Research of Revision Work for Technical Regulations of Railway Logistics Handling

Yan Ping Wang

ABSTRACT

With the development of railway handling technology and freight reform, the problems that railway logistics handling rules and regulations are not suitable are becoming more obvious. The original technical regulations of railway logistics handling, classified by the work item points, have numerous numbers. And part of the contents is not consistent with the laws and regulations. This paper, combined with the “streamlining and practical” principle, put forward a classify method based on the rules that the operating personnel and administrators should obey respectively, and then reorganized and revised the original regulations, obtained two regulations including “Railway Logistics Handling Safety Regulations” and “Railway Logistics Handling Management Regulations”. They not only refine the safety measures, technical standards and process flow of railway handling and establish the guiding ideology, basic methods and key contents of handling management, but also reflect the national policies and regulations, the relevant provisions of China Railway Corporation and the requirements of the modern logistics development.

Key Words: Railway Handling; Rules and Regulations; Modern Logistics

1 INTRODUCTION

The technical regulations of the original railway logistics handling (short for railway loading and unloading) are mainly made up of Rules for the Management of Safety Techniques for Railway Handling and Operation(Railway Transport [1983] No. 1668), Rules for the Administration and Management of Railway Handling Operations (Railway Transport (86) No. 717), Rules for the statistics of Railway Handling (Railway Transport [1994] No. 33 ), Rules for the Administration of Railway Transport Handling Machinery (Railway Transport [2006] No. 35), Notice on Strengthening the Handling of

Wang Yanping, Master, Shanghai Railway Bureau, Room 602, No.25, Lane 379, An'ning Road, Minhang District, Shanghai
Railway (Railway Transport [2009] No. 1404) and so on, were issued during the Ministry of Railway. There are more rules, some of the contents are inconsistent with laws, regulations and development policies[1], not suited to the loading and unloading personnel, technology, craftwork, equipment and Management, they don’t comply with China Railway Corporation’s the requirements “strengthen base standard and improve quality and efficiency”. Therefore, in order to further improve the railway logistics management and service level, guide the railway loading and unloading to develop efficiently, regularly and orderly, we need to conform and sum up the original rules and regulations and make the new ones according to the existing laws and regulations, basic technical regulations and the practice of railway logistics handling management.

2 RAILWAY LOGISTICS HANDLING TECHNICAL REGULATIONS TO AMEND THE BASIC IDEAS

We insist on the “streamlining and practical” principle, break the way of the classification of the original railway logistics handling rules and regulations, classify according to the rules and regulations that the operating personnel and administrators should obey, reorganize the original regulations, revise the relevant clauses. After the railway logistics handling rules and regulations were revised, they consist of Rules for the Administration of Railway Freight Handling Safety (short for Logistics handling Safety Regulations) and Rules for the Handling of Railway Cargo Handling (short for Logistics handling management regulations). Logistics handling Safety Regulations are the basic rules that the loading and unloading operation personnel must grasp accurately and implement strictly, Logistics handling Management Regulations are the basic rules that the loading and unloading management personnel should follow.

Figure 1. Technical regulations drawings for railway logistics handling.
3 MAIN CONTENTS OF TECHNICAL REGULATIONS FOR RAILWAY LOGISTICS HANDLING

3.1 Main contents of the Logistics handling Safety Regulations

Logistics handling Safety Regulations are the basic rules that the loading and unloading operation personnel must master and obey, its operational and guidance must be strong, regulatory language must be simple, accurate, clear and avoid ambiguity. The contents include not only the loading and unloading operations general requirements, but also the requirements of the mechanical operations, human operations, the main cargo category loading and unloading and emergency treatment. It also makes specific provisions to necessary technical conditions of the loading and unloading operation personnel, equipment and facilities. The terms of the regulations meet the following requirements:

(1) Commit the national laws and regulations and policy requirements. Commit the Safety Production Law, Railway Law and the others, add the company's main responsibility for the production of safety and personal safety responsibilities into the rules and regulations. Refine the rules of the training of special operators and certificates, strict the safety operation requirements of cranes, forklifts and other special equipments, implement the spirit of the Environmental Protection Law, remove the contents of the steam cranes according to the Special Equipment Safety Law and Special Equipment Safety Management Regulations [2].

