

## **CONTRACT-BASED SEAFARER TRAINING: WAYS OF IMPLEMENTATION**

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**Abstract.** The paper covers the issues of seafarer training in present-day Russia and ways of finding feasible solutions. It states that the international shipping industry is on the rise while the problem of ship officer shortage remains grave. The author makes it clear that seafarer training and job placement issues are inseparable from the global trends, still there are some specific features. The peculiarities of the Russian system of maritime education and training are dwelt upon as well as the roots of the specific problems are, as the whole system of higher professional education and training in Russia has undergone dramatic change. The model of contract-based seafarer education and training is presented, paying attention to possible options. The ways of implementation of such system are given, substantiated by appropriate figures and data from the Russian shipping industry companies as well as by extracts from the MSU syllabi. The conclusion is made that through the combined efforts in implementation of the proposed models Russian system of maritime education and training will be capable to meet the challenges of the XXI century in supplying well-qualified and skillful seafarers to the shipping industry both in the home market and internationally.

### **INTRODUCTION**

International mercantile marine keeps growing, and there are no signs of slowing down its development. World shipbuilding is booming. Highly sophisticated and environmentally safe ships continue replenishing the world merchant fleet.

Shipping is involved in globalization to a far greater degree than other sectors; ship owners enjoy the right to employ crewmembers in any part of the world. But despite all the above achievements, here emerges the question: who will con the ships and control sophisticated equipment ensuring the ships' safe and accident-free operation.

The world economic crisis makes allowances in the process of marine transport development, but the tendencies and problems this sector is facing remain.

Any country can only have a guaranteed recruitment of seafarers for her national fleet at the expense of redundant specialists wishing to continue their careers as crewmembers which will ensure healthy competition as a stimulus for further development of principles of safe navigation, preservation of the environment and commercial effectiveness of fleet operation. Today, however, the shipping sector is facing an unprecedented lack of personnel. According to assessments made by some experts, shortage of only ships' officers will be from 27 to 45,000 people in the nearest future. The same sources claim that this tendency can redouble taking into account the fact that the amount of ships increases by 1 % annually.

### **CURRENT SITUATION WITH SEAFARER TRAINING IN RUSSIA**

The global critical situation with providing the world fleet with well-qualified officers affected Russia too. The number of young people wishing to make a marine career is decreasing sharply. Well-trained graduates of Russian marine institutions increasingly find employment in shore-based organizations; those wishing to work at sea choose foreign companies where payment is higher, working conditions are better and social package is thicker.

Every high school leaver faces the problem of choosing his/her profession; here prestige of a profession is a decisive factor. The very notion of prestige related to a profession/specialty implies the essence of the attitude on the part of an individual and the whole society towards the factors underlying a common idea of attractive career and consequently, quality of life.

The prestige value of marine career is a special theme to be discussed separately and protractedly. Today we can only mention that high-quality level of entrants to seafaring jobs is a prerequisite for further work with cadets and their successful employment. The notion of marine romance lost its attractiveness for modern young people long ago. Hard labor of a well-skilled seafarer deprived of advantages that work and leisure ashore gives is becoming less and less prestigious for a young person spoiled by civilization amenities. This is why an appropriate payment for such labor that can guarantee a worthy life to a seafarer and his family members becomes a prevailing factor when one chooses seafaring as his/her profession. It would be of interest to mention here the results of studies conducted by the Russian Maritime Registry of Shipping where the students' and cadets' motivation to work in the shipping sector was analyzed. The results of the survey were made public at by N. Reshetov, Director General, Russian Maritime Registry of Shipping [1].

According to the data he quoted, the young people's decision to get maritime education was influenced by: security of interesting employment upon graduation – 44 %; their relatives', friends' and acquaintances' recommendations and family traditions – 26 %; Prestige value of maritime education – 22 %; and only 5 % believed shipping companies' guarantees. Distrust for shipping companies' promises is a serious warning for the companies to take into consideration.

