A Comparative Study on the Differences between the Operation Management and Operation of Engineering Ships and Operational Ships Based on the Definition of Transportation

Hong-bin Wei*
China Waterborne Transport Research Institute, Beijing, China
*Corresponding author

Keywords: Offshore Support Vessel (OSV), Operation and transportation, Operation management.

Abstract. Offshore support vessel (OSV) is the main transportation means to connect the offshore platform and land, and it is an important tool for the offshore platform to supply goods, transfer goods and transfer the crew and engineers. However, as a transport ship, OSV and operational transport ships are different in operation management and operation. Through the study of the definition of transport and the regulation of operation and transportation, from the classification of ship transport types and the requirements of ship type, the paper summarizes the difference of management between OSV and merchant shipping, and obtains the special OSV in Operation Management and operation. Relevant conclusions can provide reference advice for OSV operation Management.

Introduction

With the increasing trend of economic globalization and the rising level of human productivity, the demand for oil in the world is also increasing day by day. With the improvement of people's living standards, the demand for petroleum and other energy resources has remained high for a long time. Offshore oil support ship undertakes to provide comprehensive ship operation support services for offshore oil exploration, development and production. Although the tasks performed are not directly related to oil production, they are important guarantees for the safe and efficient work of offshore oil platforms. The normal operation of offshore oil support vessels can better serve offshore oil platforms and ensure offshore oil development capacity. The nearby oceans are developed by enterprises. At the same time, offshore oil support vessels can also be regarded as offshore service industries. Therefore, in the service of offshore oil development, whether from the perspective of offshore oil and gas industry or marine service industry, offshore oil support vessels can promote the development of marine economy.

Definition of Transport and Characteristics of Operational Transport

Transport refers to the process of transferring people, money and goods from one place to another. Transport is also considered as the fundamental of the national economy. Transportation refers to the behavior that the main body of transport (person or goods) moves from place A to place B through means of transport (or means of transport and transport routes) to achieve a certain economic purpose. Therefore, transportation is a kind of "derivative economic behavior". Transportation is mostly for completing some economic behavior.

Modern modes of transport can be classified according to different means of transport, which can be divided into five modes: railway, highway, aviation, pipeline and water transport. Shipping is a mode of transportation in which passengers and goods are transported by ship. Waterway transportation includes inland transportation, coastal transportation and ocean transportation. Water transportation mainly undertakes large quantity and long distance transportation, which is the main form of transportation in ocean transportation. In inland and coastal areas, small vessels are often chosen as means of transport to complement and link up ocean transportation.
The main advantages of water transportation are low cost, large quantities and long distance transportation. However, there are obvious shortcomings in water transport. The main shortcomings are the slow speed of transportation, which is greatly affected by the port, water level, season and climate. Therefore, the interruption of transportation takes a long time in a year. According to the main body of transport, water transport can be divided into passenger transport and freight transport. Passenger transport refers to carrying passengers for leisure, sightseeing, tourism and arrival at designated locations. Freight transport can be divided into dry goods and liquid goods according to the physical form of the goods, and general goods and dangerous goods according to the physical nature.

**Classification of Ship Transport Types and Requirements for Ship Types**

The operation of waterway transport can be divided into sea transport and inland river transport according to the navigation area. Maritime transport can be divided into coastal, offshore and ocean. Coastal transportation is a way of using ships to transport passengers and cargo through coastal waterways near the mainland, generally using small and medium-sized ships. Offshore transport is a form of transport that uses ships to transport passengers and cargo through the sea lanes of the continental neighbouring countries. Medium-sized vessels or small vessels can be used depending on the voyage. Ocean-going transportation is a long-distance transportation form using ships to cross the ocean. It mainly relies on large ships with large volume. The types of ships used by ocean-going international transport ships should conform to the Technical Rules for Statutory Inspection of International Navigation Vessels. Inland waterway transportation is a way of using ships to transport in rivers, rivers, lakes, rivers and other waterways on land. It mainly uses small and medium-sized ships. The type of ships used should conform to the Technical Rules for Statutory Inspection of Inland Navigation Vessels. Coastal and inland waterway transport belongs to domestic waterway transport, and the corresponding ships shall comply with the Technical Rules for Statutory Inspection of Domestic Navigating Marine Vessels.

According to the types of business, it can be divided into cargo ship transportation and passenger ship transportation. Freight ship transportation is divided into ordinary cargo ship transportation and dangerous cargo transportation. Dangerous goods transport is divided into packaging, bulk solid and bulk liquid dangerous goods transport. The transportation of bulk liquid dangerous goods includes the transportation of liquefied gases, chemicals, oil products and crude oil tankers. Common cargo transportation includes towing. When a minor is on a non-passenger ship, his parents or other guardians shall accompany him and be responsible for his safety during the ship. It can be seen on "Notice on Strengthening Safety Management of Personnel Other than Crew on Non-Passenger Vessels" (Marine Vessels [2012] 685).

