

**TECHNICAL SPECIFICATION**

**FOR**

**STEEL DRY CARGO CONTAINER**

**40' x 8' x 8'6" 1AA TYPE**

**MODEL NO : CX10-4012**

**SPEC. NO : CX10-4012-S**

**DATE OF ISSUE : Dec 20, 2011**

**REVISED DATE : Jan 04, 2021**

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## 1. General

### 1.1 Scope

This specification will cover the design, construction, materials, testing and inspection performances of 40' x 8' x 8'6" 1AA type steel dry cargo containers.

These containers specified herein will be manufactured at \_\_\_\_\_ (hereinafter referred to \_\_\_\_\_) under strict quality control by \_\_\_\_\_ and be approved by the classification society or agency.

### 1.2 Operational environment

The container will be designed and constructed for carriage of general cargo by marine (on or below deck), road and rail throughout the world. All materials used in the construction will be to withstand extremes of temperature range from -30°C (-22°F) to +80°C (+176°F) without effect on the strength of the basic structure and watertightness.

### 1.3 Standards and Regulations

The container will satisfy the following requirements and regulations in their latest editions, unless otherwise mentioned in this specification.

#### 1.3.1 ISO Container Standards (1AA type)

ISO 668	-- Series 1 freight containers - Classification external dimensions and ratings
ISO 830	-- Terminology in relation to freight container
ISO 1161	-- Series 1 freight containers - Corner fittings Specification
ISO 1496-1	-- Series 1 freight containers - Specification and testing. part 1: General cargo containers for general purposes
ISO 6346	-- Freight containers - coding, identification and marking

#### 1.3.2 T.I.R. Certification

All the containers will be certified and comply with "The Customs Convention on the International Transport of Goods under the cover of T.I.R. Carnets." or "The Customs Convention on Containers."

#### 1.3.3 C.S.C. Certification

All the containers will be certified and comply with the requirements of the "International Convention for the Safe Containers."

#### 1.3.4 T.C.T. Certification

All exposed wooden components used for container will be treated to comply with the requirements of Department of Agriculture and Water Resources (DAWR) regulations: Australian Biosecurity Import Conditions (BICON).

#### 1.3.5 U.I.C. Registration

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All the containers will be registered and comply with the "International Union of Railways."

1.3.6 Classification society

All the containers will be certified for design type and individually inspected by classification society which will be nominated by the buyer in written before production.

1.4 Handling

The container will be constructed to be capable of being handled without any permanent deformation under the following conditions:

- a) Lifting, full or empty, at top corner fittings vertically by means of spreaders fitted with hooks, shackles or twistlocks.
- b) Lifting, full or empty, at bottom corner fittings using slings with terminal fittings at any angles between vertical and 30 degrees to the horizontal.

1.5 Transportation

The container will be constructed to be suitable for transportation in the following modes:

- a) Marine : In the ship cell guides of vessels, seven (7) high stacked with MGW 30,480kg.  
On the deck of vessels, four (4) high stacked and secured by vertical and diagonal wire lashings.
- b) Road : On flat bed or skeletal chassis, secured by twistlocks or equivalent at the bottom corner fittings.
- c) Rail : On flat cars or special container cars secured by twistlocks or equivalent at the bottom corner fittings.

**2. Dimensions and Ratings****2.1 External Dimensions**

Length	12,192	+ 0mm	40'	+0
		-10mm		-3/8"
Width	2,438	+ 0mm	8'	+0
		- 5mm		-3/16"
Height	2,591	+ 0mm	8'6"	+0
		- 5mm		-3/16"

- 1) No part of the container will protrude beyond the external dimensions mentioned above.
- 2) Maximum allowable differences between two diagonals on anyone of the following surfaces will be as follows:
 

Roof, bottom and side diagonals :	19mm	3/4"
Front and rear diagonals :	10mm	3/8"

**2.2 Internal Dimensions**

Length	12,034	+ 0mm	39' 5 13/16"	+0
		-10mm		-25/64"
Width	2,352	+ 0mm	7' 8 19/32"	+0
		- 5mm		-3/16"
Height	2,393	+ 0mm	7' 10 7/32"	+0
		- 5mm		-3/16"

**2.3 Door opening dimensions**

Width	2,340	+ 0mm	7' 8 1/8"	+0
		- 5mm		-3/16"
Height	2,280	+ 0mm	7' 5 49/64"	+0
		- 5mm		-3/16"