68 % of respondents are planning to devote their life to marine career upon graduation, and 15 % have not decided yet. However, out of the group intending to work aboard marine ships only 19 % are going to work there till their pension age; 27 % intend to work there till they are promoted to the rank they wish; another 27 % are planning to do so till they find a higher-paid position ashore, and 22 % more are going to work as crew members till they save enough money to purchase real property. Thus, most young people consider their marine career as a temporary arrangement and they are not prepared to carve out such a career during all their life span. It is, therefore, equally important for a seafarer working with a shipping company to gain an offering to carve out his/her career and be secure socially working either at sea or ashore.

The personnel problem and the image of a shipping sector are interconnected; therefore, the approach to correcting the situation should be system-based. Need to increase shipping companies' responsibility for training of their ships' crews is one of the aspects of the systemic approach; it fully corresponds to the IMO idea that maritime education and training should become an integral part of shipping industry.

The image of the Maritime University as a source of marine manpower has been created, and the authority of the institution is quite high especially in the Primorsky Krai. Now it is essential to develop the results achieved and outreach Siberia and other parts of Russia. The University has started such activities. The MSU team visit to a Fair of Professions held in Irkutsk showed a great interest of young people staying in that region to the Maritime University.

## **ROOTS OF THE PROBLEM**

After the USSR collapse, a conundrum was shaped in the Russian system of maritime education and training and on the seafarers' labor market. The government funds marine specialists' training with budget means, but foreign shipping companies use its results; as a rule, the best graduates find employment with those companies. This fact takes toll on the situation in the Russian shipping sector. Taking into account the prospects of the fleet growth and increase in cargo transportation aboard ships hoisting the Russian flag, we can expect aggravation of the personnel problem. The following specific features are typical for the system of marine specialists' training under the present-day conditions:

- The graduates whose training was funded by the state budget get employment aboard Russian ships hoisting foreign flags;
- There is a steady drift of the best graduates to foreign shipping companies where high payment, comfortable labor conditions, reliable insurance, work and vacation interchange acceptable for one's health, before-the-voyage training, re-training and career development are guaranteed;
- Deficient funding of maritime institutions during quite some years led to aging of marine training facilities, low payment caused loss of a teacher's profession prestige, drift of young specialists from maritime institutions and faculty aging;
- Constant growth of requirements to maritime training;
- Poor high-school training makes it necessary to arrange correction courses for entrants so that they could meet international standards.

But the short time it takes for our graduates to adapt themselves to the best modern ships assures us that the Russian system of maritime education and training ensures the level required of marine specialists.

According to a number of Russian shipping companies and the Union of Russian Shipowners, we should get back to the system of rigid career assignment so that a graduate would have to work for a certain period (of three years) wherever he/she was allotted. The system of compulsory work for young specialists as junior officers would help resolve the problem of the heaviest deficit of personnel.

Under the conditions of open seafarers' labor market, however, a young specialist's mandatory employment aboard ships of the companies that aren't good enough for a young specialists due to various reasons, won't resolve the problem of graduates' long-term employment with those companies. Upon expiration of the term of mandatory assignment a specialist that has gained work experience will leave for a company more acceptable for him/her unless the company where he was employed creates competitive labor conditions. Thus, the Russian graduates' mandatory career assignment system will help fill in career placements with prestigious, mainly foreign companies.

In addition, the company that is to employ graduates might face personnel disproportions owing to regular filling of junior positions by young specialists and slowing renewal of experienced instructing seafarers. Thus, the mandatory career assignment system based on government allotment without a company's additional efforts to create conditions for the graduates' long-term work with the company won't resolve the problem comprehensively. The current system of employing the Maritime University graduates is based on applications about demand submitted by shipping companies and contracts with shipping companies. Hand-on experience of contract relations with companies implies partial reimbursement of expenses for cadets' practical certified training and imposes obligations on graduates to arrive at a shipping company for employment.

Data on demand of shipping companies in young specialists as they were submitted are shown in Table 1.