Passenger transport includes ordinary passenger ship transport, passenger and cargo ship transport and ro-ro passenger ship transport. There is a clear distinction between cargo ships and carriers. Among them, the Ministry of Transport has specific requirements for freight ships, i.e. non-passenger ships. The passenger quota of lifesaving facilities for domestic non-passenger ships shall be fully considered. The total number of crew and non-crew shall not exceed the passenger quota of lifesaving facilities. No non-passenger ship shall carry more than 12 non-crew members. Ships under special circumstances, such as scientific research ships, trial ships, offshore supply ships and crew examination ships, which have special provisions, shall be managed in accordance with relevant provisions.

The Ministry of Communications shall be in charge of the safety management of ships carrying dangerous goods throughout the country. The Maritime Administration of the People's Republic of China is responsible for the supervision and management of the safety of ships carrying dangerous goods. The corresponding ship type shall comply with the requirements of the Regulations of the People's Republic of China on the Safety Supervision and Administration of Shipping Dangerous Goods. At the same time, for ships carrying dangerous goods, it is pointed out in the Notice on
Strengthening the Safety Management of Personnel Other than Crew on Non-Passenger Ships (No. 685, 2012) that tankers, gas carriers and ships carrying dangerous chemicals are prohibited from carrying non-crew members. Thirdly, corresponding to different navigation areas, international navigation ships should be in accordance with the International Maritime Dangerous Goods Regulations. Domestic navigation ships should classify and stow dangerous goods correctly according to the Regulations on the Transport of Dangerous Goods by Waterway, so as to ensure the safety of dangerous goods during loading on board.

**Differences between OSV and Merchant Shipping Operation Management**

OSV and merchant ship (cargo ship or passenger ship) have obvious differences in transport object, route and shipping date, stakeholders, transport documents and revenue mode, and have significant particularity.

First, in terms of the object of transport, OSV needs to transport a variety of goods, including groceries on deck, bulk liquid cargo, and personnel transshipment. The cargo ship or passenger ship usually carries a single cargo or passenger; of course, there are passenger and cargo ships, but usually in the form of roll-on.

Second, in terms of shipping schedule, OSV travels between shore-based and offshore platforms with a fixed shipping schedule. Freight ships and passenger ships usually operate between ports, including liner transport with a fixed shipping schedule, and dry bulk or liquid cargo transport with an unstable shipping schedule.

Third, in terms of stakeholders and transport documents, the owner of OSV and the oil company sign a charter party. The ownership of the goods has not been transferred in the course of transportation. The ship only needs to fill in the manifest before sailing, and does not issue the bill of lading. The interest relationship is relatively simple. The common cargo ship transportation is often accompanied by trade. Ownership transfer occurs in the process of cargo transportation. The interests of shipper, carrier and consignee are linked by bill of lading, which forms part of the contract of carriage and the interests are complex. Ordinary passenger ship transport embodies the contractual relationship between shipowner and passenger through passenger tickets.

Fourth, in terms of operating income OSV does not charge freight separately, but is included in the ship's rent, which is usually calculated in the form of daily rent. Ordinary cargo ships or passenger ships achieve revenue by earning freight revenue or ticket revenue.

<table>
<thead>
<tr>
<th>Serial number</th>
<th>OSV and Shipping Merchant Ship Operational Characteristics</th>
<th>Cargo ship</th>
<th>Passenger ship</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Transport object</td>
<td>Groceries, bulk liquids, special personnel</td>
<td>Single cargo category</td>
</tr>
<tr>
<td>2</td>
<td>Route characteristics</td>
<td>Between a port and a marine facility or facility</td>
<td>Inter-port operations</td>
</tr>
<tr>
<td>3</td>
<td>Shipping date</td>
<td>Unfixed</td>
<td>Fixed or not fixed</td>
</tr>
<tr>
<td>4</td>
<td>Stakeholders</td>
<td>Ship-owners, charterers</td>
<td>Cargo owner/shipowner/consignee</td>
</tr>
<tr>
<td>5</td>
<td>Transport document</td>
<td>Contracts, manifests</td>
<td>Contract of carriage, ocean bill of lading</td>
</tr>
<tr>
<td>6</td>
<td>Revenue mode</td>
<td>Rent/ main contractor Charge</td>
<td>Freight or rent</td>
</tr>
</tbody>
</table>

**Conclusion**

First, the OSV ship supplies materials to the platform, transshipment personnel and other business belongs to the operational transport behavior, management characteristics belong to the "Domestic Waterway Transport Management Regulations" management category.
Second, In accordance with the current laws and regulations, ships engaged in waterway transport business should be transported using the corresponding ships. Different types of ships need to meet different technical requirements. However, the current laws and regulations lack clear provisions on the applicable ship type for platform material transportation.

Third, OSV and transport ships have obvious differences in operation and management, such as transportation objects, shipping routes, shipping dates, stakeholders, transport documents and revenue modes, and have significant particularities.

References

