



# Case Study of Import Container Cargo Operation at Shanghai

Beijing Re-code Trade Security and Facilitation Research Center

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Reported from: Jin Bingjie, Zhou Zhuojian

Instructor: Jiang Xiaoping

Beijing Re-code Trade Security and Facilitation Research Center

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# 1 Introduction

The research on the import and export operation at ports is the most basic work in the field of international trade research. However, the existing domestic researches are mostly from theoretical points of view with low practicability, and the operation flows described by many researchers are not up to date.

In the form of case study, this report tracked a shipment from Costa Rica to Shanghai, China, and explores the specific operations of each step, the costs incurred, and some issues to be resolved. Starting from the actual situation, the current detailed operation procedures of import container cargoes at Shanghai have been meticulously sorted out in this report, with a view to refine and supplement the research on the operation in turn.

## 2 Over view of the sampled shipment and the operation flow

### 2.1 Basic information

The basic information of the sampled shipment is illustrated by the following table:

**Table 2.1 Basic information of the sampled shipment**

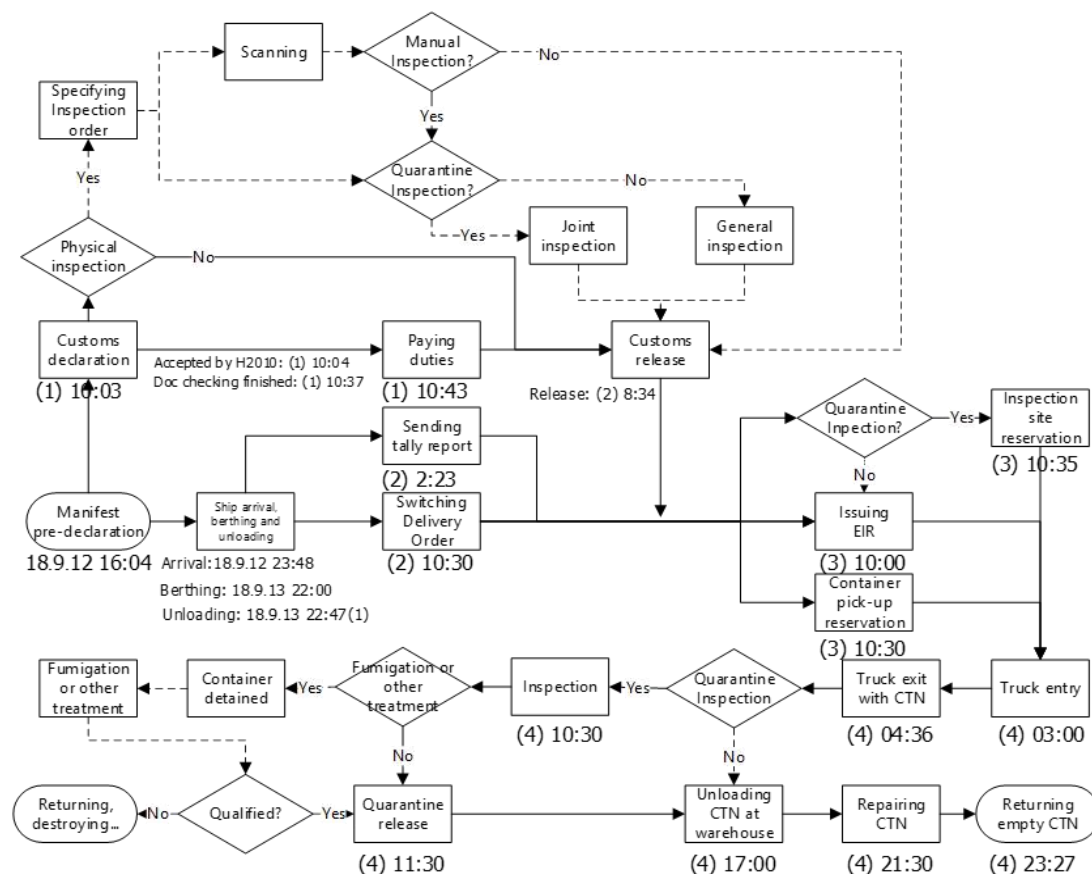
Item	Description
Commodity	Teak board (wet board)
HS Code	4407291090
Quantity / weight	14869 / net weight 28260 KG
Value of goods	14,000 USD
Country of departure	Costa Rica
Destination	Shanghai, China
Port of entry	Yangshan Port
Mode of transport / form of shipment	Sea / container
No. of Bill of Lading	ONEYSJOU00949600
Container type and quantity	one 40-feet dry container
Container number	TGHU6829871
Shipping company	OCEAN NETWORK EXPRESS
Customs supervision codes	y4xA <sup>1</sup>

## 2.2 Analysis of the overall operation flow

### 2.2.1 Overall operation flow chart

The import of containerized goods at the Shanghai begins with the “manifest pre-declaration” and can go through up to 25 steps. However, in this case, since the Customs did not conducted physical inspection, it only went through 18 steps, and this report records the time node of its completion for each step, which is shown in the following flow chart:

<sup>1</sup> y: Export license (small-scale border trade); 4: Export license; x: Export license (processing trade); A: Entry / exit inspection and quarantine.