(2) Join the relevant railway technical regulations[3-4]. Refine hand-shunting operation approval procedures, the number of carts, vehicle braking and electrification section means shunting operation requirements, refine the regulations of the different conditions of loading and unloading operation lines protection measures and protection signal installation, removal requirements, unify protection signal plate technical parameters and safety performance, strictly protect the system of signal request, use, custody, maintenance, destruction on the basis of the “railway technology management procedures”[5]. Refine the relevant provisions of the cargo loading and stacking, delete the original rules “loading pallet from the outside of the rail head to keep 2 meters above distance” and so on according to the requirements of “technical regulations” “cargo stacking from the outside of the rail head to keep 1.5 meters above”. On the basis of the cargo loading and strengthening rules, supplement the specific contents of three checks before and after the loading and unloading, refine the contents on the goods, vehicles, loading and unloading equipment respectively according to the four links before loading and unloading, after loading and unloading, it is easy for field operation personnel to operate.

(3) Protect the lives safety and health of the workers effectively. Detail the safety measures of the handling operation line protection, switch doors, climb operations, lifting operations, electrical equipment operation and so on. Stress that the weight limit of human handling must be carried out according to the relevant provisions of our nation, delete the original rule “loading and unloading workers of the maximum weight not more than 80kg, women workers personal
weight does not exceed 40kg”. To ensure the safety of workers in winter and summer, loading and unloading machinery driver rooms and intermittent rooms are required to configure the cold sunstroke facilities, minimize the outdoor manpower hours during high temperature period, ensure the necessary intermittent time after continuous operation for a certain period of time. Strengthen labor protection, wear and use of labor protection supplies correctly.

(4) Improve the security level of science and technology and equipment. Learn from domestic and foreign advanced technology experience, increase the promotion and application new technology, new equipment in the loading and unloading production. Install the reversing radar or sound and light warning device in mobile loading and unloading machinery, install speed limit device or speed alarm device in the tractors and forklifts on high platform, install satellite positioning and safety monitoring system in the large mobile loading and unloading machinery, the container hanging with a weighing display and overload alarm device, spreader lock is equipped with dual protection system of mechanical and electronic interlock. In order to ensure the safety of the goods in the process of loading and unloading, a special section and standardized operation shall be stipulated. The total weight (including the weight of the goods) required to enter the caravan shall not exceed 8 tons. The other parts of the machinery except the moving parts mustn’t touch the body, don’t impact the door with the trolleys, forklifts and other loading and unloading equipment, don’t remove the doors and windows arbitrarily.

(5) Refine the operation provisions of the main cargo category loading and unloading. The relevant provisions of the container handling process access to the delivery of loading and unloading, scattered cargo express loading and unloading have been increased according to the actual needs of the development of freight reform [6]. There have been many vehicle derailment lessons caused by improper operation of loading and unloading personnel. Rules for loading and unloading of flat cars have been made. Revise the loading and unloading operation requirements of the packing of goods, bulk cargo and heavy cargo. Refine the operation safety measures of containers, coils, stone, mixed cargo and other cargo handling [7].

(6) Refine the safety operation requirements of various types of loading and unloading machinery. Set up the loading and unloading machinery safety operation points according to the mechanical industry standards and various types of loading and unloading machinery operating requirements, there are not only the general operation requirements of various types of loading and unloading machinery, but also the classification operation requirements of bridge crane, forklift, loader, loading and unloading machine and other types machinery and folder machine, electromagnets and other types of rigging. Set up detailed operational requirements respectively as to the recent use of a large number of containers dedicated door crane, ordinary door crane installation slow lift spreader, the front hanging and grasping (Pa). Clear that all types of handling machinery shift must check the confirmed items and contents, standard the safety operation points of loading and unloading machinery maintenance operations. It is stipulated that the power and operating efficiency of the internal combustion
machinery in the plateau area shall be 0.85 times of its rated power and average efficiency on the basis of summing up the practical experience.

(7) Revise the relevant contents according to the relevant national standards. Amend the handling speed of loading and unloading machinery according to Safety rules for railway and road transport in industrial enterprises (GB4387-2008), modify the lifting machinery-related safety technology according to Safety rules for lifting machinery (GB6067.1-2010), modify the safety requirements of electrical equipment according to Design specifications of general equipment distribution (GB50055-93), revise the repair and management requirements of “wire rope safety lifting the scale table”, “rope deduction of the number of each end of the rope and spacing table” and the wire based on Crane wire rope maintenance, maintenance, installation inspection and retirement standards (GB / T5972-2006).

(8) Improve the emergency response capacity of non-normal situation. For personal injury, vehicle subversion, fire and other security incidents during the loading and unloading operations, set up the emergency disposal methods to ensure that the casualties and property damage can be minimized in occurrence of security incidents. For the loading and unloading machinery sudden wind, vehicle slip, equipment leakage and other non-normal situation during the operation process, develop emergency measures respectively to prevent accidents in the bud and improve the operational response capacity of the staff.

