DOI: 10.6919/ICJE.202104_7(4).0047

Analysis of Inland Dry Port Function and Operation Mode

Chunhao Qi

College of Automotive Engineering, Shandong Jiaotong University, Jinan 250357, China.

Abstract

With the steady rise of the development and throughput of China's coastal ports, some functions of coastal ports gradually moved out to inland waterless ports, the construction of inland waterless ports in addition to building foreign trade bridges for the region, so that logistics and transportation and import and export trade become more convenient, at the same time as the inland endpoint, promote the development of China's sea-rail transport. This paper analyzes and studies the current situation, function and operation mode of inland waterless ports in China, compares the characteristics and advantages of domestic and foreign waterless ports, and looks forward to China's waterless ports in the light of the Belt and Road Strategy, hoping that the inland waterless ports will finally solve the integration of inland ports, information integration and customs clearance integration, and achieve seamless docking with ports, forming a regional port linkage, and realizing their seamless docking with ports.

Keywords

Inland Dry Port; The Belt and Road Initiatives.

1. Status of Inland Dry Port

1.1 Concept and Research Status of Inland Dry Port

The dry port, also known as anhydrous port and land port, is an innovation and extension of the existing customs port compared with the concept of water port. The concept of dry port is defined and elaborated more accurately. It is directly established with the port on the geographical level and has the same function as the port, but some procedures are transferred to the inland. An inland transport station that is thus carried out inland.

Foreign scholars have studied the concept of waterless ports earlier. Initially, it was defined as "The area where inland areas provide loading, unloading and documents for shipping goods in and out", and later it was defined as "The hinterland where container end users can directly transport containers without the permission of a third party". In contrast, the concept of waterless port is more widely recognized in China as "a modern logistics center with value-added service functions such as customs declaration, inspection and bill of lading issuance in inland areas".

1.2 Significance of the construction of inland waterless ports

According to many literature the results it can be seen that the anhydrous port construction from the perspective of regional development, actually for bridge structures, the foreign trade in the region, the logistics transport and cargo import and export trade is becoming more convenient, better able to provide logistics services to the customers, thus boosting the local economy development, on the basis of meet the demand of development of the local government also led to the growth of foreign trade enterprises to local demand.

At the same time, the construction of the waterless port is also convenient for local customers to pick up and return containers nearby, reduce the transport empty rate, save logistics and transportation costs, and reduce the congestion of the port. From the perspective of port enterprises, the construction

DOI: 10.6919/ICJE.202104_7(4).0047

of waterless port can bring new increment to enterprises, expand new hinterland for the port, and improve the existing economic and trade. At the same time, the construction of waterless port provides the basic guarantee for the development of multimodal transport and improves the logistics network.

1.3 The development status of domestic dry ports

Relying on the developed inland water system in China and the rapid development of economy, the construction of waterless ports in China has been developing rapidly in recent years. According to their geographical locations, the existing domestic dry ports can be divided into four dry port groups, namely, the northwest dry port group of North China, the northeast dry port group, the Shandong Peninsula dry port group, and the southeast and southwest dry port group. There are not many waterless ports in Northeast China, mainly including Shenyang, Changchun, Harbin and other waterless ports, which are all based on Dalian Port and Yingkou Port. The waterless ports of North China and Northwest China were grouped together, mainly including Tianjin Port as the support of Xi 'an, Baotou, Beijing Chaoyang, Shijiazhuang, Zhengzhou, Tongliao, Urumqi, Ningxia Huinong and other dry ports. Shandong Peninsula Waterless Port Group is mainly based on Qingdao Port and Rizhao Port, including Qingzhou, Linyi, Zibo and other waterless ports. Because of geographical reasons, south of the large number of anhydrous port development, for example, yingtan, shangrao, jinhua, fuyang, xiangyang, nanchang, quzhou, lishui, yongkang, ganzhou, jinjiang, shaoxing, yiwu, zigong, longyan, nanning, guilin, yulin, such as anhydrous port, which rely on ningbo port, xiamen and shenzhen, divided into southeast southwest anhydrous port group.