**Figure 2.1 Flow chart of importing container cargoes and tracking records of the sampled shipment**

Note: The ship berthing day (September 13th, 2018) is set as the first day, indicated by (1); September 14, 2018 is the second day, indicated by (2); September 15, 2018 is the third day, indicated by (3); September 16, 2018 is the fourth day, indicated by (4). For example: "(2)10:30" means 10:30 am on the second day (September 14, 2018).

### 2.2.2 Types of completing the steps

With the improvement of informatization of each stakeholder in the port, many steps can be completed fully or partially online and paperlessly. For the 18 steps in this case, this report summarizes the following four types of completions and give the substitutability of the offline operations:

#### A. Online operations

B. Involves online operations and offline operations, but offline operations can be replaced by online operations if more information technologies being applicated.

C. Involves online operations and offline operations, but offline operations are un-replaceable.

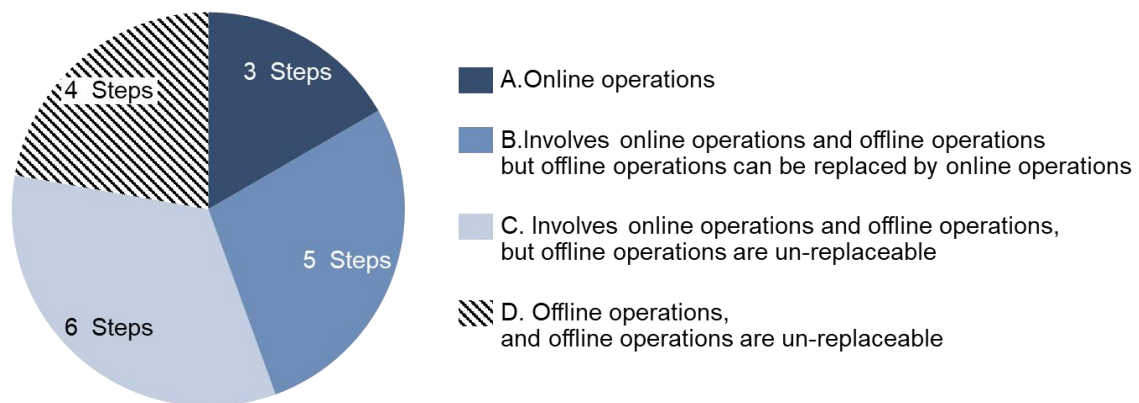
D. Offline operations, and offline operations are un-replaceable.

For the completion of each step in this case, the summary is as follows:

**Table 2.2 Type of completing each step**

No.	Step	Type of completion	No.	Step	Type of completion
1	Manifest pre-declaration	A	10	Container pick-up reservation	B
2	Customs declaration	B	11	Quarantine inspection site reservation	B
3	Paying duties	A	12	Truck entering port	C
4	Berthing	D	13	Truck exiting port with container	C
5	Ship unloading	D	14	Quarantine inspection	D
6	Sending tally report	C	15	Quarantine release	D
7	Doc. examination	A	16	Unloading at warehouse	C
8	Switching Delivery Order (D/O)	B	17	Repairing container	C
9	Issuing EIR	B	18	Returning container	C





**Figure 2.2 Distribution of all steps in different types of completion**

In the 18 steps of this case, 3 steps were completed online, 11 steps involved both online and offline operations (5 of them can be replaced by online operations if more information technologies being applied), and the rest 4 steps were carried out offline (un-replaceable).

### 2.2.3 Overall time consumption

Before doing time-consuming statistics, we need to define several types of time consumption based on the following important time nodes:

**Table 2.3 Important time nodes**

Important time nodes	Specific time in the case
Manifest pre-declaration finishing	2018.9.12 16:04
Ship arrival	2018.9.12 23:48
Declaration being accepted by customs	2018.9.13 10:04
Ship berthing finished	2018.9.13 22:00
Customs release	2018.9.14 08:34
Cargo leaving the gate of port zone	2018.9.16 04:36
Customs quarantine release	2018.9.16 11:30
Empty container being returned	2018.9.16 23:27

1) Customs clearance time: Under normal circumstances, the

customs clearance time should be the time taken from “declaration being accepted by customs” to “customs release”, but since the sampled shipment was declared in advance, meaning that declaration was accepted before the ship berthing, the "customs clearance time" of this shipment was the time taken from "ship berthing finished" to "customs release", consuming 10 hours and 34 minutes.

