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## **Chapter 3: The Form of Multimodal Transport Operation**

### **Objectives**

- To understand the form of Intermodal and Multimodal Transport Operation
- Aware of connectivity between modes of transportation

### **FORM OF INTERMODAL AND MULTIMODAL TRANSPORT OPERATION**

The traditional step in Multimodal transport chain may start by taking in charge of the goods at the shipper's door, making inland transport and export customs clearance procedure. Booking space from the Common Carrier for main transport (ocean/ road/rail /air) and hand over the goods to Common Carrier. At transshipment point, he may appoint his agent to perform the customs transshipment procedure at the terminal and arrange inland transport to another terminal for second main transport (ocean/ road/rail /air). When the goods arrive at destination, the multimodal transport operator agent will perform the import customs procedure and arrange inland transport for delivery to consignee.

If we define the different between Multimodal Transport and Intermodal Transport by the concept of without handling the goods and same loading units or road vehicle, then the form of intermodal and multimodal transport can be determined as follows:

#### **ROAD/SEA/ROAD**

This form can be performed under both schemes;

Multimodal transport: the goods may be carried by Multimodal Transport Operator to his CFS from factory at origin place and stuffing the goods into containers and dispatch to the port, laden on board and upon arrival, the container is unpacked and loaded onto truck for consignee premise.

Intermodal transport: the containers would be brought to the factory at the origin place by the trailer, upon finish stuffing the goods into the containers; the trailer will be driven into the ocean vessel at the port together with containers. Upon arrival at the destination port, the trailer will continue to carry the container to final destination.

#### **ROAD/AIR/ROAD**

Most of the combination of air carriage with truck transport is a normal method of multimodal transport service provided by the airlines. It is, in term of operation and definition of Multimodal transport, this operation is multimodal transport. However, in the MT Convention, this performance is not deemed as Multimodal transport operation if such arrangement of land transport carried out in the performance of a unimodal transport contract (air transport) as defined in such contract, it shall not be considered as an international multimodal transport.

The airlines may use own fleet of truck like in Europe and may hire common truck operators to perform land transport service combining with air transport.

For Intermodal transport, in reality, there will be a very rare case to perform these modes as intermodal transport operation. Because of the high cost of air freight, it would not be reasonable to bring vehicle with goods on board the airplane.

### **ROAD/SEA/ROAD/AIR/ROAD**

In the reality, the full combination of multimodal transport of **SEA/AIR** vice versa **AIR/SEA**, the road transport is always one of the components in transport mode because there will be no air or sea terminal in the same area.

This combination of cost and speed of sea and air transport becomes more popular in several trade lanes. The key issue to perform this multimodal transport is to understand which is the best routing and where is the best hub of transshipment to make a mode shift from air to sea or sea to air.

There are many countries using Singapore, Bangkok or Laem Chabang as the hub of transshipment, for the shipments from South East Asia to Europe and United State of America.

### **ROAD/INLAND WATERWAY/SEA/ROAD**

This combination of mode is in use when the goods are moved from inland point by road transport and in order to save more cost of transport, the goods have been shifted to inland waterway mode to a sea port where the goods will be laden on board mother vessel at the port of origin to the port of destination and connecting to road transport for final destination.

In Southern part of Thailand, the empty container from the Penang port will be shifted to Thailand by small barge or coaster liner. The rubber products will be stuffed and carried by road transport from factory to the pier where the barge will receive containers on board and convey to Penang Port for laden on board mother vessel bounded for final destination port and continue carrying container by road transport to final destination depended on the contract of carriage.

### **ROAD/ RAIL /SEA/ROAD**

This combination of mode is commonly used when ICD – inland container depot gets involved in transportation. Multimodal Transport Operator may send the truck to pick up the goods at the factory and stuff the goods into the container at ICD, then container has been dray by rail transport to the port of origin and begin ocean carriage to the port of destination and continue carriage to final destination by road transport.

In the case of Intermodal Transport, special cargo is packed into special equipment from land lock country using road transport from factory to rail terminal until arrival at sea port. The container will be laden on board the vessel and made the final delivery by road at destination. For example; cargo is stuffed into flat rack container and not required to have any handling during the journey of transport.

### **ROAD/RAIL/SEA/RAIL**

The connecting between rail/sea/rail is the idea of combination of usage ICD and rail terminal whilst sea transport is in the middle mode of transport. Export containers are carried by road transport to ICD and from ICD, those containers are carried by rail transport to seaport and from seaport to seaport, ocean carriage will be used and continue carrying the container to inland point such as a rail terminal either in the same or different country.

In United State, rail transport is very efficient mode in term of cost of transport and they are using a rail terminal to make a mode shift which is known as Mini Land Bridge or Land Bridge. However, when the container is moved across the border to the second city, the rail mode plays vital role for connectivity, especially Eastern Europe, it calls as Mini Bridge.

### **RO/RO – ROLL ON / ROLL OFF**

RO/RO vessel is used to transport heavy and over dimensional cargoes including automobiles. Current RO/RO vessel for automobile transport is known as a PURE CAR CARRIER.

In the ASEAN context, RO/RO is one of promotional mode of transport, not only to carry cars, trucks, but possible to carry the goods on a truck from one country to another country. Without unloading goods from the truck during ocean transport journey, the truck will carry the goods to final inland point after getting off RO/RO at destination port.

The truck from one ASEAN country can run in other ASEAN countries under the Framework Agreement on facilitation of Inter State Transport.

### **PIGGYBACK**

It is the combination of transport by road and rail, which is popular in Europe and Latin America. The goods are packed onto the trailer and the trailer is moved to rail flat car to final railway station, trailer, and then moves to final destination.

Using a long haul by the rail transport and short haul for door delivery of the trailer, the lower cost of transport, but the higher efficiency in term of punctual time, safety and reliability of transportation can be created.

### **L.A.S.H. (LIGHTER ABORAD SHIP)**

This transport is a combination between Sea Transport and Inland waterway transport. The lighter or barges which cargoes are on board have been loaded aboard larger vessel for long haul transport, ocean transport. Lighters will be released from large vessel and towed or pushed around harbors, canals or rivers at destination. Recently, it is hardly to see LASH in South East-Asia.

## **Conclusion**

The form of Multimodal Transport Operation is variety depended on the nature of the goods, route plan based on geography and availability of Common Carrier along the transport corridors.

The most well-known form are SEA/AIR and AIR/SEA, however, between these two modes of transport there is always “Land” transport involved in such operation since it is impossible that the Airport is located at Seaport.

The most popular form in Europe block countries is Truck/Rail to connect with other modes such as Sea transport at the gateway port of Europe.

Within ASEAN, SEA/AIR or AIR/SEA is currently the most efficient form of Multimodal Transport while the land transport along the corridors within the ASEAN Framework Agreement on facilitation of Goods in transit will boost up the Multimodal Transport Operation in the future.

## **Reference**