

An Analysis on the Training and Developing of Chinese Ordinary Seafarers

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Abstract. In response to the strategic requirements of maritime power development, this article focuses on the ways to strengthen training and developing of Chinese ordinary seafarers. By giving a study on the current development status of Chinese ordinary seafarers, this article points out the existing problems in the structure of Chinese ordinary seafarers and the gap between the quality of ordinary seafarers at the present stage and the requirements of modern shipping industry for seafarers. And then this article offers suggestions on the training and developing of general seafarers. The study intends to shed light on improving the development of the team of Chinese ordinary seafarer and changing to a powerful country of seafarers.

Introduction

In 2013, 18th CPC National Congress proposed the strategic goal of “developing the marine economy, protecting the marine ecological environment, resolutely safeguarding the state’s maritime rights and interests and building a powerful marine power”. In 2014, the State Council issued “Several Opinions on Promoting The Healthy Development of The Shipping Industry”, which proposed that “By 2020, China should improve the system mechanism for the training of marine talents, strengthen the construction of seafarers, especially the senior seafarers, and forcefully cultivate professional and international maritime personnel.” In 2017, 19th CPC National Congress clearly called for “steadfastly promoting land and marine development, speeding up the construction of a marine power”, and once again sounded the clarion call for building a maritime power. “Chinese Crew Development Plan (2016-2020)” points out that “by 2020, the overall goal of the development of our crew is that the crew training system is further perfected, the market mechanism is sounder, and the foundation and environment of the crew development are improved obviously. The crew is more adaptable to the national strategy and shipping development, and their ability to serve international shipping is further improved. China basically realizes the transformation from a major crew country to a power one.” Therefore, a team of ordinary seafarers with reasonable structure, excellent technology and meeting international standards will make an important contribution to the changing to a powerful country of seafarers.

The Current Situation of Marine Industry Development and the Market Demand of Seafarers

Current development of international shipping industry

With the global material and spiritual culture widely integrated and developed, the shipping industry, as a bridge of world material and cultural exchange, integrates the world organically. At present, the global economic recovery is weak, the growth of trade is slowing seriously, the contradiction between supply and demand of the global shipping market is still prominent, and the

situation facing the international shipping industry is still severe. The Baltic Sea index (BDI) continues to run low and the major shipping companies enter the cycle of bankruptcy, reorganization, mergers and alliances. The competition in the seafarer labor market is also becoming increasingly fierce.

The composition of the Chinese ordinary seafarers

In 2015, China had a total of 638990 seafarers, and the total of seafarers holding certificate of competency counts up to 468126[1]. The data difference between seafarers holding the certificate and registered seafarers, mainly originates from the registered seafarers who are still in the internship period or in the food service. The ordinary seafarers referred to in this article are seafarers who hold an effective certificate as (able) seafarer deck or (able) seafarer engine according with the STCW (Seafarers' Training, Certification and Watchkeeping) Code, 29.9% and 21.4% respectively (Table 1). In China, ordinary seafarers have accounted for more than 50% of the number of seafarers holding certificates of competency, and play an important role in the shipping market.

Table 1. Distribution Table of Chinese Seafarers Holding Certificate of Competency.

Post	Number	Percentage	Number	Project	Percentage
Master	33671	7.2%	Chief Engineer	31444	6.7%
Chief Mate	22475	4.8%	Second Engineer	17391	3.7%
Second Mate	27498	5.9%	Third Engineer	23850	5.1%
Third Mate	37238	8.0%	Fourth Engineer	34618	7.4%
Seafarer Deck	139925	29.9%	Seafarer Engine	100016	21.4%
	Total			468126	

Source: Report on the development of Chinese seafarers in 2015.

International market demand for ordinary seafarers

The global supply and demand for seafarers in 2015 showed a total of 1647500 seafarers worldwide [2], including 774000 senior seafarers and 873500 ordinary seafarers (data based on seafarers with a valid certificate that meets the requirements of the STCW Code, Table 2).

Table 2. Global Seafarers Supply in 2010-2015 (unit: person).

Post	2010	2015	Growth Rate
Senior seafarers	624,000	774,000	24%
Ordinary seafarers	747,000	873,500	17%
Total	1,371,000	1,647,500	20%

Source: The global supply and demand for seafarers in 2015.

In 2015, 1545000 seafarers were expected to be in the world, of whom 790500 senior seafarers and 754500 ordinary seafarers (Table 3). The global demand for seafarers has been growing, but the growth of global demand for seafarers is far below the increase in seafarers' supply in 2010-2015 (Table 2). And the growth rate of demand for ordinary seafarers is only 1%.

Table 3. Global Seafarers Demand in 2010-2015 (unit: person).

Post	2010	2015	Growth Rate
Senior seafarers	637,000	790,500	24%
Ordinary seafarers	747,000	754,500	1%
Total	1,384,000	1,545,000	12%

Source: The global supply and demand for seafarers in 2015.