2) Extended customs clearance time: the extended customs clearance time is the time taken from “ship berthing finished” to “customs release”, and in this case it was 10 hours and 34 minutes, since it was declared in advance, which making the customs clearance time equaled the extended customs clearance time.

3) Overall time consumption of port operations: the overall time consumption of port operations is the time taken from “ship berthing finished” to “cargo leaving the gate of port zone”. In this case it was 2 days, 6 hours and 36 minutes.

4) Total time spent on all steps: the time consumed from “manifest pre-declaration finishing” to the “empty container being returned”, i.e., 4 days, 7 hours and 23 minutes.

#### **2.2.4 Overall cost**

From "ship berthing finished" to "empty container being returned ", the total cost of the shipment was 5,134 yuan. The

specific details are as follows:

**Table 2.4 Fees & charges in the whole procedure**

Charge entity	No.	Item	Service content / reason for charge	Unit price	Qty.	Amount
Shipping company / shipping agent	1	Document fee	Maintaining document center.	450 yuan / shipment	1	450 yuan
	2	Terminal handling charge	Offsetting the cost due to the fees charged by the port operator on the shipping company.	828 yuan / container (40GP)	1	828 yuan
	3	D/O fee	Exchanging B/L for Delivery Order.	250 yuan / shipment	1	250 yuan
	4	EIR fee	Printing equipment interchange receipt.	45 yuan / container	1	45 yuan
	5	Unloading charge	Unloading the container from the truck when returning the empty container.	100 yuan / container (40GP)	1	100 yuan
Port operator	6	Port construction fee (collecting on behalf of Maritime Security Administration)	Governmental fund for the port construction.	96 yuan / container (40GP)	1	96 yuan
	7	Port operation fee	Unloading cargos from the ship and other related operations.	Within 10 days: 75 yuan / container (40GP) more than 10 days: 150 yuan / container (40GP)	1	75 yuan
	8	Port facility security fee	Strengthening security measures.	15 yuan / container (40GP)	1	15 yuan

	9	Port dues	Infrastructure maintenance and management.	80 yuan / container (40GP)	1	80 yuan
Container management yard	10	Repairing/washing charge	Repairing / washing containers.	As appropriate	1	100 yuan
	11	Secondary moving fee	Moving containers due to repairing / washing.	150 yuan / container (40GP)	1	150 yuan
Tally company	12	Tally fee	After the goods are transported to the warehouse, if the goods are found to be damaged after unpacking, the tally company may be required to come to the warehouse for third-party records for the purpose of supporting the claim. (If a third-party report from the tally company is required, an additional fee should be paid.)	80 yuan / container (40GP) in the city	1	80 yuan
Container release company	13	Document printing agency fee	Arranging the issues about picking the container.	100 yuan / shipment	1	100 yuan
Quarantine inspection site	14	Quarantine inspection fee	Conducting operations related to quarantine inspection.	75 yuan / container (40GP)	1	75 yuan
	15	Seal fee	Re-sealing the container after inspection and quarantine treatment.	10 yuan/time	1	10 yuan
Quarantine treatment company	16	Quarantine treatment fee	Spraying insecticide water as the quarantine	180 yuan / container / time	1	180 yuan

			treatment.			
Customs broker	17	Customs declaration service fee	Services related to customs declaration.	400 yuan / shipment	1	400 yuan
Truck fleet	18	Short-distance transportation charge	Transportation between the port and the consignee's warehouse.	2100 yuan / container (40GP)	1	2100 yuan
<b>Total</b>						<b>5134 yuan</b>

### 3 Specific analysis of each step

In order to standardize the description of each step, this report elaborates on each step from six segments: completion time, participants, online operations, offline operations, costs incurred, and then step analysis.

#### 3.1 Before ship berthing

##### 3.1.1 Manifest pre-declaration

Completion time: September 12, 2018, 4:04 PM.

Participants: Shipping company / shipping agent, customs.

Online operations: the export consignor or its agent sent the cargo information required by the original manifest to the shipping company / shipping agent, and then the shipping company / shipping agent added the vessel and the loading information to form the original manifest data and sent it to China Customs. The original manifest was thus formed in the manifest system of China

## Customs.

Offline operations: None.

Cost incurred: None.

Step analysis:

Announcement No. 74 [2014] of the General Administration of China Customs - *Announcement on Specifying the Requirements for the Administration of Declaration of Imported and Exported Goods in Advance* clearly states that: "If the consignee or consignor of the import and export goods or the entrusted customs broker declares in advance, it shall first obtain the Bill of Lading or cargo manifest data. Among them, the declaration of imported goods in advance shall be declared to the customs after the goods are transported by the inbound means of transport and before being delivered to the customs supervision site; the goods declared in advance shall be declared to the customs within 3 days before the goods are delivered to the customs supervision site." According to this regulation, the declarer can declare in advance when having either the Bill of Lading or the cargo manifest data. However, for the time being, the original manifest data is a necessary condition for declaration, that is to say, the goods cannot be declared in advance with only the Bill of Lading but without the cargo manifest, and the actual achievable operation is inconsistent with the regulations of

the General Administration of China Customs.