**2.4 Internal cubic capacity (Nominal)**

67.7 cu.m	2,390 cu.ft
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**2.5 Gooseneck tunnel**

Length	3,315	mm	10' 10 33/64"	
Width	1,029	+3mm	3' 4 1/2"	+1/8"
		-0mm		-0
Height	120	+0mm	4 23/32"	+0
		-3mm		-1/8"

**2.6 Ratings**

Max. Gross Weight (R)	30,480 kgs	67,200 lbs
Tare Weight (design) (T)	3,550 kgs	7,825 lbs
Max. Payload (P)	26,930 kgs	59,375 lbs

Tare Weight Tolerance 2%

3. Materials3.1 General

The following materials will be used in the construction of containers.

3.2 Part specification

	<u>Parts</u>	<u>Materials by JIS</u>
1)	Roof panels Door panels Side panels Front panels Bottom side rails Cross members Gooseneck tunnel Rear corner posts (outer) Door sill Door header Door vertical frames Door horizontal frames Top side rails Front corner posts Front bottom end rail (upper) Front top end rail	Anti-Corrosive Steel: CORTEN A, SPA-H, B480 or equivalent material Y.P. : 35 kg/sq. mm T.S. : 49 kg/sq. mm
2)	Front bottom end rail (lower)	Structural Steel: SS400 Y.P. : 25 kg/sq.mm T.S. : 41 kg/sq.mm
3)	Rear corner posts (inner)	Rolled high tensile steel: SM490A or equivalent material Y.P. : 33 kg/sq. mm T.S. : 50 kg/sq. mm
4)	Door locking bars	Structural steel round pipe: STK41 Y.P. : 24 kg/sq. mm T.S. : 41 kg/sq. mm
5)	Corner Fitting	Casted weldable steel: SCW480 Y.P. : 28 kg/sq. mm T.S. : 49 kg/sq. mm
6)	Locking gear cams and keepers	Forged weldable steel: S20C Y.P. : 23 kg/sq. mm T.S. : 44 kg/sq. mm
7)	Door hinge pins Door gasket retainer	Stainless steel: SUS304
8)	Door gasket	EPDM
9)	Floor board	Hardwood plywood, min.19-ply
10)	Ventilator	ABS resin labyrinth type

\* Note: Y.P. --- Yielding Point  
T.S. --- Tensile Strength

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#### 4. Construction

##### 4.1 General

- 4.1.1 The container will be constructed with steel frames, fully vertical-corrugated steel sides and front wall, horizontal-corrugated steel double doors at rear end, die-stamped steel roof and corner fittings.
- 4.1.2 All welds of exterior including the base frames will be continuous welding using CO<sub>2</sub> gas, but inner part of each bottom side rail will be fastened by staggered stitch welding.
- 4.1.3 Interior welds - when needed - will be stitched with a minimum length of 15mm.
- 4.1.4 Gaps between adjacent components to be welded will not exceed 3mm or the thickness of the parts being welded.
- 4.1.5 Chloroprene or waterborne sealant is to be applied at periphery of floor surface and inside unwelded seams, butyl sealant is used to caulk at invisible seam of floor joint area and between door gasket and frame.
- 4.1.6 The wooden floor will be fixed to the base frames by zinc plated self-tapping screws.

##### 4.2 Protrusion

- 4.2.1 The plane formed by the lower faces of the bottom side rails and all transverse members shall be positioned by 12.5mm +5/-1.5mm above the plane formed by the lower faces of the bottom corner fittings.
- 4.2.2 The top corner fittings are to protrude a minimum of 6mm above the highest point of the roof.
- 4.2.3 The outside faces of the corner fittings will protrude from the outside faces of the corner posts by nominal 4mm.
- 4.2.4 The outside faces of the corner fittings will protrude from the outside faces of the sides and front wall by nominal 8mm.
- 4.2.5 Under maximum payload, no part of the container will protrude below the plane formed by the lower faces of the bottom corner fittings at the time of maximum deflection.
- 4.2.6 Under 1.8 x maximum gross weight, no part of the container will protrude more than 6.0mm below the plane formed by the lower faces of the bottom corner fittings at the time of maximum deflection.

##### 4.3 Corner fittings

The corner fittings will be designed in accordance with ISO 1161 (Amd.1990) and manufactured at the works approved by classification society.