In the construction of waterless ports, Tianjin Port, Ningbo Port and Guangzhou Port are the representative ports in the earlier construction of waterless ports. Tianjin is the first to be built. By 2019, Tianjin Port has completed the construction of 26 waterless ports, initially forming a multilevel inland logistics network system. Ningbo Port has 12 waterless ports by the first half of 2020. By 2017, the number of waterless port offices in Guangzhou has increased to 33. In addition, Dalian, Yingkou, Qingdao, Lianyungang and other large ports have set up waterless ports in recent years.

Although the number of domestic waterless ports has soared, the problems and contradictions in the construction of waterless ports in China are also more prominent, mainly manifested in the following points:

- (1) lack of overall planning, local port construction.
- (2) The construction investment is insufficient, most of the waterless port stations are small in scale and single in function, and do not reach the nature of hub.
- (3) The operating cost of some waterless ports is too high, some of them need government subsidies to maintain, and there are problems in the profit mechanism.

Overall, uneven development between different anhydrous harbor in China, serious polarization, while contributing to regional social and economic development the enormous role, but some anhydrous port due to planning or management business has been in a state of depression, part of the anhydrous harbor did not play a leading role in promoting regional economic development. Fundamentally speaking, the main reason for the above defects is the shortage of goods in container transport business. For example, 90% of the container goods in the ports above are from the Yangtze River Delta, so there are very few goods that can really enter the inland and lack of relevant market power.

In 2020, the Political Bureau of the CPC Central Committee pointed out that the strategic deployment of "accelerating the formation of a new development pattern with the domestic cycle as the main body and the domestic and international double cycles mutually promoting" would be a great new opportunity for the development of waterless ports. Under the new strategy, the new opportunities and development of China in the future will mainly come from the domestic cycle, and the development of inland industries will certainly drive the market demand of inland dry ports.

DOI: 10.6919/ICJE.202104_7(4).0047

1.4 Development Status of Waterless Port Abroad

Due to the early research on waterless port abroad, its development is in full swing, mainly represented by western developed countries. For example, the United States has led the world in the planning and construction of waterless ports, which already exist more than 400 container transfer stations, the number of waterless ports in Europe has exceeded 200, greatly improving the capacity and level of freight transport services in European countries.

Summarizing the development experience of other countries mainly has the following characteristics: (1) make full use of the influence of location advantage. (2) Promote the construction and improvement of the system. (3) Improve the role of the market. (4) Increase policy support.

2. Function of inland waterless port

Inland dry ports connect the inland areas with the international market, and play an equally important role in opening up to the outside world as coastal ports. However, compared with the development of coastal ports, the development of inland dry ports in China is still in its infancy and exploration period. In the process of development of inland port of anhydrous, need further digging its container terminal, storage function, cohesive function, customs, inspection and quarantine clearance function, function of freight forwarders, and integrated warehousing and distribution functions, especially the function is to promote the development of multimodal transport referred to in the preceding paragraph has incomparable effect. Generally speaking, except that it does not have the function of loading and unloading ships, other functions are basically similar to those of coastal ports, including storage yard, storage, transportation, inspection, etc.

Its main functions are: (1) container distribution, storage function. (2) Transport connection function. (3) customs clearance, inspection, quarantine and other customs functions. (4) Promote the development of rail and sea transport.

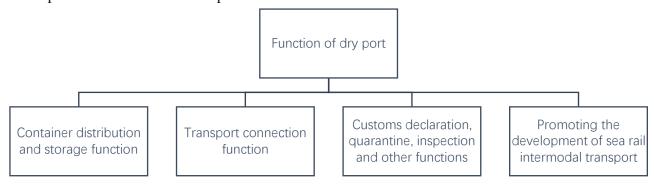


Figure 1. Function of dry port

2.1 Container distribution and storage functions

Inland waterless port is an important node of container transport in the inland, which plays the role of connecting the inland area with seaport, airport or border port. As a distribution point for container goods, inland dry ports can concentrate small, scattered flows of goods into large volumes, which can then be transported by rail or road to ports, airports or border ports. The containerization level of dry port cargo can also improve the transportation efficiency of cargo. With the help of dry port, an efficient cargo flow organization system can be formed for inland container transportation, which is a kind of improvement to the traditional inland transportation network system of bulk cargo.