In addition, in accordance with Article 9 of Chapter 2 of the *Measures of the Customs of the People's Republic of China on Supervising the Means of Transport and Manifests* newly revised by the Order No.240 of the General Administration of China Customs, "the manifest sender shall transmit the main data of the original manifest to the customs at the following time limit: (1) 24 hours before the container ship is loaded, 24 hours before the non-container ship arrives at the first port of destination; .....after the customs accepts the main data transmission of the original manifest, the consignee or the entrusted customs broker can handle the declaration procedures for goods and articles to the customs."<sup>2</sup> According to this regulation, the main data of the original manifest should have been sent to the customs 24 hours before the container is loaded. That is, the main data of the original manifest is available before the ship departure. According to this description, the import declaration can be made theoretically, but this is in contradiction with the provision of the order No. 74 of 2014: "declaration of imported goods in advance should be declared to the customs after being transported by the inbound means of

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<sup>2</sup>The time limit in the Measures of the Customs of the People's Republic of China on Supervising the Means of Transport and Manifests is again emphasized by the Announcement No.93 [2018] of the General Administration of China Customs (Announcement on Relevant Matters Concerning Adjusting the Supervision of the Means of Air or Water Transportation Entering and Leaving China and the Cargo Manifests Thereof).

transport and before being delivered to the customs supervision site". Therefore, there is a big problem with the rigor of Order No. 74.

The Announcement No.56 [2017] of the General Administration of China Customs - *Announcement on Relevant Matters Concerning Adjusting the Supervision of the Means of Air or Water Transportation Entering and Leaving China and the Cargo Manifests Thereof* released in November, 2017 emphasized that the following measures should be implemented from June 1, 2018: "Turn on the time limit switch of the water and air cargo manifest management system, check the time difference between the electronic data transmission and storage time of the manifest and the shipping time (sea transport) and the arrival time at the first destination port (air transport) in the territory is within the time limit specified by the customs." However, from the current situation, this switch should not be effective. In general, the advance dynamic of manifests is usually 1-2 days before the ship berthing (the advance time of the sample is later in this report, only less than 8 hours before the ship arrived the port), not 24 hours before the shipment abroad.

Customs should manage the main data declaration time (i.e. advance time) of the original manifest of the shipping company and



the shipping agent, because the earlier this time, the earlier the enterprise can declare in advance.

### 3.1.2 Customs declaration

Completion time: September 13, 2018, 10:03 AM.

Participant: Customs broker.

Online operations: The customs broker queried cargo manifest information on the General Administration of China Customs' manifest information inquiry webpage. After the advance manifest appeared, it logged into the Single Window, filled in the customs electronic declaration form, and uploaded relevant documents.

Offline operations: The customs broker collected and compiled documents for declaration. After the declaration, if it was determined that the shipment was selected for customs quarantine inspection, the quarantine inspection notification should be printed, including information on the quarantine inspection site. Sent the required information and the notification to the cooperative truck fleet.

Cost incurred:

**Table 3.1 Fees & charges incurred in the customs declaration**

Charge entity	Item	Service content / reason for charge	Unit price	Qty.	Amount
Customs broker	Customs service fee	Customs broker	400 yuan / shipment	1	400 yuan

Step analysis: The original manifest of this shipment appeared

at 16:04 on September 12, 2018, but the declaration time of the broker was 10:03 on September 13. The customs broker should appropriately strengthen the sense of urgency and declare as soon as the original manifest data appeared.

### **3.1.3 Duty payment**

Completion time: September 13, 2018, 10:43 AM.

Participant: Consignee.

Online operations: The consignee logged into the Single Window and paid the duties (including the customs tariff & VAT) after the status of the declaration was displayed as the document examination finished.

Offline operations: None.

Cost incurred: None.

Step analysis: After the Single Window showed the status of the document examination finished (September 13, 2018, 10:37), the consignee paid the tax in about 6 minutes (10:43), which did not affect the timely release of the goods.

### **3.1.4 Ship arrival & berthing**

Arrival time: September 12, 2018, 23:48.

Berthing time: September 13, 2018, 22:00.

Participants: Shipping company / shipping agent, Maritime Safety Administration (MSA), Immigration Inspection Station (IIS),

customs, pilot station, port operator.

Online operations: The shipping company / shipping agent electronically declared to MSA, IIS and customs, and then MSA permitted berthing, and IIS and customs permitted unloading.

Offline operations: After MSA permitted berthing, the shipping company / shipping agent applied for the pilotage service to the pilot station. After the ship arrived at the designated berth of the port, IIS inspected the ship, MSA and customs would board the ship for inspection as appropriate (boarding inspection may also be carried out at the anchorage), and the unloading was permitted after all the inspection.

Cost incurred: None.