As the Table shows, there is a steady deficit in young specialists. Taking into account hand-on experience and cadets' expulsion during their training, to meet the shipping companies' demand in specialists – junior officers, the intake of entrants to seafaring specialties should be 50 % more right now. The resources required for high-quality training is another essential aspect of seafarer training.

Snip officer training is an expensive matter. On the average Roubles 1.0 – 1.2 million are allotted for training one cadet on the government order now. This is quite a big amount, but it is yet not enough.

The University annual demand for budget funding is calculated on the basis of the current normative documents; the amount stated there is three times more than the means allotted. Thus, the demand in funding is satisfied approximately by 30 %. Naturally, the question of finding the deficient means that could be used for renovation of facilities, raising the teachers' social status and new teaching aids arises.

Table 1

**DEMAND of Shipping Companies in Young Specialists – Seafarers in 2005 – 2008**

Item	Shipping Company	2005	2006	2007	2008	Total
1.	FESCO	100/85	85/65	30/30	30/24	245/204
2.	PRISCO	43/35	41/39	52/52	66/51	202/177
3.	SMP	22/ 10	27/19	34/20	18/2	101/51
4.	PRIMTANCO	17/6	25/12	19/10	38/24	99/52
5.	RIMSCO	27/12	28/16	50/35	37/9	142/72
6.	FESCOCONTRACT	36/15	62/14	65/25	65/56	228/110
7.	ARCTIC SHIPPING COMPANY	6/2	6/4	6/4	12/6	30/16
8.	HERMES	6/2	6/2	7/2	5/2	24/8
9.	MEGAMARIINESERVICE	-	-	-	16/6	16/6
	<b>TOTAL:</b>	<b>263/167</b>	<b>286/171</b>	<b>269/178</b>	<b>287/180</b>	<b>1105/696</b>
	<b>SHORATGE IN PROPORTION TO DEMAND (%)</b>	<b>36.5</b>	<b>40.21</b>	<b>33.83</b>	<b>37.28</b>	<b>37.01</b>

Nominator: the number demanded, consequent: the number assigned.

The Federal Target-Oriented Project “Development of Russia’s Transport System” (2010 – 2015) assigns Roubles 5.042 billion for renovating the University facilities. When carried out, five investment projects within this Federal Project will make it possible to upgrade simulators, laboratory equipment drastically and put into operation new academic facilities. However, no program envisages increase in current funding. There is specialist training funding shortfall for today and for the near future.

### MODEL OF CONTRACT-BASED SEAFARER TRAINING

In this connection, the task of improving the quality of specialist training should be resolved comprehensively: by concentrating the resources available and finding additional sources. Let us look at the figures.

For instance, the University spends Roubles 1,055,000 for one future navigator’s training. The first three years cost the treasury: Roubles 191,460, 236,790 and 212,694 respectively. It is the period of carrying out the so-called Federal Educational Standard. The rest three years of taking special subjects are funded by the budget to the amount: Roubles 141,538, 140,656 and 131,844 respectively, thus totaling to Roubles 414,038.

At the same time, to ensure specialists’ training in compliance with their respective specialization (oil tanker, gas carriers, bulkers etc.) specialists possessing shipboard work experience should be engaged;

additional simulators and laboratory equipment and also new teaching aids should be provided. As an example, a list of additional subjects for training universal engineers including those working in gas carriers is given in Table 2.

Table 2

SUBJECT	Hours			Term paper	Term project
	Total	Class hours	Solitary work		
Ship's Steam Turbines	80	50	30	1	
Ship's Main Boiler Installations	80	50	30	1	
Ship's Auxiliary Power Equipment of Steam Turbine Installations	80	50	30		
Maintenance of Steam Turbines	80	50	30		
Special Systems of Oil Tankers	80	60	20		
Special systems of LNG Carriers	80	50	30		
Oil Tanker Familiarization Course	72	40	32		
Oil Tanker Specialized Course	72	40	32		
Chemical Tanker Familiarization Course	72	40	32		
Chemical Tanker Specialized Course	72	40	32		
Gas Tanker Familiarization Course	72	40	32		
Gas Tanker Specialized Course	72	40	32		
Environment Pollution Prevention	32	16	16		
Dual Fuel Ship's Diesel Engines Operation	32	16	16		
<b>Total in Ship's Engines Package</b>	<b>976</b>	<b>582</b>	<b>394</b>		

Amounts of hours for new courses and, consequently, their provision depend on a specialty and specialization.