2.2 Transport connection function

Inland dry port is an important node of international and domestic logistics, as well as an important distribution center of inland import and export goods and domestic goods. It should have the function of transport connection for transfer and conversion. Inland dry ports should take the initiative to connect with other modes of transportation according to their own traffic location, so as to provide

DOI: 10.6919/ICIE.202104 7(4).0047

supporting hardware and software foundation for the further development of multimodal transportation. At the same time, under the favorable policy of developing multimodal transport vigorously by the state, the infrastructure of waterless port is forced to continue to improve, especially to connect the surrounding traffic and transportation network.

2.3 Customs clearance functions such as customs declaration, inspection and quarantine

The stationing of customs and inspection and quarantine authorities in inland dry ports to provide customs declaration, inspection and quarantine and other customs clearance services is the biggest difference between dry ports and ordinary container inland stations and logistics centers, and is also the advantage of dry ports to attract cargo flow.

2.4 Promote the development function of sea-railway intermodal transport

Inland dry ports are the inland endpoints of sea rail combined transport. Most inland dry ports are connected with water ports by rail, providing almost all service functions except dock loading and unloading operations at water ports. Therefore, the construction of inland dry ports will also promote the development of sea rail combined transport.

3. Supporting conditions for the sound development of waterless ports

The benign development of a waterless port includes both internal and external conditions.

3.1 Internal conditions for the development of waterless ports

The internal conditions for the sound development of waterless ports include:

- (1) Logistics infrastructure. The primary condition of logistics infrastructure is land, and it has the appropriate scale to adapt to the development of related business of the dry port. The scale will determine the appropriate scale for the development of related business of the dry port, and the scale will determine the facilities, functions and services that the dry port can bear. Secondly, there are complete facilities attached to the land, such as those used for industry and commerce, customs and commodity inspection.
- (2) Logistics functions and services. Logistics services include basic services and value-added services. When planning and designing a waterless port, its business model must be designed according to the supply chain, industrial chain and service chain of the location and radiation location.
- (3) Operating subjects and investment subjects. It is necessary to have a clear operating body to coordinate the resources of all parties and avoid the situation of separate administration or separation of government and enterprise.

3.2 External environmental conditions for the development of waterless ports

External environmental conditions for the development of a waterless port include:

- (1) Economic conditions. Economic condition is the primary condition for the development of waterless port. The construction of waterless port needs economic support, and meanwhile, economic development can also attract more customers to join in.
- (2) Resources or industrial conditions. As a branch port set up inland by coastal ports, waterless ports must have abundant resources or industries for port transportation, use powerful railway trunk lines or highway network to extend port functions to inland areas, realize cross-regional distribution and radiation functions of ports, or provide convenience for resource export of local enterprises.
- (3) Traffic conditions. Anhydrous port of the radiation and transport organization ability need to rely on advanced integrated transport network to support, it requires that the area is not only to have a variety of modes of transportation, but also has a certain scale and level, and have the possibility of mutual seamless, especially to have the requirement of container transportation, which could carry out multimodal transport.
- (4) Location conditions. Good location conditions are a prerequisite for reducing transportation costs. In the same conditions, good location in the long run, easy to form a regional economic development

DOI: 10.6919/ICJE.202104_7(4).0047

center and transportation hub. The waterless port that serves the local economy or radiates the regional economy will be established with its superior location advantages. The functions of bonded logistics, international logistics, domestic comprehensive logistics and logistics industry cluster will be planned and designed to directly integrate into the international trade and international logistics system.