##### 4.4 Base frame structure

Base frame will be composed of two (2) bottom side rails, twenty-eight (28) cross members, and

a gooseneck tunnel

#### 4.4.1 Bottom side rail

Each bottom side rail is built of 52x30x155x28x4.5mm thick cold-formed double “Z” section steel made in one piece. The lower flange of the bottom side rail is outward so as to facilitate easy removal of the cross members during repair and of less susceptible corrosion.

Reinforcement plates are to be made of 4.0mm thick flat steel plates. The plates are welded to bottom corner fitting.

#### 4.4.2 Cross member

The cross members are made of pressed channel section steel with a dimension of 50x122x40x4.0mm for the normal areas and 75x122x45x4.0mm for the floor butt joints. The cross members are placed fully to withstand floor strength and welded to each bottom side rail.

Three (3) pieces of 4.0mm gussets to be fully welded at each inside of floor joint cross-member.

#### 4.4.3 Gooseneck tunnel

The gooseneck tunnel consists of 4.0mm thick pressed hat section steel plate, twelve 4.5mm thick pressed channel section bows which are welded to the top plate, one 4.5mm thick opened section tunnel rear bolster reinforced by four gussets, and sixteen 4.0mm thick tunnel outriggers. The gooseneck tunnel is designed in accordance with ISO requirements.

#### 4.5 Flooring

The floor will consist of twelve pieces plywood boards, floor center rail, and self-tapping screws.

##### 4.5.1 Floor

The wooden floor to be constructed with 28mm thick min.19-ply hardwood plywood boards which is the first three layers on top/bottom the grain should be in longitudinal direction are laid longitudinally on the transverse members and the floor centre rail of 4.0mm thick flat bar painted with internal paint system. The floorboards are tightly secured to each member by self-tapping screws, and all butt joint areas and peripheries of the floorboards are caulked with sealant.

- 1) Wood species : Apitong ,Tropical combination hardwood plywood or bamboo wood composite.
- 2) Glue : Phenol-formaldehyde resin.
- 3) Treatment :
  - a) Preservative: MEGANIUM 2000 or others.
  - b) In accordance with Department of Agriculture and Water Resources (DAWR) regulations: Australian Biosecurity Import Conditions (BICON).  
Average moisture content will be 12% before installation.
- 4) The top surface of floorboard will be coated with PSF.

##### 4.5.2 Self-tapping screw

Each floor board is fixed to the transverse members by zinc plated self-tapping screws that are 8.0mm dia. shank x 16mm dia. head x 45mm length, and fastened by four screws per cross member but five screws at joint areas. Screw heads are to be countersunk through about 2mm below the floor top surface.

#### 4.6 Rear frame structure



The rear frame will be composed of one door sill, two corner posts, one door header and four corner fittings, which will be welded together to make the door-way.

4.6.1 Door sill

The door sill to be made of a 4.5mm thick pressed open section steel is reinforced by four internal gussets at the back of each locking cam keeper location. The upper face of the door sill has a 10mm slope for better drainage.

A 200 x 75mm section is cut out at each end of the door sill and reinforced by a 200 x 75mm channel steel as a protection against handling equipment damages.

4.6.2 Rear corner post

Each rear corner post of hollow section is fabricated with pressed, 6.0mm thick, steel outer part and 40x113x10mm hot-rolled channel section steel inner part, which are welded continuously together to ensure a maximum width of the door opening and to give a sufficient strength against stacking and racking forces.

Four (4) sets of hinge pin lugs are welded to each rear corner post.

4.6.3 Door header

The door header is constructed with a 4.0mm thick pressed "U" section steel outer part having four internal gussets at the back of each locking cam keeper location and a 3.0mm thick pressed steel inner part, which are formed into box section by continuous welding.

4.7 Door

4.7.1 Each container will have double wing doors at rear end frame, and each door will be capable of swinging approximately 270 degrees.

4.7.2 Each door is constructed with 3.0mm thick pressed channel section steel horizontal frames for the top and bottom, 100x50x3.2mm rectangular hollow section vertical frames for the post side and center side of door respectively, 2.0mm thick horizontally corrugated steel door panel, which are continuously welded within frames.