According to preliminary estimates, the amount of additional finances required is nearly the price of training one cadet in his/her 4<sup>th</sup>, 5<sup>th</sup> and 6<sup>th</sup> years, i.e. it is equal to Roubles 400 – 500,000.

As it was noted previously, there is an experience of compensating by shipping companies for a part of practical certified training to the amount of US\$ 2,000 – 3,000.

The contracts made between companies and the University state the amount of compensation; on an average it is equivalent to US \$ 2,000. For quite some time the University has practiced such contracts with PRISCO (the agreement was canceled in 2008), FESCO and FESCONTRACT Companies. Partial compensation was stipulated in the contract of practical training with RIMSCO and PRIMTANCO

Companies. This arrangement is especially efficient if a company selects future graduates at an early stage of their training and tripartite contracts are made. The contracts stipulate additional scholarship, practical training (if possible in a capacity of regular employees) and guaranteed employment. It is our present-day arrangement with FESCO and FESCONTRACT Companies. The FESCO only makes contracts with graduates, but there is no contract with the University on rendering educational services.

A new model of contract training offered by the University is based on the following principles.

All the cadets undergoing training at the University should be involved in the system of contract training.

The University undertakes the obligations exceeding the current academic standard of conducting additional courses ensuring specialization required for a certain shipping company.

A shipping company undertakes to provide additional resources for a specialist's training to the amount required for the University to conduct additional courses ensuring a graduate's specialization.

A trainee undertakes to complete the program of his/her specialty including all additions stated by a corresponding shipping company, to get the certificates stipulated by the International Convention for obtaining a Certificate of Competence and work aboard ships owned by the Company during the contract term.

The tri-partite contract covers the matters of:

- Employing for a period of shipboard training;
- Cadets' catering during their shipboard training aboard the Company ships;
- Covering transport fares up to the port where shipboard training starts;
- Allotting supervisors for the period of shipboard training.

Additional resources for specialists' training that a shipping company undertakes imply:

- Money means;
- Guidance materials, laboratory and simulating equipment;
- Expenses for training and re-training including fieldwork for instructors of special subjects;
- A part of expenses for shipboard training.

On the whole, the up-dated model is in many respects similar to the University-Company-Cadet contract relations materialized today. The difference is that the amount of resources to be paid by a shipping company is significantly bigger; consequently, the amount of obligations that the University undertakes is also bigger.

Another model of specialists' training through contracts with shipping companies is feasible. It is aimed at satisfying the demand of companies wanting specialists to the fullest. For example, a government order guarantees to cover 70 % of a company's demand in specialists. The rest 30 % are to be covered by contract training. In this case companies undertake to finance specialists' training starting from their first year in full. By doing so a company has the right to order the appropriate quality of training. It is evident that the trainee's commitments are to be tighter. Such a form of contract training is being used by the Admiral Ushakov Maritime State Academy, Novorossiisk and Novoship Company. The fact that the cadets selected are former servicemen guarantees a positive result. Their training is conducted under the program of secondary vocational level. In 2007 – 2008 the average cost of training was about Roubles 180,000 per year per one trainee. In addition, this form of contract training is being widely used in railroad transport.

Shipping community repeatedly suggested applying the law on alternative service currently in force in Russia to young specialists working aboard Russian merchant fleet. It would help resolve the problem of personnel shortage.

The current legislation of the Russian Federation does not permit to use this law directly for the benefit of shipping companies. Appropriate amendments should be made in the current legislation.