Step analysis: The ship took 22 hours and 12 minutes from reaching anchorage (September 12, 2018, 23:48) to berthing finished (September 13, 2018, 22:00).

## **3.2 From ship berthing to customs release**

### **3.2.1 Ship unloading**

Completion time: September 13, 2018, 10:47 PM. (Note: It was the time when the sampled shipment was unloaded from the ship, not the time when the entire ship was unloaded up.)

Participant: Port operator.

Online operations: None.

Offline operations: Unloading by the unloading unit of the port.

Cost incurred: None.

Step analysis: It took 47 minutes from the berthing of the ship (September 13, 2018, 22:00) to the sample shipment being unloaded (September 13, 2018, 22:47), which at a reasonable level.

### **3.2.2 Sending tally report**

Completion time: September 14, 2018, 2:23 AM.

Participants: Tally company, customs.

Online operations: After the goods were counted, the tally company sent a tally report to the customs.

Offline operations: After unloading, the tally company counted the cargos and made records.

Cost incurred: None.

Step analysis: it took 3 hours and 36 minutes from the unloading (September 13, 2018, 22:47) to sending the tally report (September 14, 2018, 2:23), which was at a reasonable level. At present, the tally report is sent in batches when the ship unloading instead of once after all the cargos being unloaded up. From the time of sending the report to the report received by customs, the tally company make the commitment the time consumption being

controlled in 4 hours.

### **3.2.3 Customs document examination and release**

The time of the declaration accepted by customs: September 13, 2018, 10:04.

The time of customs declaration document examination being finished: September 13, 2018, 10:37.

Customs release time: September 14, 2018, 8:34.

Participant: Customs.

Online operations: Customs reviewed and checked the customs declaration information, the attached documents and the corresponding manifest information, and then released after confirmation.

Offline operations: None

Cost incurred: None

Step analysis: The announcement No. 45[2018] of the General Administration of China Customs clearly states that: from February 1, 2018, the import customs declaration release will be judged by the "manifest confirmation" status of the manifest instead of the "tally reported" status of the manifest, and in the current practice, the "manifest confirmation" status is indeed the condition for customs release. Therefore, in theory, the time for "manifest confirmation" status should be earlier than the time when the tally

company sends the tally report. However, in the absence of targeting and inspection, customs release can be earlier than the time when the tally company sends the report, but the customs release time of the sampled shipment (September 13, 2018, 8:34) was still later than the time when the tally company sent the tally report (September 13, 2018, 2:23), so we need to explore the reasons further.

### **3.3 From customs release to container leaving the port zone**

#### **3.3.1 Switching Delivery Order**

Completion time: September 14, 2018, 10:30 AM.

Participants: Customs broker, shipping agent/ship company.

Online operations: The customs broker inquired the fee to be paid on the website of the shipping agent / shipping company, and paid through bank transfer / electronic payment, and then printed the payment receipt.

Offline operations: The customs broker prepared the relevant documents such as the payment receipt, the Bill of Lading, etc., and exchanged the Bill of Lading for the Delivery Order at the shipping agent service window.

Cost incurred:

**Table 3.2 Fees & charges incurred when switching Delivery Order**

Charge entity	Item	Service content / reason for charge	Unit price	Qty.	Amount
Shipping company / shipping agent	Document fees	Maintaining document center.	450 yuan / shipment	1	450 yuan
	Terminal handling charges	Offsetting the cost due to the fees charged by the port operator to the shipping company.	828 yuan / container (40GP)	1	828 yuan
	D/O fee	Exchanging B/L for Delivery Order.	250 yuan / shipment	1	250 yuan

Step analysis: The procedure for switching D/O can be carried out after the customs release, indicating that the Delivery Order was not a precondition for customs declaration. Payment can be made online, this is also an improvement. However, the related fees and the reasonableness of the prices are yet to be investigated.

### **3.3.2 Issuing equipment interchange receipt (EIR)**

Completion time: September 15, 2018, 10:00 AM.

Participants: Shipping company / shipping agent, container release company, customs broker.

Online operations: None.

Offline operations: After customs release, the customs broker sent the Delivery Order to the container release company. After receiving the Delivery Order, the container release company confirmed that the shipment had been released, then went to the shipping company / shipping agent window to pay the EIR fee (or

make payment online) to obtain the equipment interchange receipt, and the shipping company / shipping agent stamped on the Delivery Order. Because the container release company and the shipping company had signed a container use agreement with a deposit of several hundred thousand yuan, there was no need to pay another deposit for using containers at each time of issuing EIR.