Comparing table 2 and table 3, the supply and demand of global seafarers in 2015 show a shortage of 16500 senior seafarers and a surplus of 119000 ordinary seafarers. And the overall surplus of seafarers is 102500 (Table 4).

Table 4. Global Seafarers' Supply and Demand in 2015 (unit: person).

	Senior seafarers	Ordinary seafarers	Total
Shortage	-16,500	119,000	102,500
Percentage	-2.1%	15.8%	6.6%

Source: The global supply and demand for seafarers in 2015.

Due to the slowdown in global maritime market demand in 2010-2015, the ordinary seafarer labor market is relatively oversupplied. And this has become an inevitable trend. Only by building a high-quality team of ordinary seafarers can we occupy a place in the international shipping market.

Difficulties Faced by the Training and Developing of Chinese Ordinary Seafarers

The gap between the quality of Chinese ordinary seafarers and the requirements of modern shipping industry

There is a high incidence of the physical and mental health problems of ordinary seafarers. Navigation is a hard work. With the full effect of the Maritime Labor Convention 2006, the living environment and accommodation conditions on the ship have been improved, but still inferior to that on the land. Occupational diseases such as hypertension, heart disease and stones are highlighted in the seafarers. In addition, with the narrowing of the income gap between on board and land, the seafarers are facing a decline in social status and their work recognition is missing. Besides a close environment of living and working, they need to face the challenges of the impact of extreme weather, sea conditions, noise, and homesickness. The psychological problems of seafarers present a high trend.

There is a lack of sense of responsibility and team consciousness for ordinary seafarers. Lacking the personal attachment and a sense of belonging to enterprises, ordinary seafarers are job-hopping frequently, also in short of teamwork. When encountering extreme weather, complicated sea conditions or other situations, seafarers with an irresponsible attitude cannot afford coordinated and effective action the first time, which makes a security threat against the sail.

Working skills of ordinary seafarers need to be improved.

1. The awareness of conventions and regulations needs to be promoted. Seafarers' behaviors during the work of ships are bound by international conventions and regulations. A senior seafarer should be familiar with relevant maritime conventions and regulations, and be able to clearly expound the requirements and explain to others. And the ordinary seafarers should also maintain the awareness of the conventions and regulations to protect the interests of their own and ship-owners. However, Chinese ordinary seafarers' awareness of international conventions is weak in general. For example, effective management of ships depending on the rules of ISM (international security management rules) Code has become a common practice; however, Chinese ordinary seafarers generally do not know their own responsibilities in the ISM Code, and they work mechanically according to experience. This is also an important factor affecting the international first-class ship-owners to hire any Chinese ordinary seafarers.

2. Foreign language ability needs to be improved. Chinese ordinary seafarers are generally weak in foreign language. They usually have not participated in regular English training, and also not take the initiative to exercise foreign language ability in daily life. That has become the main constraint on internationalization of Chinese ordinary seafarers.

3. Sailing skills need to be improved. With the rapid development of navigation technology and the tendency of large-size and automatic ships, especially the application of special ships (liquefied gas

ship, cruise ship, chemical ship, etc.), requirements for seafarers' sailing skills also enhance. Ordinary seafarers still have promotion space to improve their skills in face of new technologies.

The loss of Chinese ordinary seafarers is serious.

At present, the loss of Chinese ordinary seafarers is more serious (Table 5). In general, Chinese ordinary seafarers are mainly concentrated in the age of 20-30, and showing a rapid declining trend with increase of age. Nowadays, the income gap between on board and land has gradually narrowed, and the attractiveness of the wage for ordinary seafarers has been gradually reduced. There are too many negative news about seafarers, and the occupation of seafarers is misunderstood. Young seafarers' view of employment has changed and they are not inclined to be long-serving seafarers.

Table 5. The Age Distribution of Chinese Ordinary Seafarers in 2015 (unit: person).

Post	18 ≤ - < 20 years old	20 ≤ - < 30 years old	30 ≤ - < 40 years old	40 ≤ - < 50 years old	50 ≤ - < 60 years old	≥ 60 years old	Total
Seafarer Deck	47	63234	31888	23931	17336	3489	139925
Seafarer Engine	23	49465	22710	17398	9057	1363	100016
Total	70	112699	54598	41329	26393	4852	239941

Source: Report on the development of Chinese seafarers in 2015.

The Manila Amendments to the STCW Code have an impact on Chinese ordinary seafarers.

In the Manila amendment to the STCW Code, new requirements for “able seafarer deck” and “able seafarer engine” were added, and the Manila Amendment has been fully implemented in January 1, 2017. China and her major foreign ship countries and regions, including Hong Kong, Liberia, the Marshall Islands, the Bahamas and other maritime authorities, have made clear that after January 1, 2017, the international sailing ships must be equipped with ordinary seafarers certificated as able seafarer deck or able seafarer engine. Therefore, the demand for ordinary seafarers certificated as able seafarer deck or able seafarer engine is bound to increase substantially in the future shipping market. However, in contradiction with the demand, ordinary seafarers conforming to the requirements are supposed to be in a short supply in China, where requirements for certification are higher than the STCW Code (Table 6).