- (5) Policy conditions. Whether a waterless port can have long-term vitality and attraction depends on the support of the government. At the initial stage of planning and construction, the waterless port should be supported by the national and local governments and have corresponding guiding policies. In the practice of our country, the restriction of land use index, logistics land price and logistics tax policy are the important policy levers that affect the development of logistics industry, and the important influencing factors of the construction and operation of waterless ports.
- (6) Talent requirements. Talents are an important guarantee for the construction of waterless ports. Only with sufficient talents can the construction of waterless ports achieve long-term development.

4. Operation mode of inland waterless port

4.1 Divided by the investment and operation of government and enterprises

According to the investment and operation of the government and enterprises, the operating modes of waterless ports can be roughly divided into three types: "landlord port" investment and operation mode, "tool port" investment and operation mode, and "social investment and operation mode" investment and operation mode.

4.1.1 "Landlord and Port" Investment Operation Mode

Main Features: Landlord port type waterless port projects are usually initiated by port enterprises. The port enterprises and state-owned transportation investment enterprises, railway companies and local logistics enterprises affiliated to the local government of the waterless port set up a joint venture project company, as the main body of the development of the waterless port, responsible for the investment and construction of the infrastructure, sites and equipment of the waterless port. After the completion of the dry port project, the company itself or through recruitment of shipping companies, freight forwarders and logistics enterprises to enter the dry port to carry out loading and unloading, storage, customs declaration, inspection and other businesses.

Advantages: diversified fund raising, reduce the financial burden of the government. It can effectively play the supervision and coordination functions of the government, and make use of the advantages of port enterprise management and technology, combined with the resources of local enterprises, and achieve the optimal efficiency through the form of market operation. Disadvantages: Multi-party cooperation needs a long time to run in. Government coordination is relatively weak.

This model is suitable for the general nodal cities with good development of local export-oriented economy, abundant supply of goods, low level of development of local logistics and limited financial capacity of local government. This model includes ports: the waterless port initiated by Tianjin Port Construction. Tianjin Port started its national strategic layout by establishing a cooperative mechanism for the construction of large customs clearance in northern China, and built inland waterless ports in various logistics centers and transit ports in northern China, such as Beijing Chaoyang, Hebei Baoding, Shanxi Taiyuan, Gansu Lanzhou and so on. By establishing a waterless port in the inland, the transportation channel between the port and the inland will be improved, so as to realize the connection between the inland area and the international shipping. At the same time, it will be beneficial to play the gateway role of Tianjin port in opening to the outside world and improve its international competitiveness.

4.1.2 "Tool port" investment and operation mode

Main Features: The tool port type dry port is usually initiated by the local government. The local government specially sets up the dry port management committee, which is fully responsible for the preliminary investment, construction and operation of the dry port. The dry port management committee is the main body of the investment and operation of the dry port. Customs, national

DOI: 10.6919/ICJE.202104_7(4).0047

inspection and other regulatory agencies are coordinated by the local government. Port enterprises may participate in part of the business of waterless ports by providing technical support, sending representative offices or establishing sole proprietorship or joint venture companies. In this mode, the local government has absolute dominance.

Advantages: can give full play to the government's policy resources, enjoy preferential land development, tax policies. The government has made strong coordination efforts to ensure the scale and progress of the construction. Weaknesses: the government's financial investment is too large and lacks flexibility. There is a risk that early planning and design will be disconnected from the market. This mode is suitable for regional key cities with abundant local goods, wide radiation range, strong local government financial funds, high administrative level and strong resource coordination ability. The dry port in this mode includes Xi 'an dry port. Known as the "No Waterless Port in China", Xi 'an International Logistics Park is a modern comprehensive logistics park planned by the Shaanxi Provincial Government and Xi 'an Municipal Government. The project consists of "one center and three groups", the "one center" is the bonded logistics center, and the "three groups" are the international logistics area, the domestic comprehensive logistics area, and the logistics industry cluster area. Customs, border inspection, commodity inspection and other agencies are set up in the port. Xi 'an International Port and Logistics Zone is a hub international land port in the western region, and a convergence of various coastal ports in Xi 'an sub-line ports. It is based on railway, highway and other transportation modes, and is a public operation platform for coastal ports to provide international transportation business.