Cost incurred:

**Table 3.3 Fees & charges incurred when issuing EIR**

Charge entity	Item	Service content / reason for charge	Unit price	Qty.	Amount
Shipping company / shipping agent	EIR fee	Printing EIR	45 yuan / container	1	45 yuan
Container release company	Document printing agency fee	Arranging the issues about picking the container.	100 yuan / shipment	1	100 yuan

Step analysis: Through the analysis of the logic of 3.3.1 & 3.3.2, in fact, the entire D/O switching, payment, and EIR issuing can be carried out in advance or at the same time as the customs declaration. The most ideal situation is: before the customs release, all the related formalities and payments before picking up the container are completed and the container picking is available as soon as the port operator receives the customs release order.

What needs to be added here is that, in the recent past,



Shanghai International Port Group Co. (SIPG), Ltd. has provided data interface services for a number of shipping companies and shipping agents, completed the link between the EIR electronic public platform of SIPG and the EIR systems of these shipping companies, which will fully implement the electronic EIR. The container release company, the truck fleet, and the truck driver can transfer the electronic documents 7×24 hours. For the shipping company and the container release company, the printing costs and express costs of the documents can be greatly reduced.

### **3.3.3 Container pick-up reservation**

Completion time: September 15, 2018, 10:30 AM.

Participants: Container release company, port operator.

Online operations: The container release company paid port construction fee, port operation fee, port facility security fee, port dues, and tally fee on the business website of the port operator, and submitted the container pick-up plan on the website. At this time, if the container had been stored at the port container yard for more than the free storage period (Shanghai Port offer 4 days free of storage, starting from the unloading of the first container of each shipment off the ship), the container release company would need to pay the storage fee at the same time. As this shipment not beyond the free storage time, there was no such fee.

Offline operations: After the relevant fees and charges were paid and the pick-up plan was submitted, the port operator would provide the password for picking up the container, and the container release company then directly copied and sent it to the truck fleet, or printed out the paper version of the password and expressed it to the truck fleet. The container release company gave the Delivery Order stamped by the shipping company to the port operator. After that the port operator confirmed the container pick-up plan in the system according the Delivery Order, the truck fleet could enter the port at the scheduled time to pick up the container.

Cost incurred:

**Table 3.4 Fees and charges incurred in the container pick-up reservation**

Charge entity	Item	Service content / reason for charge	Unit price	Qty.	Amount
Dock	Port construction fee (received on behalf of MSA)	Governmental fund for the port construction.	96 yuan / container (40GP)	1	96 yuan
	Port operation fee	Unloading cargos from the ship and other related operations.	Within 10 days: 75 yuan / container (40GP) more than 10 days: 150 yuan / container (40GP)	1	75 yuan
	Port facility security fee	Strengthen security measures	15 yuan / container	1	15 yuan

			(40GP)		
	Port dues	Infrastructure maintenance and management	80 yuan / container (40GP)	1	80 yuan
Tally company	Tally fee	After the goods are transported to the warehouse, if the goods are found to be damaged after unpacking, the tally company may be required to come to the warehouse for third-party records for the purpose of supporting the claim. (If a third-party report from the tally company is required, an additional fee should be paid.)	80 yuan / container (40GP)	1	80 yuan

Step analysis: 1) the port operator should specify the details of the corresponding service in the port operation fee invoice issued to make it more transparent; 2) in fact, it is entirely possible to enter the container pick-up plan into the system before the customs release, and as soon as the customs release, the driver can enter the port at the appointed time for container stuffing. If customs inspection is required, and the driver are unable enter the port at the appointed time, it can be set to cancel. After the customs declaration is released, re-pay the relevant expenses and arrange a new plan; 3) between the shipping company and the port operator,

the information that needs to be confirmed by the Delivery Order can be completely by paperless operation instead, which improves efficiency.

#### **3.3.4 Quarantine inspection site reservation**

Completion time: September 15, 2018, 10:35 AM.

Participants: Container release company, quarantine inspection site.

Online operations: At the same time as the container pick-up plan being submitted, for some quarantine inspection sites, online appointment for the quarantine inspection on the next day is available (for SIPG Zhendong Branch and SGICT quarantine inspection platforms).

Offline operations: At the same time as the container pick-up plan being submitted, for some quarantine inspection sites, telephone appointment for quarantine inspection on the next day is available (for the quarantine inspection sites other than SIPG Zhendong Branch and SGICT).

The whole process of quarantine inspection for the sampled shipment took about one hour. At present, the proportion of quarantine inspection is 30%, 50%, 100% according to different levels of low risk, medium risk and high risk respectively. The proportion of quarantine inspection of raw wood is 100%.

Cost incurred: None.

Step analysis: Under normal circumstances, the time for picking up the container is the early morning of the day after when the plan is submitted. Therefore, it is reasonable to make an appointment for the quarantine inspection on the day of picking up the container. However, if it is possible to make a container pick-up reservation before the customs release, the time of making appointment for the quarantine inspection can be advanced accordingly, and the time for carrying out the quarantine inspection may be advanced.

### **3.3.5 Truck entering port / exiting port with container**

Empty truck entry time: September 16, 2018, 3:00.

Truck exit the port time: September 16, 2018, 4:36.

