

그린포트 구축을 위한 활동 순위 및 효과분석에 관한 연구

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A Study on the Activities Priority and its Effects for Green Port Construction

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요 약 : 2009년 세계 경제 위기 이후 회복세로 돌아섬에 따라 항만 산업의 물동량이 증가하고 선박의 대형화 및 신속화가 점차 가속화됨에 따라 항만 시장도 경쟁이 치열할 것으로 전망되어진다. 한편 교토의정서가 공식 발효됨에 따라 각국에서는 대기오염에 대한 관심이 증가되고 있으며 CO₂배출량에 대한 감축 목표를 설정할 정도로 대기오염을 방지하는 자구책을 강구하고 있다. 이에 따라 항만에서도 그린 포트로의 전환이 불가피한 실정이다. 따라서 본 연구에서는 그린포트구축 활동을 항만의 경쟁력관점에서 고찰하여 각 특징을 분석한다. 또한, 전문가의 설문조사를 행하고, 이에 대한 AHP 분석을 통하여 그린포트 구축 활동간의 우선순위를 도출하며, 구축결과가 항만의 경쟁력에 어떠한 영향을 미칠 것인지를 고찰한다.

핵심용어 : 기후변화협약, 온실가스, 이산화탄소, 그린포트, 항만 경쟁력

ABSTRACT : As the <Kyoto Protocol> has been brought out in 1997, many ports pay attention to greenhouse gas emission reduction and try to develop the port as an Green Port. The purpose of this paper is to establish the activities priority for Green Port construction and analysis its efficiency for the port competition. First of all, the activities for Green Port is introduced and showed its characteristics. To analysis these effectiveness for Green Port, the questionnaire survey is done by considering the opinion of port specialists. And by using AHP analysis method, the priority between the port activities is obtained and its effect for Green Port is taken by considering port competitiveness.

KEY WORDS : UNFCC, Greenhouse gas, Carbon, Green port, Port Competitiveness

1. Introduction

The Kyoto Protocol is an international agreement linked to the United Nations Framework Convention on Climate Change(UNFCCC). The major feature of the Kyoto Protocol is to sets binding targets for 37 industrialized countries and the European community for reducing greenhouse gas (GHG) emissions for global warming.

These reduction amounts of GHG will be lower an average of five percent based on 1990 levels during the five-year period 2008-2012.

The protocol was initially adopted on 11 December 1997 in Japan, but it entered into force on 16 February 2005.

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After <Kyoto Protocol> has being brought in 1997, many people put their attention on environment pollution. Especially by considering the future development in the port, many countries and its port authorities pay attentions on Green Port construction such as C40 (C40 Cities Climate leadership group), WPCI(World Port Climate Initiative) and so on.

Specially, C40 World Ports Climate Conference draws up some adaptive plans among big cities and major ports. The plans include the incentives provided to green ship user, cooperation among the C40 member ports, encouragement to develop and utilize the AMP(Alternative Maritime Power) and etc..

In EU, major policy of Green Port is the use of marine diesel fuel contains sulfur less than 1% (after Jun. 2010) in the port for

every vessel.

....(omit)....

2. Define Green Port and its Activities

2.1 The Definition of Green Port

As the global warming affecting in the world, climate has been heavily changed. And it makes the natural resources depletion and the supply imbalance for industry. And it make the financial crisis. For getting away from financial crisis and creating the new growth motivity, the counties in the world take more efforts on developing economic.

By recognizing the global climate and environment crisis, Korean government also brought out the "Green Growth Policy". By embodying this policy, "Low Carbon Green Growth of the Basic Law" is announced in 2010.



Fig. 1 Green Port Appearance

....(omit)....

2.2 Port Activities in Major ports

① LA/LB Port

In order to achieve the reduction of marine pollutants, LA/LB Port developed the Clean Air Action Plan for 5 years. Its plan includes the reduction targets for marine pollutants emission which generated by the vessel, yard handling equipment, heavy duty truck and so on.

....(omit)....

② Rotterdam Port

③ Busan Port

3. Analysis the Relationship between Port Activities and Port Competitiveness

3.1 Factors Analysis of Port Competitiveness

Although past studies have been researched on port selection, these models only have focused on the port selection by using the factors as port facilities, port services, port rates and charge and location.

Murphy made a survey between 534 shipping companies and port authorities in 1989 and between 1850 shipping companies and port authorities in 1992.

....(omit)....

3.2 The trend of Port Competitiveness

3.3 Analysis the Relationship between Green Port Activities and Port Competitiveness

4. Analysis the Priority of Green Port Activities and its Effects for the Port Competitiveness

4.1 AHP model for Analysing the Priority of Green Port Activities

4.2 The Priority of Green Port Activities

4.3 Analysis the Port Activities Consider with Port Competitiveness

5. Conclusion

In this paper, we deal with the priority of Green Port activities which concerned with the port competitiveness in future. The main research results for the activities is that

....(omit)....

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