Table 6. Contrast of Requirements of the Manila Amendments to the STCW Code and Rules of the People's Republic of China for the Competency Examination and Certification of Seafarers Serving in Seagoing Ships.

Post	the Manila Amendments to the STCW Code	Rules of the People's Republic of China for the Competency Examination and Certification of Seafarers Serving in Seagoing Ships
Able Seafarer Deck	Approved deck service qualification: not less than 18 months, or less than 12 months and approved training has been completed.	Served as a seafarer deck for 18 months, or served for 12 months and finish the probation for no less than 3 months according to the probation plan and the book of records in the last 6 months. And through the corresponding test.
Able Seafarer Engine	Approved marine service qualification: not less than 12 months, or less than 6 months and approved training has been completed.	Served as a seafarer engine for 18 months, or served for 12 months and finish the probation for no less than 3 months according to the probation plan and the book of records in the last 6 months. And through the corresponding test.

Suggestions

Suggestions on the training of Chinese ordinary seafarers

To improve the training mode in line with the needs of international shipping market.

1. The first is to improve the ordinary seafarer training system: To improve the infrastructure construction of ordinary seafarers' vocational education, increase the input of practical courses such as real ship simulation, and develop their ability to adapt to the new navigation technology. To improve the teaching quality evaluation system for training institutions, encourage cooperation between school and enterprise, and encourage excellent seafarers to participate in teaching.

2. The second is to strengthen the practical ability and comprehensive quality training of ordinary seafarers: Drawing on the experience of the training mode of British Maritime apprenticeship [3], to carry out the combination of shore based training and ship training, set up a team of trainers on board, and implement the pattern of "teacher and apprenticeship". To require new ordinary seafarers to complete the training on certain qualifications, strengthen the professional accomplishment, especially team consciousness, and conduct a comprehensive training on laws, regulations, conventions and international maritime affairs. And to carry out the training courses of psychological dredging in the ordinary seafarers and ensure their mental health.

3. Besides, based on the Manila amendment to the STCW Code, to lower the requirements in Chinese regulations for obtaining the certificate of able seafarer deck or able seafarer engine, and encourage ordinary seafarers to gain the certificate.

To coordinate the examination and certification mode with training methods.

1. The first is to optimize the contents of examinations: To implement the examination that can objectively verify the training effect and reflect ordinary seafarer's ability.

2. The second is to innovate the examination method: To promote the combination of on-board training and practical examination.

3. The third is to improve the seafarers' certificate issuance mode: To realize the electronization of seafarers' certificates and shorten the renewal time of certificates.

Suggestions on the developing of Chinese ordinary seafarers

To promote the efficient and healthy development of ordinary seafarer labor market.

1. The first is to build an open and transparent environment: To establish and improve the government information publish and inquiry system, make greater efforts to publicize related policies and regulations among ordinary seafarers, and keep track of the market supply and demand of ordinary seafarers as well as the employment situation and salary.

2. The second is to build a standardized and orderly market for seafarers: To improve the credit system of shipping enterprises, crack down on dishonest enterprises, and impose more severe penalty on the enterprises which intentionally damage the interests of ordinary seafarers.

To focus society attention on ordinary seafarers.

1. The first is to build a public service platform for seafarers: To build the information sharing platform involving the government led, shipping enterprises, the Seamen's Union and other relevant organizations. And to publicize the profession of seafarers with a fair view through the platform and provide information services for ordinary seafarers, such as employment guidance, employment, legal aid, which is expected to attract the attention of the society and encourage more young talents to join the team of ordinary seafarers.

2. The second is to innovate service mode for seafarers: To implement the "Internet plus" service mode of providing all-round, multi-level and integrated high quality services, which offers easy communication and achieves information sharing between seafarers and their families, fully considering occupational characteristics of seafarers.

To promote the construction of protection mechanism for the rights and interests of ordinary seafarers. With the full force and effect of the Maritime Labor Convention 2006, all government departments should work together to establish international cooperation and coordination for implementation.

1. The first is to improve the laws and regulations to protect the rights and interests of seafarers, and provide seafarers channels for complaints, especially ordinary seafarers.

2. The second is to strengthen the examination of seafarers' dispatch agreements, especially to meet the Convention requirements of wages for ordinary seafarers.

3. The third is to study the social security payment method applicable to ordinary seafarers according to the professional characteristics, so as to ensure that seafarers enjoy normal social insurance payments during the time off work.

4. Besides, to research and improve the handling mechanism of overseas emergencies so as to ensure Chinese seafarers not stay abroad.

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References

[1] Report on the development of Chinese seafarers in 2015 [M]. Dalian: Dalian Maritime University Press, 2016.

[2] BIMCI/ICS. The global supply and demand for seafarers in 2015 [M/OL]. Manpower Report, 2015.

[3] Y.Q. Wen, S.P. Zhang: The British maritime professional apprentice system and its main characteristics, Maritime Education Research, 2013(4): 1-8.