4.1.3 "Social investment" investment operation mode

Main Features: Social investment waterless ports are usually initiated by local enterprises. The local government is responsible for part of the preliminary infrastructure investment and construction of the dry port through the dry port management committee. The operators of the dry port are social enterprises, which are responsible for site construction, equipment purchase and daily operation, and usually directly provide various services of the dry port. There is a loose franchise authorization relationship between social enterprises and the waterless port management committee, and social enterprises have the dominant right to construct and operate the waterless port. Government coordination is weak. Mainly by the social enterprises themselves coordinate customs, national inspection and other agencies to enter.

Such dry ports usually serve a single port. Ports participate in waterless port cooperation by means of technical cooperation and staff assignment. The form of cooperation is loose, and the degree of cooperation is the lowest among the three development modes. The construction scale of waterless port is usually small and the development grade is low.

Advantages: absorb diversified investment capital, release the pressure of local policies and finance, encourage the development of private enterprises. We should develop flexibly and give full play to the market mechanism. Weakness: the government support and coordination is relatively weak, customs, national inspection and other government agencies settled usually time-consuming. The cooperation with port enterprises is weak, and the superior resources of the port cannot be combined to realize the optimal operation of the waterless port. The enterprise's late investment capital is limited, there is a lag in project development and construction, and there is a greater risk of poor management or using it for other purposes. Social investment type waterless port is suitable for medium and above cities with mature port development conditions, sufficient local goods and high degree of marketization development.

This model of dry port: Henan Puyang dry port. The dry port was initiated by SDIC Xinda Corporation, which signed a contract with Shuijinwan Co., Ltd. and the Puyang municipal government in 2018 to build the dry port. Puyang Waterless Port Project is invested by SDIC Xinda Group and operated by Shuijinwan Tianjin Co., Ltd. The project is introduced into customs and inspection quarantine institutions stationed, can serve the whole north of Henan area. By puyang anhydrous harbor construction, give full play to local logistics resources, and cost greatly reduced, at

DOI: 10.6919/ICJE.202104_7(4).0047

the same time can connect using puyang zhongyuan economic zone and the beijing-tianjin-hebei bohai economic circle, geographical advantages, in the circulation of logistics industry chain condensed elements, pooling resources, incubation industry, driving the development of economy, cooperate with zhengzhou airport, central trains, comprehensive bonded zones and other important portal of the development of the open economy, modern logistics industry bigger and stronger, driving, radiation surrounding industrial chain extension, promote the optimization of regional economy, comprehensively carries on the eastern coastal area industrial transfer. In addition, the construction of Puyang waterless port can effectively improve the city's foreign trade volume, further boost the level of inland open economy, and build an all-round opening pattern of Puyang.

4.2 According to the degree of involvement of coastal port enterprises

According to the degree of involvement of coastal port enterprises, the operation modes of waterless ports can be divided into the following two types.

A point opposite the operating model. For the dry ports put into operation, the coastal port enterprises participate in the operation of the dry ports in the form of establishing new companies, and settle in the dry ports according to the corresponding business personnel to manage and operate the dry ports. However, this operation mode may lead to only single line contact between dry port and port storage yard, customs, agents and other parties without effective communication and cooperation, resulting in a waste of resources and a reduction in the clearance efficiency of goods. Two - point - to - point operation. Refers to the coastal ports set up entity company, will be entirely responsible for anhydrous port of the goods at the port operation, by the company structures, anhydrous port information platform, the summary of anhydrous port transportation of all kinds of information, the coastal port government responsible for coordinating the customs, inspection and quarantine departments into the real company, finally realizes the anhydrous port of intensive, informationization, modernized assignments.