But the idea seems to be attractive. In our judgment, the model of contract training where a law on alternative service is applied could be like the following.

An applicant signs a contract that guarantees him/her a fare up to the place of training and subsistence and lodging. There are two options for funding:

- at the expense of a company participating in the contract;
- at the expense of an institution that received extra budgetary resources for training specialists for companies.

The contract stipulates paying scholarship and other material support (fare to go on leave, clothes, individual facilities for augmenting learning such as a laptop, player, dictophone etc.) by the company ordering specialists. The second part of the contract comes into force on the day of admission to an institution; it includes signing by a cadet of commitments to follow the institution statute, to live a healthy way of life and to be ready to work in specific conditions of the sea, to master a course of naval training, to go for acculturation and to be intent on self-improvement including elements of improving educability.

The institution commitments toward a cadet are stipulated in the statute. The ordering company ensures shipboard training aboard her ships or ships owned by another company of the type that the ordering company is planning to purchase. The company makes unhindered propaganda of her corporate interests and brings up the cadets in the spirit of loyalty to the company during their shipboard trainings.

The contract is made with an applicant for the term of entering an institution, training, shipboard training and naval practice, for the terms of leaves and mandatory work in the shipping sector. For instance, an applicant that chose the higher level of training in ship navigation in sea routes makes a contract for eight years and approximately eight months.

The government is a guarantor of purposeful spending of budget means in compliance with the regulations of boarding schools and guarantees work in the sector that should be supported by the company of the sector.

The model of contract training combined with alternative service is attractive for cadets taking courses of secondary vocational training and who do not have occupational determent.

The three models of contract training analyzed above can be tentatively called as follows:

Model 1: Refund for Specialized Vocational Training;

Model 2: Full Refund of Expenses for Training;

Model 3: Training Combined with Alternative Service.

Evidently, other models of contract training, versions and combinations of the models presented are possible.

We think that the first model is most feasible today; we present it to shipping companies so that they could use it as the basis of their contract relations with the University.

The question we examine today was discussed with Russian Far East companies at an extended session of the University Academic Council in 2007. We received definite proposals with regard to the examined question on the eve of preparing for the Guardianship Board sitting from FESCO, SMCO and RIMSCO companies.

## **CONCLUSIONS**

Further development of shipping industry worldwide and in Russia as an integral part of the world economy is inconceivable without a profound and flexible system of maritime education and training capable of meeting the challenges of the new era of globalization. The maritime education providers keep

on seeking such forms of education and training that would satisfy the demand on the part of the industry to the fullest extent. Still certain problems persist. Russia is no exception, though there are some peculiarities caused by the fact the whole system of higher professional education and training has been undergoing a long and painful process of change since the USSR collapse and replacement of socioeconomic formation. As FESCO Managing Director V.N. Korchanov says, "Today the Decree on Target-Oriented Contract Training of Specialists of Higher and Secondary Vocational Level is not working; in fact, the means allotted by the government budget for training seafarers are to a great extent spent for training specialists for foreign ship owners".

However, this Decree is primarily related to training personnel at the expense of budget means of budget enterprises, organizations and institutions. Territories of the region act as ordering parties of contract training. For instance, today the University is carrying out training of navigators and engineers to the order of the Sakha Republic (Yakutia). To make it possible to apply this law in order to secure personnel for shipping companies, significant alterations of the current Decree are required; they are likely to cause deep changes in the legal framework. This matter is to be specially worked out.

Summing up the analysis presented and proposals worked out, the Maritime State University suggests that the following considerations be taken into account:

- Model 1: Refunding for Specialized Vocational Training as the most acceptable model of contract training of specialists today;
- Shipping companies to build their relations with the University on the basis of this model-based contract;
- Thorough study of the option of supporting special research of forms of contract training of specialists.

Through the combined efforts in implementation of the proposed models Russian system of maritime education and training will be capable to meet the challenges of the XXI century in supplying well-qualified and skillful seafarers to the shipping industry both in the home market and internationally.

## **References**

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