4.7.3 Two sets of galvanized locking assemblies which is the same model with "SL-F/1", "HH-ET" or "SJ-66M" with steel handles (two point custom sealing system) are fitted to each door wing using high tensile zinc plated steel bolts according to TIR requirements. Locking bar retainers are fitted with nylon bushings at the top, bottom and intermediate bracket. Locking gears should be assembled after painting and not to be painted.

4.7.4 The left-hand door can not be opened without opening the right-hand door when the container is sealed in accordance with TIR requirements.

4.7.5 The door hold-back of nylon rope is provided to the centre locking bar on each door and a hook of steel bar is welded to each bottom side rail.

4.7.6 Each door is suspended by four hinges provided with stainless steel pins, self-lubricating nylon bushings and brass or stainless steel washers, which are placed at the hinge lugs of the rear corner posts.

4.7.7 The door gasket made of an extruded triple lip type (J-C type - vertical and upper are "J", lower is "C")EPDM rubber with an increase lip at right door left top corner for better waterproof is installed to the door peripheral frames with stainless steel gasket retainers and fastened by stainless steel blind rivets at a pitch of about 150mm. The door gasket must be caulked with butyl sealant before installation to the door frames.

4.8 Roof structure

The roof will be constructed with eleven five-corrugated (die-stamped) steel panels and four corner protection plates.

4.8.1 Roof panel

The roof panel is constructed with 2.0mm thick die-stamped steel sheets having about 5.0mm upward smooth camber, which are welded together to form one panel and continuously welded to the top side rails and top end rails. All overlapped joints of inside unwelded seams are caulked with sealant.

4.8.2 Protection plate

Each corner of the roof in the vicinity of top corner fitting is reinforced by 3.0mm thick rectangular steel plate to prevent the damage caused by mishandling of lifting equipment.

4.9 Top side rail

Each top side rail is made of a 60x60x3.0mm thick square hollow section steel.

4.10 Side wall

The trapezium section side wall is constructed with 1.6mm thick fully vertically continuous-corrugated steel panels at the intermediate area and both ends which are butt welded together to form one panel and continuously welded to the side rails and corner posts. All overlapped joints of inside are caulked with sealant.

4.11 Front structure

Front end structure will be composed of one bottom end rail, two corner posts, one top end rail, four corner fittings and an end wall, which are welded together.

4.11.1 Bottom end rail

The bottom end rail is made of 60x60x3.0mm full width square hollow section, and reinforced by four stiffener plates. In which two 6.0mm thick plates are welded with gooseneck tunnel end and other two 9.0mm thick plates are welded with bottom corner fittings, two 3.0mm thick pressed angle section steel plates for floor board support.

4.11.2 Front corner post

Each corner post is made of 6.0mm thick pressed open section steel in a single piece, and designed to give a sufficient strength against stacking and racking forces.

4.11.3 Top end rail

The top end rail is constructed with 4.0mm thick "Z" section pressed steel.

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#### 4.11.4 Front wall

The trapezium section front wall is constructed with 2.0mm thick vertically corrugated steel panels, butt welded together to form one panel, and continuously welded to front end rails and corner posts. All overlapped joints of inside are caulked with sealant.

#### 4.11.5 Front Corner Post Floor Support

Front corner post floor support to be made of polypropylene. The colour of polypropylene is gray.

#### 4.12 Special feature

##### 4.12.1 Customs seal provisions

Customs seal and padlock provisions are made on each locking handle retainer to cover the sealed area in accordance with TIR requirements.

##### 4.12.2 Lashing fittings

Ten (10)  $\Phi$  12 lashing hoop rings are welded to each top and bottom side rail at recessed corrugations of side panels but not extruded any cargo space (total 40 rings). Each lashing point is designed to provide a "1,500 kgs pull load in any direction" without any permanent deformation of lashing ring and surrounding area.

Two (2)  $\Phi$ 10 lashing rods are welded to each corner post. Each lashing rod on the corner post is designed to provide a "1,000 kgs pull load in any direction" without any permanent deformation.

##### 4.12.3 Shoring slot

A shoring slot, having a size of 60mm width x 40mm depth is provided on each rear corner post so that 2 1/4" thick battens can be arranged to be able to prevent doors from damage due to shifting cargo.

##### 4.12.4 Ventilator

Each container will have ten small plastic ventilators with EPDM gasket of labyrinth type. Each ventilator is fixed to the upper part of each side wall by three 5.0mm dia. aluminum huck bolts in accordance with TIR requirements after drying of top coating, and caulked with sealant around the entire periphery except underside to prevent the leakage of water.