5. Development prospect of inland waterless ports

5.1 Build a Maritime Silk Road Network

Continental areas in China in a long time, the lack of direct foreign trade distribution function, by building the anhydrous port and coastal port cooperation network, to better participate in the maritime silk road in the 21st century, to build a complex network of maritime trade circulation can help achieve anhydrous port of foreign trade in circulation of import and export logistics function, at the same time satisfy the strategy of "area" under the needs of the development of the opening up to the inland provinces solve the long-standing liquidity obstacle restricting the development of foreign trade in inland provinces. At present, among the 127 ports along the "21st Century Maritime Silk Road" in China's 15 inland provinces, the overall level of export-oriented trade circulation network is at a relatively low level, and the export-oriented function cannot well meet the development needs. On January 1, 2021, Shanxi logistics will go to sea directly, Huayuan International Land Port Group and Zhejiang Port Group will start the construction of "One Belt And One Road" Shin-Zhejiang logistics channel and "Zhongding Logistics Park - Ningbo Zhoushan Port" rail sea combined transport starting, trains to carry the wheel and photovoltaic products. This not only transfers the function of Ningbo Port to Shanxi, but also forms the continuity of sea-railway intermodal transport and constructs a new pattern of Shanxi's inland opening. Rail sea combined transport opened, will form after central railway trains, railway and inland water transportation, ocean a variety of effective connection mode of transportation of Shanxi new channel at sea, build a logistics transportation network connecting all parts of the world has been communication, and broke through some inland provinces as inland areas land port economic development relative lag, the bottleneck of logistics cost is high. With the implementation of the "One Belt And One Road" initiative and the gradual transfer of China's industries from coastal areas to central and western regions, waterless ports should give better play to the advantages of railway hubs and their functions.

DOI: 10.6919/ICIE.202104 7(4).0047

Silk road on the sea, under the background of "area" strategy, and some inland port without water can be fully integrated into the Yangtze river delta integration of national strategy of development, with the iron transport, china-eu class as a gripper, promote land port, harbor linkage development, and the coastal ports logistics maritime silk road transport network, cling to construct the pattern of development opportunities. The establishment of cooperation network between dry ports and coastal ports makes dry ports have export-oriented characteristics in the foreign trade circulation, which is of great significance to the development of foreign trade in inland areas. Meanwhile, it can optimize the position and role of inland provinces in the trade circulation network of the 21st Century Maritime Silk Road. In addition, a scientific and reasonable cooperation mechanism and system should be established. Waterless ports should consider the development needs, distance, convenient transportation and other practical factors of both sides, and choose the right ports to establish a mutually beneficial win-win cooperation mechanism.

For a long time, China's central and western regions have been short of effective border foreign trade scale, showing a strong regional pattern of high in the east and low in the west. Under the "One Belt And One Road" strategy promoted by the central government, the trade circulation in the central and western regions has a large space and power to improve.

5.2 Inspiration from the development experience of inland dry ports abroad on the development layout of inland dry ports in China

Countries and regions with relatively mature development of waterless ports in the world include the United States, Europe and Korea.

There are a large number of waterless ports in the United States, and sea-rail intermodal transportation lines are all over the whole country, with Kansas Inland Logistics Center and Chicago Inland Logistics Center as the most typical ones. The Kansas Inland Logistics Center is operated by rail to the coastal ports and by road to the surrounding inland areas.

Europe has benefited from the coordinated organization of the Continental Union, which has networked its operations with each other. It is the largest dry port in Europe. It is located near Madrid, also known as the dry port of Madrid. It is connected with four major ports in Spain.

South Korea Kyungin ICD Logistics Center in 1990 to establish the inland container logistics base.

Foreign waterless ports developed earlier, there are many experiences worth learning for domestic reference. First of all, inland waterless ports in developed countries have prominent advantages in geographical location and traffic conditions. Madrid has an international railway connecting France to Portugal, and the inland dry ports are mostly connected to the water ports by rail,

In addition to wharf loading and unloading, it provides almost all service functions except for the dock handling. It also includes the shipping company empty container layout, container disassembly and consolidation and port functions. For China, the purpose of waterless port construction has different adjustment according to the different levels of economic development in different places. For waterless ports with relatively complete functions, in addition to providing basic container loading and unloading, transportation, port customs declaration and inspection, bonded warehousing, more service functions should be added, such as providing professional services such as value-added logistics processing and on-demand distribution, to meet the needs of different customers. In relatively economically backward areas, waterless ports can mainly function as ports.

