

MAASVLAKTE 2 – A NEW PART OF THE PORT OF ROTTERDAM

MAASVLAKTE 2 – NOVÁ ČASŤ ROTTERDAMSKÉHO PRÍSTAVU

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Summary: The port of Rotterdam is the biggest sea port in Europe. It lies on the bank of the Rhine River and the coast of the North Sea. The first part of the port of Rotterdam was built in the city centre of Rotterdam. The terminals of the port started to build to the coast of the North Sea in the length 40 kilometres due to the increase of transfer of cargo and the expansion of the city. In 2008 a new part of the port Maasvlakte 2 started to build on an artificial peninsula. This part of the port which is designed for the latest generation of container ships will consist of container terminals and areas for chemical industry and distribution.

Key words: port of Rotterdam, a new part of the port, artificial peninsula, container ships Post Panamax and Super Post Panamax, container terminals

Anotácia: Prístav Rotterdam je najväčším európskym námorným prístavom. Leží na brehoch rieky Rýn a Severného mora. Prvá časť rotterdamského prístavu bola postavená v centre mesta Rotterdam. Kvôli nárastu množstva preloženého nákladu a rozširovaniu mesta sa jeho jednotlivé terminály začali budovať k brehom Severného mora v dĺžke 40 kilometrov. V roku 2008 sa začala stavať nová časť rotterdamského prístavu (Maasvlakte 2) na umelo vytvorenom polostrove. Táto časť prístavu navrhnutá pre najnovšiu generáciu kontajnerových lodí bude pozostávať z kontajnerových terminálov a územia vyhradeného pre chemický priemysel a distribúciu nákladu.

Kľúčová slova: prístav Rotterdam, nová časť prístavu, umelý polostrov, kontajnerové lode post Panamax a super post Panamax, kontajnerové terminály

1. INTRODUCTION

Sea ports are the gateways for all kind of cargo which is transported by ships among the continents. In the world there are about 400 sea ports which containers are transferred in. Most of containers (about 98 %) are transferred in the 60 sea ports of the world.

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Nowadays a lot of countries have got one or two main sea ports which are supported by smaller sea ports. In these ports containers are transferred between container ships and container terminals. The part of these containers is loaded on the small container ships which transport containers in smaller sea ports (feeder service) [1].

According to the Review of Maritime Transport 2009 about 506,9 million TEU transferred in the container terminals of the sea ports (a rise of 4,06 per cent over the previous year) in 2008. 20 leading container terminals transferred about 247,373 million TEU (48,8 % of the total volume). Among the top of the world's 20 leading container ports there were 13 ports in Asia, 4 ports in Europe and 3 ports in the USA [2].



Fig. 1 – Top 20 world ports

Singapore with 29,918 million TEU was the busiest sea port in the world in the transfer of containers. Shanghai with 27,980 million TEU was in the second place and Hong Kong with 24,248 million TEU was in the third place.

The port of Rotterdam (10,800 million TEU) obtained the best place among European ports. It was in the ninth place on the list of the world's 20 leading container ports (the first place in Europe), Hamburg (9,700 million TEU) was in the eleventh place (the second place), Antwerp (8,664 million TEU) in the thirtieth place (the third place) and Bremen (5,501 million TEU) was in the ninetieth place (the four place in Europe) [2].

2. THE PORT OF ROTTERDAM

2.1 Generally about the port

The port of Rotterdam is the biggest sea port in Europe. The total area of the port is 10 556 hectares (ha) out of which 5 299 ha are infrastructure and area of water and 5 257 ha is industrial part. The port has got a long but short territory. The length of the port is about 40 km [3]. Different terminals are situated on the banks of the Rhine River and the coast of the

North Sea. The first part of the port was built in the city centre. The port has expanded from the city centre to the coast of the North Sea due to the increase of transfer of cargo. The port has got a direct connection with the most industrial areas of Western Europe (Rhineland and the Ruhr) through the Rhine River. In its surrounding about 1,3 million people live there, 150 million people live up to 500 kilometres.

Maximal draught for ships is 24 metres. The depth of water in the port enables to navigate to bulk carriers and container ships Post Panamax and Super Post Panamax which transport containers from Asia and America.

2.2 Transfer of cargo in the port

In the transfer of cargo the port of Rotterdam is the biggest port in Europe, in the fourth place in the world. In 2008 about 421,1 million tons of cargo was transported in the port, out of which 95,0 million tons of bulk cargo (iron ore, coal), 194,0 million tons of liquid cargo (crude oil, mineral oil products, other liquid bulk goods), 132,1 million tons of general cargo (containers, roll on/roll off, other general cargo). In 2030 about 800 million tons of cargo will transport in the port.

In the second place was the port of Antwerp with 189,5 million tons of cargo, in the third place was the port of Hamburg with 140,4 million tons of cargo, in the fourth place was the port of Marseille with 96,0 million tons of cargo [3].



Fig. 2 – Top 20 European ports

3. MAASVLAKTE 2

As it was mentioned in the introduction of the article the port of Rotterdam with 10,800 million TEU [2] (the statistics of the port of Rotterdam presents 10,784 million TEU in 2008 [3]) was in the first place in the transfer of containers.

About 4,685 million TEU were transported from / to hinterlands by other mode of transport (30,2 % by inland water transport, 12,7 % by rail transport and 57,1 % by road transport). About 1,809 million TEU was transported by feeder service [3].

Most of containers which come to / from the port of Rotterdam are transferred in Maasvlakte 1. This part of the port was built in the 1960s by reclaiming land from the North Sea through dykes and sand suppletion. In the 1980s Europe Container Terminal (ECT) built Delta Terminal there. Now there are four container terminals: Euromax, APM Terminal Rotterdam and ECT.



Fig. 3 – Maasvlakte 2 (orange colour)

Nowadays the port of Rotterdam has not got enough free area for its expanding where new terminals could be built. In September 2008 the construction of a new part of the port Maasvlakte 2 (see Fig. 3) started to carry out next to Maasvlakte 1. A new artificial peninsula has been built so far by reclaiming the land from the North Sea. The total area of this

peninsula is 2 000 ha, out of which 1 000 ha are for new container terminals (630 ha), areas for chemical industry (190 ha) and distribution (180 ha).

There will be three container terminals which are designed for a new generation of container ships. The Rotterdam World Gateway Terminal, which will have the capacity of 4,0 million TEU, will be taken into the use in 2013. The capacity of other two container terminals will be 4,5 and 2,3 million TEU. Expectations are that Maasvlakte 2 will reach full occupancy as late as 2033 [4].

4. CONCLUSION

The port of Rotterdam which is one of the biggest sea ports in the world transfer the most containers which come to / from Europe. Nowadays it has not got enough area for its expansion. In the 1960s the port started to reclaim the land from the North Sea due to the construction of a new part of the port Maasvlakte 1. The second expansion of the port to the North Sea started in 2008 when an artificial peninsula with the area of 2 000 ha started to build (Maasvlakte 2). The land of the port will increase about 20 %. There will be container terminals for a new generation of container ships, areas for chemical industry and distribution. The first container terminal will be opened in 2013, it will reach full occupancy as late as 2033.

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