## 5. Surface preservation

### 5.1 Surface preparation

- 1) All steel surfaces - prior to forming or after - will be fully abrasive shot blasted conforming to Swedish Standard SA2 1/2 to remove all rust, dirt, mill scale and all other foreign materials.
- 2) All door hardware will be hot-dipping zinc galvanized with approximately 75 microns thickness.
- 3) All fasteners such as self-tapping screws and bolts, nuts, hinges, cam keepers and lashing fittings will be electro-galvanized with approximately 13 microns thickness.

### 5.2 Coating

#### 5.2.1 The total dry film will be (microns):

	EXT.	INT.	BASE
1st shop primer	10	10	10
Waterborne Epoxy zinc primer	20	20	20
Waterborne Epoxy middle coat	40		
Waterborne Epoxy top coat		40	
Waterborne Acrylic top coat	40		
Waterborne undercoating			200 (steel parts) 100 (wooden floor)
<b>Total</b>	<b>110</b>	<b>70</b>	<b>230(steel parts)</b>

\* Epoxy zinc rich primer and pure epoxy are not applied to the wooden floor.

Note: The equivalent effect waterborne paint and waterborne undercoating will be applied. The paint system and supplier (inclusive of undercoating) will be submitted to customer's approval in advance before production.

6. Marking

6.1 Arrangement

The container will be marked in accordance with ISO, UIC, TCT, CSC and TIR requirements, owner's marking specifications and other required regulations.

6.2 Materials

- 1) Decal : - Self-adhesive, high tensile PVC film for seven (7) years guarantee without peeling off, tenting or colour fading.
- 2) Certification plate : 18-8 type stainless steel plates to be chemically etched by acid and treated by enamel.

6.3 Specifications

- 1) Identification plates such as consolidated data plate consisting of CSC, TIR and TCT will be riveted on the door permanently by stainless steel blind rivets. The entire periphery except underside will be caulked with sealant.
- 2) The owner's serial numbers and manufacturer's serial numbers will be stamped into the top plane of rear lower-left corner fitting.

## 7. Testing and Inspections

### 7.1 Testing

#### 7.1.1 Prototype testing

The prototype container to be manufactured in accordance with this specification will be tested by manufacturer under the supervision of classification society.

	<u>Test items &amp; loads</u>	<u>Test methods</u>
A)	Stacking Internal load : 1.8R-T Test load: 86,400kg/post	Hydraulic cylinder load will be applied to each corner post through top corner fittings. Offset: 25.4 mm lateral 38.0 mm longitudinal
B)	Lifting (from top corner fittings) Internal load : 2R-T	Lifting vertically. Time duration : 5 minutes
C)	Lifting (from bottom corner fittings) Internal load : 2R-T	Lifting 30 degree to the horizontal. Time duration : 5 minutes
D)	Restraint (longitudinal) Internal load : R-T Test load : 2R	Hydraulic cylinder load will be applied to the bottom side rails.
E)	Floor strength Test load : 7,260 kgs (16,000 lbs)	Use of a special truck. Total contact area: 284 sq. cm Wheel width : 180 mm Wheel centre : 760 mm
F)	Wall strength (front) Test load : 0.4(R-T)=0.4P	Compressed air bag will be used.
G)	Wall strength (side) Test load : 0.6(R-T)=0.6P	Compressed air bag will be used on one side only. moreover ,one air bag will be used only.
H)	Wall strength (door) Test load : 0.4(R-T)=0.4P	Same as front wall strength test.
I)	Roof strength (weakest part) Test load : 300 kgs	Applied area will be 600x300mm longitudinal and transverse.
J)	Racking (transverse) Test load : 150,000 newtons	Hydraulic cylinder load will be applied to the header rail through top corner fittings.
K)	Racking (longitudinal) Test load : 7,620 kgs	Hydraulic cylinder load will be applied to the top side rail through top corner fitting on one side only. Two times for pulling and pushing.

40'X8'X8'6"

L)	Operation of door	After completion of test, the operation of doors, locks, hinges, etc. will be checked.
M)	Dimensions and weight	After completion of test, the dimensions and weight will be checked.
N)	Weatherproofness	Inside dia. of nozzle : 12.5mm Distance : 1.5 m Speed : 100 mm/sec. Pressure : 1 kg/sq.cm

\* Note: **R** Maximum Gross Weight  
**T** Tare Weight  
**P** Maximum Payload

## 8. Guarantee

### 8.1 Structure

All the containers shall be guaranteed by manufacturer to be free from defects in materials, workmanship and structure for a period of one (1) year, from the date of acceptance of the container by the buyer.