Kansas inland center container transportation system is very developed, rail combined transportation, iron and water combined container transportation conditions are mature, although the distance from the Port of Los Angeles is about 1500 miles, but the railway container can still reach the port within 12 hours, is a long distance without water port. Lanzhou as the western inland areas in China important goods distribution center of international trade and international logistics transit hub, and is located in the silk road economic belt of the golden period of important area, developed for inland railway hub and itself has the capability of international logistics and supply channels of the city, and port cooperation can promote the development of the two ports at the same time.

DOI: 10.6919/ICJE.202104_7(4).0047

At present, many inland waterless ports in China mainly rely on coastal ports for development, which is the function transfer of coastal ports. Inland dry ports should play the same important role as coastal ports, and the government of inland regions should recognize the driving role of inland dry ports in promoting the open economy and industrial agglomeration in their regions. Inland dry port can greatly facilitate the logistics and transportation of inland hinterland, so it is necessary to set up "special special" green channel for dry port, establish preferential policies and give certain support.

In the operation of inland waterless ports abroad, local, port and railway parties can adopt business cooperation, joint venture operation, or independent operation of ports, etc., and an effective linkage mechanism should be established to ensure that local problems encountered in the operation can be quickly solved.

Acknowledgments

Anhydrous port construction in China is still in groping stage of development, at present the main problem is the anhydrous harbor construction layout is mostly confined to the area, can't consider global unified planning, centralized and one-to-many several ports, so that no water port construction for some more places and local interests, rather than do consider for a long time. Moreover, the unequal status of coastal ports and inland dry ports also leads to the passive development of inland dry ports. The inland dry ports need to find their own development direction and cannot completely rely on the big ports. In terms of sea-railway intermodal transport, China's inland waterless ports, as inland endpoints, play an important role as transit hubs, making logistics transportation and goods import and export trade more convenient, and playing a role in stimulating the development of local economy.

China is in the stage of rapid development of container transport, and the inland container facilities have been rapidly developed. However, the facilities are still spotty, most of the facilities are small in scale and no waterless port with hub nature has been formed. Inland port of anhydrous is a capital-intensive facilities, its construction cost can reach tens of millions of sometimes even reached one hundred million yuan, so no water port needs to absorb the social capital to invest, it needs not only the domestic capital, such as port, shipping companies, the government and the private capital, etc., also need foreign capital to invest, but at present our country anhydrous port investment is less, need the government's strong support, organization and guidance.

Under the strategy of "One Belt and One Road", the construction of maritime trade circulation network of inland dry ports can help bring into play the function of import and export logistics in the foreign trade circulation of dry ports, which makes the development of inland dry ports have huge space and potential.

References

- [1] Yuan Ke-dart. Evaluation of the performance of inland waterless ports in multimodal transport [J]. Port Science and Technology, 2020(10):42-49.
- [2] Ye Ningning. Analysis of influencing factors of dry port and countermeasures [J]. Journal of Zhejiang Wanli University, 2019,32 (06): 29-33.
- [3] Li Guili. Research on the Development of Waterless Port in Hebei Province [D]. Anhui University of Finance and Economics, 2017.
- [4] Hu Wenbin, Feng Xuejun, Zhang Yan, Jiang Liupeng, Zhang Cheng. Journal of East China Jiaotong University, 2017, 34(02):78-84. (in Chinese).
- [5] Mao Boke. The construction of waterless port under the new development and exhibition bureau should be changed to the original Yousi Road [J]. China Port, 2020(12):13-15.
- [6] Song Guowei. Research on the Development Strategy of Tianjin Port Inland Waterless Port Project [D]. Dalian Maritime University, 2019.