

Research Trends and Results

Characteristics Analysis of the International Ferry, RO-RO Ship and Transport Cargo

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(Key words) International Ferry, International RO-RO Ship, Ship Dimensions, Cargo Flow

1. Introduction

Now that the relation with Asian economy becomes closer than ever and more rapid and effective transport is required, we see that the needs for the transport by the international ferries and RO-RO ships are more required than ever. Therefore it is necessary to grasp their transport trends and make an analysis so as to contribute to future demand forecasts.

Based on the background, we have conducted the characteristics analysis on the international ferries and RO-RO ships as well as cargo transported by them. Here a part of such analysis is introduced.

2. Analysis on the international ferries and RO-RO ships dimensions

Based on the shipping company HP and dimensions Data developed by MDS, Lloyd's and so on, we have made comparisons and analysis of the dimensions such as ship length, width, full load draft, etc. of the international ferries and RO-RO ships providing service in East Asia including Japan, Korea, China and so on, and of ships in areas other than East Asia such as Europe and America. Fig. 1 shows, for example, the ship length plotted on the vertical line and international gross tonnage (GT) on the horizontal line classified by the service area and ship type.

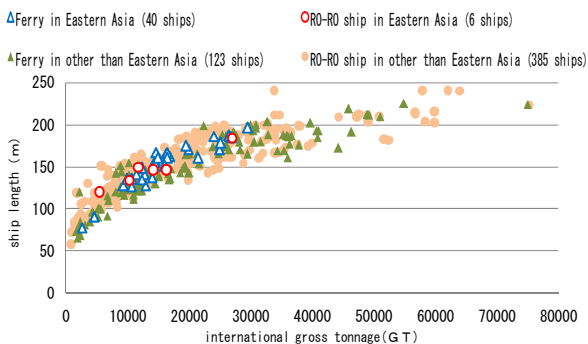


Fig. 1 Comparison of dimensions of the international ferries and RO-RO ships per service region

The figure shows that the international gross tonnage is approximately maximum at 30 thousands GT and ship length is approximately maximum at 200m for the international ferries and RO-RO ships in the East Asia, while it exceeds 30 thousands GT and 200m for those in areas other than East Asia. This shows larger ships are deployed for services in areas than other East Asia.

3. Analysis on the hinterland (background area) of the international ferries and RO-RO ships

Based on the 2008 National survey on Import/Export Container Cargo Flow data, we analyzed the hinterland areas of the cargos carried by international ferries and RO-RO ships and compared them with those of container ships. As an example of such an analysis, Table 1 shows the percentage of the hinterland regions regarding the cargo imported at the Hakata port in which the regular services of the ferries, RO-RO ships and container ships are available. Likewise, Fig. 2 shows the percentage of 207 daily life spheres in the cargo total by the RO-RO ships calling at the Hakata port.

Table 1 Hinterland (consumption area) of the imported cargos using the Hakata port

Hakata port	Percentage of respective area in cargo total						Cargo total (Freight tons)
	Kanto	Chubu	Kinki	Kyushu	Others	Total	
Ferry	0.9%	7.4%	0.3%	87.1%	4.2%	100%	32312
RO-RO ship	47.7%	18.3%	13.4%	15.5%	5.1%	100%	10571
Container ship	0.7%	0.1%	1.7%	95.7%	1.8%	100%	97596

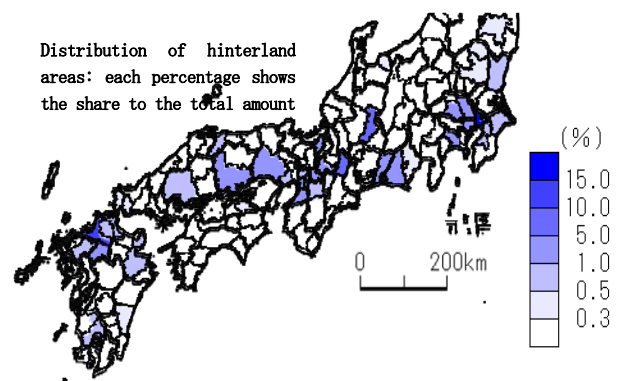


Fig. 2 Distribution of Hinterland (consumption area) of the RO-RO ship cargos calling at the Hakata port

While we see that the 80% or more cargo transported by ferry and container ship are consumed in the Kyushu area, the rate of RO-RO ship is just around 15%. In addition, approximately 50% of such cargos are consumed in the Kanto area, showing that cargo by RO-RO-ship calling at the Hakata port have much larger hinterland areas compared to those of the ferry and container ship.

【Reference】

Technical Note of NILIM No.707, 2012

<http://www.nilim.go.jp/lab/bcg/siryou/tnn/tnn0707.htm>