### 8.2 Painting

8.2.1 The paint system coated on the container surface shall be guaranteed to be free from corrosion and failure for a period of five (5) years, from the date of acceptance of the container by the buyer.

8.2.2 Corrosion is defined as rusting which exceeds RE3 (European Scale of degree of Rusting) on at least ten (10) percent of the total container surface, excluding that resulting from impact or abrasion damage, contact with solvents or corrosive chemicals and abnormal use.

8.2.3 If the corrosion exceeds RE3 as defined above within the guarantee period, inspection of the corrosion shall be carried out by the buyer, and paint manufacturer to detect the cause. As the result of the inspection, if it is mutually agreed and accepted that the corrosion has caused for the defective paint quality and/or poor workmanship, and/or paint manufacturer shall correct the defect on their accounts.

### 8.3 Decals

Decals applied on the container shall be guaranteed for a period of seven (7) years without peeling off, tenting or colour fading if decals are supplied by  
shall not be liable for any consequential damage or expenses occasioned by any defects for whatsoever reason or any loss of time due to repair or correction.

## 9. Revisions

9.1 This specification (CX10-4012-S Revised date: Jun 19, 2017) bases on previous specification (CX10-4012-S), main differences is as followings:

1. Chloroprene or waterborne sealant will be applied interior.
2. Update floorboard material.
3. The solvent paint system has changed to waterborne paint system.

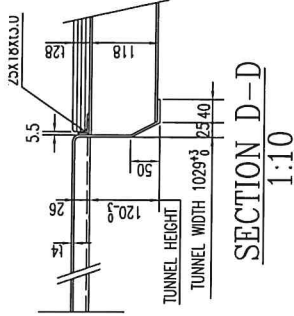
9.2 This specification (CX10-4012-S Revised date: Apr 22, 2019) bases on previous specification (CX10-4012-S Revised date: Jun 19, 2017), main differences is as followings:

1. Certificate of timber treatment to the requirement of Australia Biosecurity Import Conditions (BICON).

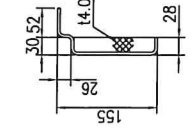
9.3 This specification (CX10-4012-S Revised date: Jan 04, 2021) bases on previous specification (CX10-4012-S Revised date: Apr 22, 2019), main differences is as followings:

1. The reinforcement plates for bottom side rails have changed to t4.0mm flat steel plates.
2. The thickness of undercoating for wooden floor has changed 100 microns.
3. The top surface of floorboard will be coated with PSF.
4. The cross members (small) have changed to 50x122x40x4.0mm.
5. The tunnel outriggers (small) have changed to 50x118x40x4.0mm.
6. The protection plate for top corner fitting has changed to 300x260mm.
7. Each container will have ten small plastic ventilators with EPDM gasket of labyrinth type.

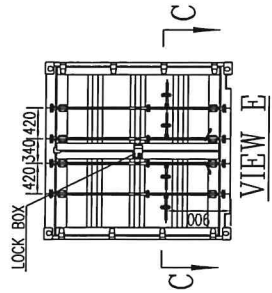




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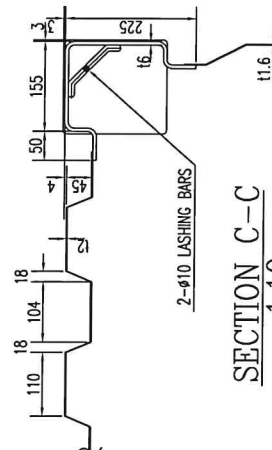


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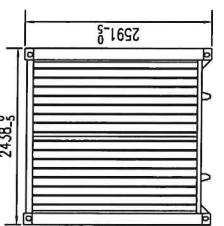