3.2 Main contents of Regulations of Logistics handling management

Regulations of Logistics handling management is regarded as the technical regulations of handling management, including the management of the division of responsibilities, safety management, equipment management, production organization, quality management, team building, business outsourcing, emergency management and so on. In view of the wide range of management work and strong policy, its rules and regulations should not only comply with relevant policies and regulations, in line with the professional management requirements of the head office security, accounting, financial, labor and so on, but also meets the professional characteristics of loading and unloading and work reality[8]. The contents of the terms should reflect the following:

(1) Clear the positioning of loading and unloading work. Summarize and analyze the negative impact of the wrong positioning of loading and unloading work and the frequent adjustment of the management system objectively in the past 20 years. Combined with the practical needs of the development of modern logistics, position clearly that “loading and unloading is an important part of the freight and is an important link of modern logistics, it should be integrated into the unified management of the transport industry”[9].

(2) Strengthen the construction of loading and unloading team. In accordance with the principle of “intensive labor, saving labor”, meet the needs of personnel handling of the key technical staff positions, put forward the training assessment requirements of loading and unloading production staff and management staff to promote the healthy development of loading and unloading team. At the same
time, advocate more than a job, use technical means to promote part-time and post and improve labor productivity.

(3) Speed up the promotion and application of new technologies of loading and unloading. Speed up research and application of the loading and unloading machinery automation, intelligentize, lightweight and modular, strengthen the construction of loading and unloading standardization, mechanization, information technology and intelligentize. Use the internet and other information technology means to promote the remote control and management of loading and unloading machinery, promote the use of mechanical and electrical integration, frequency control, internet of things, intelligent control and video surveillance technology to enhance the safety technology level of loading and unloading.

(4) Improve the loading and unloading process. In accordance with the requirements of “one class, one case”, develop the loading and unloading process series of programs, loading and unloading machinery and rigging supporting the use of programs respectively to the goods with different characteristics. Summarize and promote the excellent loading and unloading process regularly to improve the service quality and operational efficiency of loading and unloading.

(5) Standard the production, organization and management of loading and unloading. Adhere to the principle of centralized and unified command, promote the further integration and development of “the integration of loading and unloading”. According to the principle of “Anyone who operates should be responsible”, explore and improve the supervision system of loading and unloading to solve the existing problems and contradictions of cargo handling personnel supervision and operation. Make full use of video, operation recorder and other technical means to improve the efficiency and quality of handling safety management.

(6) Strengthen the management of handling quality. Adhere to the problem-oriented, the responsible company (person) should be responsible for cargo damage and shortage caused by the loading and unloading responsibility. Through the development and improvement of loading and unloading civilized service standards, create loading and unloading service brand, loading and unloading will be loaded into the “civilized team”, “service model” creating activities to enhance the quality of loading and unloading services.

(7) Push on the loading and unloading machinery “state repair”. Adapt to the promotion and development of the quality of loading and unloading machinery technology initiatively, from the point of view of improving the quality and costing savings, adjust the repair and maintenance methods of loading and unloading machinery, for loading and unloading machinery with self-diagnosis function, have priority to use state repair to promote the machinery repair and system reform.

(8) Standard outsourcing management of loading and unloading business. In the past few years, some railway bureaus have had many legal disputes because loading and unloading management is not standardized, specific clear provisions about the loading and unloading business outsourcing procedures, conditions,
contracts, legal relations and daily management have been put forward according to the requirements of in light of the law and rules.

(9) Simplify loading and unloading statistics. Put loading and unloading statistical indicators into the railway transport production statistics content. Railway loading and unloading production business statements, Railway handling machinery report and the instructions of filling, as loading regulations annex, compress loading and unloading statistical workload.

(10) Improve the emergency response capacity. The railway bureaus, railway stations and the station sections establish the loading and unloading safety accident emergency disposal plan and the goods arrival or sending, nature disasters, disaster relief and other conditions of loading and unloading production organization contingency plans to improve emergency response capacity.

4 CONCLUSIONS

After the implementation of Logistics handling Safety Regulations and Regulations of Logistics handling management, Rules for the Administration of the Safety Management of Railway Handling and Handling (Railway freight [1983] No. 1688), Rules for the Administration of the Handling of Railway Handling and Operation (Railway freight [1986] No. 717), Rules for the Administration of Railway Transport Handling Machinery (Railway freight [2006] No. 35), Rules for the Administration of Railway Loading and Unloading statistics (Railway freight [1994] No.33), and Notice on Strengthening the Work of Railway Loading and Unloading (Railway freight [2009] No. 1404) were stopped execution. Up to now, the revision and reorganization of railway logistics handling regulations come to an end. However, with the development of railway loading and unloading technology and the deepening of freight reform, the problems that railway logistics handling regulations are not suitable will continue to present, need to keep pace with the times and revise and perfect constantly to provide the basis and technical support for the railway modern logistics development.

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REFERENCES