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Research on Mountain Highway Traffic Volume Transferred by Ports

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Abstract With the expansion of port handling capacity and economic benefit, large mountains highway traffic volume are aggregated to and transported by ports, and large increment of traffic volume of mountains highways connected with the port occurred. Based on studying characteristics of port transportation and mountainous highway traffic network, mountains highway traffic volume transferred by ports is analysed, and corresponding analysis model of passenger and goods volume of entering and leaving port is put forward. Firstly, choosing ports which mainly effect mountains highway volume; secondly, collecting and studying category of goods, characteristic of passenger, throughput of passenger and goods, and development program of these ports in past years; thirdly, investigating goods category, throughput, space, and some other useful data of these ports at the present. Characteristics of waterway goods transportation is studied and spatial distribution of passenger, goods volume between different ports is estimated, and mountain highway traffic volume transferred by ports is forecasted. The method proposed in this paper is applied successfully in practical engineerings, and provides reference for engineering research.

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Research on mountain highway traffic volume transferred by ports

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Keywords: port transportation; traffic volume; mountains highway

Abstract. With the expansion of port handling capacity and economic benefit, large mountains highway traffic volume are aggregated to and transported by ports, and large increment of traffic volume of mountains highways connected with the port occurred. Based on studying characteristics of port transportation and mountainous highway traffic network, mountains highway traffic volume transferred by ports is analysed, and corresponding analysis model of passenger and goods volume of entering and leaving port is put forward. Firstly, choosing ports which mainly effect mountains highway volume; secondly, collecting and studying category of goods, characteristic of passenger, throughput of passenger and goods, and development program of these ports in past years; thirdly, investigating goods category, throughput, space, and some other useful data of these ports at the present. Characteristics of waterway goods transportation is studied and spatial distribution of passenger, goods volume between different ports is estimated, and mountain highway traffic volume transferred by ports is forecasted. The method proposed in this paper is applied successfully in practical engineering, and provides reference for engineering research.

Introduction

Port plays an irreplaceable role for the development of national economy and local economy as the national important infrastructure [1-3]. Port is a place for flow of people and goods, and a hub of water and land transportation. With the transportation increase of some important ports and the development of western economy, port will attract more passenger volume and goods volume which are transferred through the highway attached to it, and increase the traffic volume of these highways which connect the port and the transferred traffic volume of port will come into shape.

The prediction of traffic volume is mostly based on normal road traffic volume. Currently there are two research methods on the technique of road network planning: four-phase model method [4] and total control method [5]. Based on OD survey, four-phase method determines the OD distribution of present road and predicts the future OD distribution, and distributes the predicted flow of OD to road networks through a certified model, and eventually decides the technical levels of roads by the volume of network roads and arranges the order of construction. While total control method does not make OD survey, it will go through many planning processes as follows: total prediction as base, appropriate network planning as core and comprehensive assessment as means. Due to the geographical differences, plains and mountain areas are quite different in road structure. Besides, goods by water transportation from port and their volumes are different from average road, characterizing as bulkiness and timelessness. A lot research has been done on shift traffic volume between plains, water transportation and road, while little has been done on the port effect on the volume of mountain highway. The rapid boom of port volume will make considerable road traffic crowded in transferring in ports and cause a lot pressure to the road attached to port. Therefore, it is particularly important to research the prediction method of traffic volume transferred from port to road.

Analysis on the Traffic Volume Transferred from Port to Mountain Area

Characteristics of Traffic Volume Transferred by Port. Port is where water way, road, railway, airline and pipeline meet or multiple ways of the same transportation joint, it is key to the implementation of transportation integration, and it is where the flow of passengers and goods gather and transfer. Each transportation way of comprehensive transportation hub where port plays a major