

# Some Opinions on Strengthening Emergency Oil Filling of Ships and Boats

Gaoyang Li\*

Logistics University of PAP, Tianjin 300300, China

\*2701137618@qq.com

## Abstract

**In view of the current situation of insufficient emergency oil filling capacity, optimization suggestions are put forward. In order to solve the problem of slow emergency response speed, improve the response speed through cooperation with oil suppliers. Further strengthen the capacity-building of filling by reasonably strengthening the filling force. Combined with practical experience, the emergency oil filling scheme is improved. Finally, combined with the actual tasks, the emergency oil filling capacity is enhanced through the emergency oil filling drill.**

## Keywords

**Oil Filling; Emergency; Ships.**

## 1. Introduction

Emergency oil filling is to ensure that when the ship receives an emergency task, the oil can respond to the demand at the first time, so as to avoid affecting the task process due to untimely oil filling. With the gradual increase in the number of ships and boats and the frequency of emergency going to sea, the proportion of temporary tasks is increasing. Among them, the temporary evacuation and emergency mobilization of ship formation are more frequent, which puts forward higher requirements for the response speed of oil filling. In this situation, accelerating the development of oil emergency response capacity is a necessary prerequisite for the ship to effectively carry out its sea mission.

## 2. Problems

### 2.1. Slow Emergency Response

At present, there is a lack of unified control over the supply system between boat units and oil suppliers, there is no clear definition of the division of functions and responsibilities of both parties, and the implementation of management responsibilities is not specific, resulting in uneven docking between boat units and oil suppliers. Due to the slow refueling response speed of local oil suppliers at night, the emergency response mechanism is not started quickly enough when the boats are dispatched, so it is impossible to meet the oil demand at the first time. In addition, due to the lack of effective coordination mechanism to reduce the oil filling time and improve the oil filling efficiency, the emergency oil supply of ship units is more difficult when emergency oil filling is required for temporary sea going.

### 2.2. Weak Emergency Oil Force

First, the strength of stations such as oil depots is weak. From the construction of oil facilities, at present, the supplier's oil depot stations have small capacity, small quantity, unreasonable layout, small radiation range of oil stations, and low efficiency in actual tasks. Therefore, the emergency oil filling capacity through the oil depot station is extremely scarce. Second, the refueling style is single. When the oil is distributed through the oil tank truck, the supply rate is

slow, the tank capacity is small, and there are many uncertain factors in road transportation, which is difficult to meet the emergency oil filling demand of ships and boats when they go to sea. Third, the professional strength of emergency oil filling is insufficient. At present, the short-term training for oil business personnel in Colleges and universities involves less emergency oil filling, which can not meet the needs of emergency oil filling.

### **2.3. The Emergency Filling Scheme is not Yet Mature**

The emergency oil filling plan can support the rapid decision-making of the oil business department and greatly reduce the time in the preparation stage of oil filling. At present, each oil filling point has rich practical experience in emergency oil filling and flexible means and methods. However, due to the lack of full understanding of the necessity of data accumulation, the efforts to sort out and summarize the methods and measures and advanced experience worthy of reference and promotion for task practice need to be improved. Many oil filling experience only stays in the subjective operation habits and disposal intuition of business personnel, No objective and practical guidance materials were formed to provide reference for oil competent units to formulate emergency oil filling plan, which reduced the efficiency of group training. On the one hand, subject to objective factors such as personnel change and unit transfer, it has a negative impact on maintaining the quality of professionals and continuing the vitality of professionals; On the other hand, due to the lack of classification and refinement, it is easy to produce the phenomenon of "big but inappropriate", which limits the detailed setting and practical effect of the emergency oil filling scheme.

### **2.4. Emergency Filling Drill Needs to be Enriched**

At present, the organization of emergency oil refueling training of ship and boat units has great room for improvement both in frequency and quality. On the one hand, due to the high frequency and sudden nature of sea missions, it is difficult to set aside a large amount of time to organize systematic drills; On the other hand, some business departments are still not familiar with and proficient in oil filling, resulting in weak systematization of plan formulation and weak pertinence of scheme writing. As a result, the current drill of boat units in emergency oil filling presents the phenomenon of "going their own way, fighting on their own and turning into a big one". At the same time, the phenomenon of "emphasizing professional technical operation and neglecting cooperative operation" is still common in the training process. It plays a limited role in the establishment of cooperative relationship and the maintenance of docking system during emergency oil filling at sea. It is difficult to cooperate with various oil supply units during oil filling docking, and there is still a large gap with the requirements of emergency oil filling.