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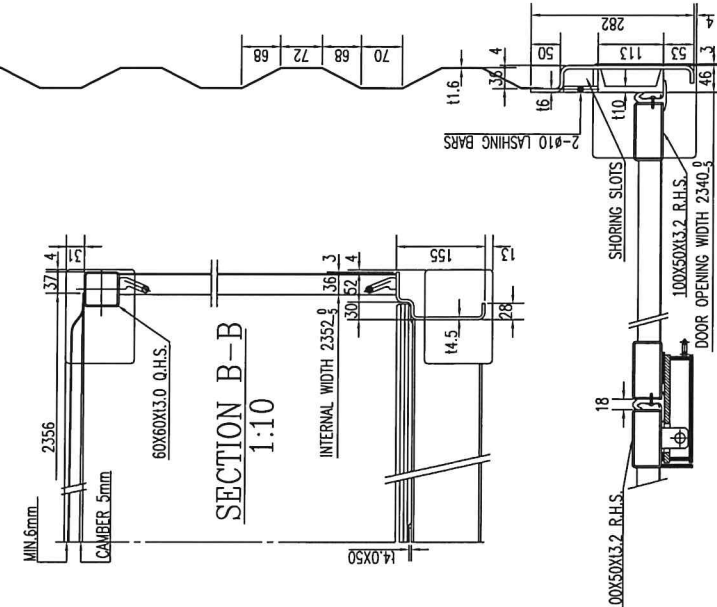
EXTERNAL	LENGTH	12,192	0	40' 0"	0	3/8"
	WIDTH	2,438	-10mm	8' 0"	0	9/16"
	HEIGHT	2,591	0	8' 6"	0	9/16"
INTERNAL	LENGTH	12,034	-5mm	39' 5 1/8"	0	3/16"
	WIDTH	2,352	-5mm	7' 8 3/8"	0	3/16"
	HEIGHT	2,393	-5mm	7' 10 3/8"	0	3/16"
DOOR OPENING	WIDTH	2,340	0	7' 8 1/8"	0	3/16"
	HEIGHT	2,280	-5mm	7' 5 5/8"	0	3/16"
INTERNAL CUBIC CAPACITY		67.7	CU.m	2,390		CU.ft
MAXIMUM GROSS WEIGHT		30,480	kg	67,200		lb
TARE WEIGHT		3,550	kg	7,825		lb
MAXIMUM PAYLOAD		26,930	kg	59,375		lb
STACKING TEST LOAD (PER POST)		86,400	kg	190,480		lb
FLOOR STRENGTH LOAD		7,260	kg	16,000		lb
CLASSIFICATION						
FRONT ASSEMBLY						
SIDE ASSEMBLY						
ROOF ASSEMBLY						
DOOR ASSEMBLY						
BASE ASSEMBLY						
DRAWING NO.	DESCRIPTION			REMARK		
CX10-4012-500	FRONT ASSEMBLY					
CX10-4012-400	SIDE ASSEMBLY			R/H: L/H:1		
CX10-4012-300	ROOF ASSEMBLY					
CX10-4012-200(R)	DOOR ASSEMBLY					
CX10-4012-100	BASE ASSEMBLY					
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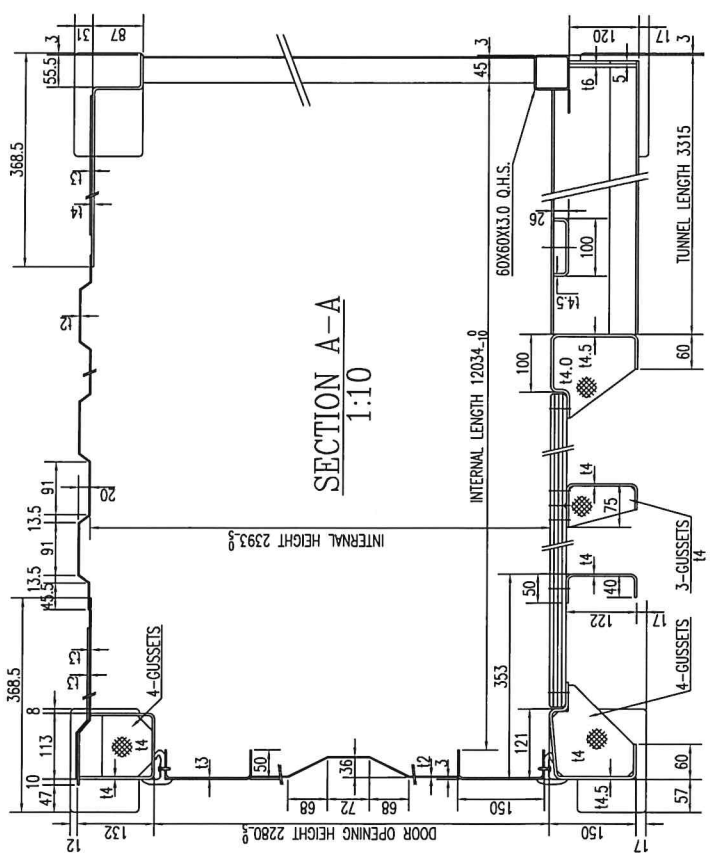
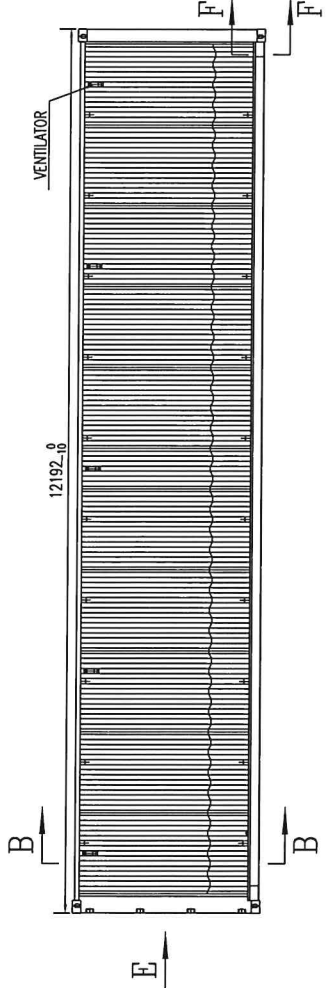
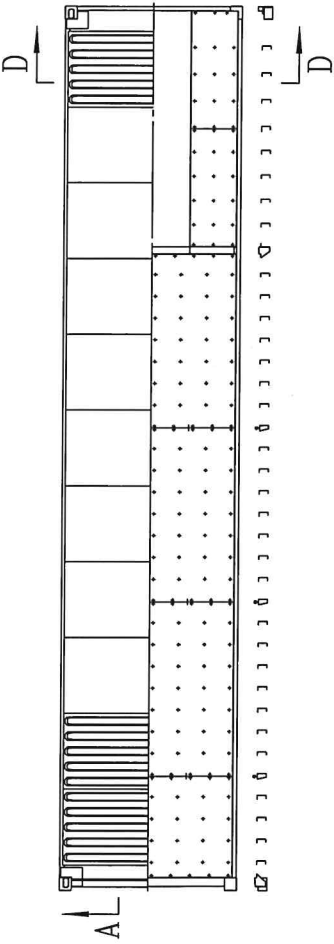
SECTION C-C  
1:10

