BPS-2) leading to the port of Ust Luga cost $ 4 billion. The fuel terminal that was built there cost $1 billion. According to Bloomberg, the next development stage valued at $ 1.88 billion is supported by the financial guarantees of 675 million dollars by Gunvor Group Ltd., a leading trading company in the market of petroleum products.18

For pipeline management businesses, the new situation requires the infrastructure to be modernized and the marine supplies to be focused on. There is also a scenario to maintain the pipeline supply to the existing customers in Central Europe in the reduced dimension, with the simultaneous marine supplies. However, a greater flexibility in the infrastructure management, transmission and storage is going to be required from the customers, together with a new approach to maritime logistics to maximize the use of its capabilities.

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15 M. Bluś Keep calm and grow, BTJ No 4/2014, p. 16.
Marine loading terminals will fulfill the functions of both transit terminals from Russia and the import ones for the domestic market. Marine Latvian, Lithuanian and Polish oil terminals do not freeze in winter, which is an advantage in case of severe frosts as they are able to ensure their duty fulfillment to customers around the world. The primary need of oil logistics systems is to build the infrastructure with the adaptability to changeable market situations.

The development of new oil export routes from Russian resources does open new opportunities for Polish oil terminal located in Gdansk. Not only does it guarantee the oil supply for the needs of Polish refineries, but it also has a pipeline network connections with neighboring countries. It is directly connected to the Gdansk Grupa Lotos refinery and PKN Orlen Plock. In the neighboring countries, it is connected to the East refineries Schwedt and Leuna, and to the Belarus Mozyr refinery.

Terrorist Threat

In recent years with a terrorist threat coming, oil tankers, chemical tankers and gas carriers are perceived as potential ecological bombs, especially for such small water reservoirs as the Baltic is. Increasingly, questions of protection of the marine environment against the possible accident-caused sea contamination are being raised. Annually, the number of oil tankers in the Baltic Sea area is about 85,000 units, entering and leaving the Danish Straits and the Kiel Canal. At the same time, there is an intense traffic between the southern and northern coast. Most ships passing by the Danish Straits go through the whole Baltic Sea to the Gulf of Finland making the east-west route traffic very heavy. More than 25% of these units are tankers.

Summary

The heaviest vessel traffic takes place near the coast of Sweden and Finland, and the size of the land countries’ congestion is caused around the Danish Straits and the Kiel Canal, with more than 500 ships being there simultaneously at times.

The increased use of maritime transport as well as the development of marine terminals infrastructure boosts the flexibility in the raw materials supply and the suppliers diversification.

Most importantly, delivery by the sea ports brings substantial changes in the market as they allow the access expansion to the global market. This should be seen as an opportunity not only to the Baltic ports and oil terminals, but also as the one to increase significantly the energy security in the crude oil supply. Planning of infrastructure development must also cover the problems of environmental dangers emerging with the increasing traffic in the Baltic. This includes adjustments related to safety of navigation, security, cargo handling, the fleet, the organization of maritime emergency services and the creation of refuge places for the individuals being the threat to the environment of the Baltic Sea.

Abstract

The article discusses the transport and transshipment of oil in the Baltic Sea Region. Over the last 20 years there has been the oil supply increase in the Baltic ports and maritime transport. The region’s 10 largest ports have handled more than 240 million tons of crude oil. The market is dominated by Russian ports transshipping more than a half of the oil. Russia intends to reduce its dependence on transit countries by the expansion of pipelines network bypassing transit countries, directing oil to its own ports and expanding the fuel terminals.

Transport i przeładunki ropy naftowej na Bałtyku na tle rynku światowego

Streszczenie

W artykule omówiono przewozy i przeładunki ropy naftowej w Regionie Morza Bałtyckiego. W okresie ostatnich 20 lat nastąpił wzrost podaży ropy naftowej w portach bałtyckich i w transporcie morskim. W 10 największych portach regionu przeładowano już ponad 240 mln t ropy naftowej. Na rynku dominują porty rosyjskie w których przeładowuje się ponad połowę ropy naftowej. Rosją zamierza zmniejszyć swoje użależnienie od krajów tranzytowych rozbudowując sieć rurociągów omijających kraje tranzytowe, kierując ropę do własnych portów i rozbudowując terminaly paliwowe.

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