Participants: Truck fleet, port operator.

Online operations: At present, the Shanghai Port is promoting the paperless electronic EIR which realizing that the port operator records the entry/exit information by scanning the electronic EIR QR code in the driver's mobile phone to synchronize all the information to the electronic EIR system. If the electronic EIR applied widely, there is no need to hand over the paper version. However , the sampled shipment was not applied the paperless electronic EIR.

Offline operations: The truck fleet went to the container release company to take the electronic EIR, the password for picking up the container, the quarantine inspection reservation receipt, and the materials for the quarantine inspection handed over to the container release company by the customs broker. On the same day, the truck entered into the port gate and then the driver inputted the password. After the driver inputted the right password, the gate would print a container slip showing the location of the container in the port zone. The driver picked up the container according to the slip. When leaving the port, the driver handed over the exit copy of the EIR to the port operator, and then left the gate.

Cost incurred:

**Table 3.5 Fees and charges incurred when the truck entering / exiting the port**

Charge entity	Item	Service content / reason for charge	Unit price	Qty.	Amount
Truck fleet	Short-distance transportation charge	Container unloading and return	2100 yuan / container (40GP)	1	2100 yuan

The above only covers the cost of the transportation which was directly paid to the truck fleet, and does not include the document printing agency fee and the unloading charge paid by the truck fleet on behalf of the consignee or its agent.

Step analysis: According to the driver's reflection, the

congestion situation in the port zone was always relatively serious in the evening, so most of the time, the driver would choose to pick up containers at 3:00-4:00 in the morning. This sampled shipment took 1 hour and 36 minutes from the empty truck entering into the gate (August 16, 2018, 03:00) to the truck exiting the gate (August 16, 2018, 04:36). This time is relatively long and needs to be improved.

### **3.4 After container leaving the port**

#### **3.4.1 Quarantine inspection and release**

Quarantine inspection completion time: September 16, 2018, 10:30.

Quarantine release time: September 16, 2018, 11:30.

Participants: Truck fleet, quarantine inspection site, customs.

Online operations: None.

Offline operations: The truck carried the container out of the gate and took them to the quarantine inspection site. The driver first went to the reception window to pay the fee, then went to hand over the quarantine inspection receipt and the related materials to the receptionist, waiting for the receptionist to call and assign the customs quarantine inspection officer. After the number was called, went to the site with the assigned customs officer. The container

door was opened by a worker who checked the woods for insects. The worker would hit the bark with a hammer in the area where the insect excreta was present, and checked for insects under the bark. If there were insects, the customs quarantine officer would give a decision on the treatment with insecticide or fumigation. In the case of insecticide, the worker would carry the spray machine by hand and inserted the spray head into the container for spraying; if fumigation was required, the driver would pay the fee first and then moved the container to the designated fumigation site. Generally, fumigation takes 48 hours and longer if in winter. It also needs to be left for a while after fumigation. After all the treatment is completed, the customs quarantine officer will issue the quarantine release order, and the driver can pick up the container.

Cost incurred:

**Table 3.6 Fees & charges in the quarantine inspection**

Charge entity	Item	Service content / reason for charge	Unit price	Qty.	Amount
Quarantine inspection site	Quarantine inspection fee	Conducting operations related to quarantine inspection.	75 yuan / container (40GP)	1	75 yuan
	Seal fee	Re-sealing the container after inspection and quarantine treatment.	10 yuan/time	1	10 yuan
Quarantine treatment company	Insecticide fee	Spraying insecticide water	180 yuan / container / time	1	180 yuan

Step analysis: This sampled shipment took a total of one hour



from the reception to the insecticide spray finished, which was at a normal and reasonable level. In terms of the cost, no matter in any case of fumigation or spraying insecticide water, it seems to be provided by the designated service vendor. This market is not open to all the companies who have the ability to conduct quarantine treatment, so if more vendors can be introduced through marketization, lower quarantine cost can be achieved. In addition, other ports have basically no practice of spraying insecticide water and only the treatment type of fumigation. Whether spraying insecticide water can reach the same effect as conducting fumigation is still to be doubted.

### **3.4.2 Unloading at warehouse / repairing container / returning container**

The completion time of unloading at warehouse: September 16, 2018, 17:00.

Repairing container completion time: September 16, 2018, 21:30.

Returning container time: September 16, 2018, 23:27.

Participants: Truck fleet, consignee, container management yard.

Online operations: If it is a case of electronic EIR, when the driver returns the empty container, the yard scans the EIR QR code

in the EIR system in the driver's mobile phone to confirm that the empty container is received, and then the driver can click “confirm container return” in the EIR system, and the counter returning information is directly synchronized to the port operator's and the shipping company's corresponding systems, and the shipping company calculates the container detention charge based on it. This sampled shipment did not apply this pattern of operation.