## **3. Countermeasures and Suggestions**

### **3.1. Strengthen Coordination and Docking, Build and Improve the Emergency Response Mechanism**

In order to ensure that the emergency oil is organized and planned and improve the speed of emergency response, an emergency situation team shall be established and a special person shall be appointed as the team leader. On the one hand, it is necessary to strengthen the linkage of emergency oil filling to ensure that when the boat unit receives the task, it can quickly linkage with the oil supplier to carry out oil filling in time. The boat unit shall strengthen cooperation with local oil suppliers and formulate and improve relevant coordination regulations. According to the actual situation of the task, the boat unit shall make docking with the local oil supplier on the linkage response details during the task, and form a stability agreement. On the other hand, communication channels should be established between units to connect

emergency refueling, accurately transfer needs, and explore and formulate the boat oil refueling process in case of emergency.

### **3.2. Rational Planning and Layout to Accelerate the Development of Emergency Oil Forces**

First, in the construction of facilities such as oil depots and stations, we should be based on reality, cooperate with local oil suppliers and rely on local oil depots to store oil, and strengthen the construction of oil reserve capacity by expanding the reserve scale, optimizing the reserve layout and constructing the agent storage system, so as to provide more abundant and More three-dimensional oil support point. Second, in combination with new situations and changes, we should aim at the demand for emergency oil and explore new ways of emergency oil supply. Third, in terms of professional talent training, we should make use of the theoretical classroom provided by oil suppliers to vigorously cultivate oil filling technical talents with "one specialty and multiple abilities" and strengthen the construction of emergency oil talents. Starting from the actual needs of emergency oil filling, closely follow the development pace of oil filling technology, pay attention to the coordinated development of personal ability and joint literacy, prepare training contents and set up training courses targeted, and improve the professional and technical level of emergency oil filling.

### **3.3. Summarize Practical Experience and Optimize and Adjust the Emergency Oil Plan**

Based on the previous emergency oil filling, the boat unit shall distinguish the task type and task environment, and formulate a guiding oil filling plan from the aspects of operation mechanism, operation process, mode application and responsibility division of emergency oil filling. Relying on the offshore information system, establish an emergency oil filling plan library covering various filling methods, gradually enrich the emergency oil filling plan library on the basis of summarizing the experience of emergency oil filling, strengthen and supplement the weaknesses according to the shortcomings of the plan in oil filling, and continuously improve the applicability and operability of the plan. During emergency oil filling, the emergency response team shall convert relevant information into data, comprehensively use the intelligent decision-making system, select the most appropriate filling plan in the oil filling plan library, and formulate the final emergency oil filling plan in combination with the actual task.

### **3.4. Focus on the Reality of the Task and Scientifically Organize the Emergency Oil Drill**

We should change the mode of single training and single training for emergency oil filling at the present stage and speed up the formation of the mode of unified training and unified performance. In the next step, the boat unit shall strengthen the contact of each unit through the coordination mechanism and speed up the task division in oil filling. The competent oil departments at all levels shall strengthen contact with the government and the oil management units of oil suppliers, regularly carry out the coordination ability of emergency oil filling around the emergency oil filling needs of ships and boats, make each unit familiar with their own task division through training, master the Mobilization Law of oil resources in case of ship emergency out of the sea, and ensure that all operation links of oil filling are carried out in an orderly manner.

## References

- [1] Hao Cui and Qingzhong Zhou(2010).Research on the operation mechanism of integrated petroleum support in information war.Logistics Technology, no.220, p.189-193.
- [2] Hongqi Wang and Zhi Chen(2019).On petroleum support in diversified non war military operations. Training and Technology, vol.30, no.1, p.49-52.
- [3] Jin Tu (2016). Research on task allocation model of petroleum support.China Storage and Transportation, no.11, p.125-127.