Offline operations: After taking the container from the port and completing the customs quarantine inspection, the truck carried the container to the consignee's warehouse for unloading. After the unloading was completed, the empty container was returned to the container management yard. The yard checked the condition of the container, determined the cost of washing/repairing the container, the driver paid in cash, and the yard stamped the yard seal and the returning date on the entry copy of the EIR.

The driver handed over retention copy of the EIR bearing the seal of the container management yard and the empty container entry date to the container release company, and then the container release company handed it over to the shipping company for calculation of the container detention charge. This sampled shipment did not exceed the free storage period (each shipping company has different free period, generally 14 days), so there was

no such fee.

Cost incurred:

**Table 3.7 Fees & charges incurred when unloading at warehouse / repairing container / returning container**

Charge entity	Item	Service content / reason for charge	Unit price	Qty.	Amount
Shipping company / shipping agent	Unloading charge	Unloading the container from the truck when returning the empty container.	100 yuan / container (40GP)	1	100 yuan
Container management yard	Repairing/washing charge	Damaged container repair charges	As appropriate	1	100 yuan
	Secondary moving fee	Move the container to the washing site	150 yuan / container (40GP)	1	150 yuan
Truck fleet	Short-distance transportation charge	Container unloading and return	2100 yuan / container (40GP)	1	2100 yuan

Step analysis: At the Shanghai port, for wood boards and raw woods, washing or repairing containers are almost 100%. If the containers are slightly dirty (some container management yards will even rub the inside of the container with a piece of white paper), the yard will charge washing/repairing fees. It is hoped that the government can organize the formulation of corresponding standards for the reasonable determination of whether the container needs to be washed or repaired when returning the empty container, to curb arbitrary charges of the yard.

In addition, the second moving charge is due to the washing or

repairing service. However, according to the driver's reflection, the location of the washing/repairing and the container storage location are actually in the same site, at a distance of only few hundred meters, but the moving fee is 150 yuan of which rationality remains open to question.

## **4 Conclusions and recommendations**

### **4.1 Summary of conclusions**

#### **4.1.1 Timeliness**

The overall operation of the Shanghai Port is relatively reasonable. The “overall time consumption of the port operation” of the sampled shipment took 2 days, 6 hours and 36 minutes from the berthing of the ship to picking up the container from port zone, compared with the operation of similar goods in 2017, the overall time consumption was significantly shortened, but the time spent on some steps was still a little longer.

#### **4.1.2 Cost**

The overall cost was 5,134 yuan, including: 1673 yuan charged by the shipping company / shipping agent, 266 yuan charged by the port operator, 250 yuan charged by the container management yard, 80 yuan charged by the tally company, 100 yuan charged by the container release company, 85 yuan charged

by the quarantine inspection site, 180 yuan charged by the quarantine treatment company, 400 yuan charged by the customs broker, and 2100 yuan charged by the truck fleet.

Compared with other ports, the overall cost was moderate or relatively high, and the charge rationality of some items still need more studies:

1) A series of fees charged by the shipping company / shipping agent, such as the D/O fee, document fee, and EIR fee are relatively high, and their rationality is open to question;

2) The port operation fee charged by the port operator needs to clarify the details;

3) The quarantine treatment fee charged by the quarantine treatment company has a reduction space;

4) The repairing/washing charge and the second moving fee charged by the container management yard are unreasonable.

## **4.2 Recommendations**

### **4.2.1 Further relax the conditions of "advance declaration"**

Implement the administrative requirements of the General Administration of China Customs on advance declaration, and realize the condition that advance declaration is allowed as long as any of the Bill of Lading or cargo manifest data is available, rather

than advance declaration is only allowed when the manifest data is available.

#### **4.2.2 Cancel “customs release” as a prerequisite for some operations**

The shipping company / shipping agent formality, container pick-up formality and customs clearance formality can be carried out at the same time. After the three formalities have completed at the same time, the truck can enter the port zone to pick up containers without the need to take customs release as the premise of the other two formality. For example, the EIR can be exchanged in advance, and does not have to wait until the customs release. In other ports (such as Tianjin Port), shipping agents always print EIRs just when exchanging B/L for D/ O.

#### **4.2.3 Further promote the transparency of specific charging items**

Some items, such as port operation fee and tally fee, lack of specific service content details, the corresponding authorities should require the relevant stakeholders to clearly inform the customer of the corresponding service content when charging, so that the charges are more transparent.

#### **4.2.4 Introduce more competition in the market of quarantine treatment**

At present, there is a relatively hidden monopoly phenomenon in the market, and more service enterprises should be introduced to carry out certain marketization, thereby promoting the reduction of related cost.

#### **4.2.5 Organize the development of clear container washing and repairing judging standards**

At present, there are many disputes about the judging standards on repairing and washing the container between the container management yards and the container users. The standards for the container management yards to determine whether the container needs to be repaired or washed are not transparent, and the corresponding authorities of the industry should organize the development of relevant standards to make the formalities more definite.