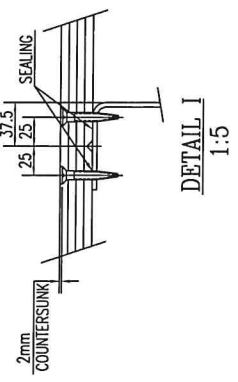
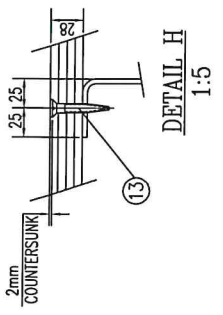
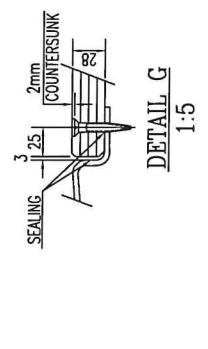
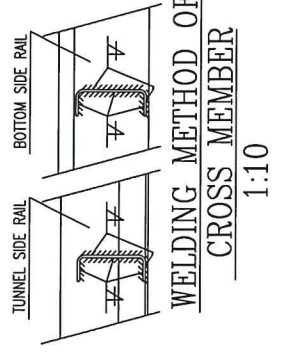
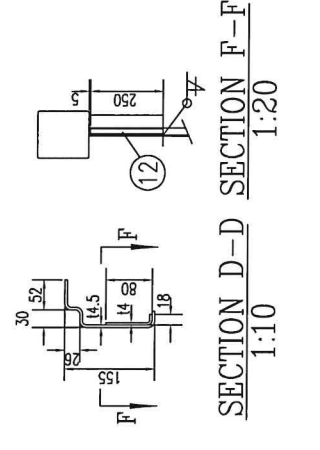
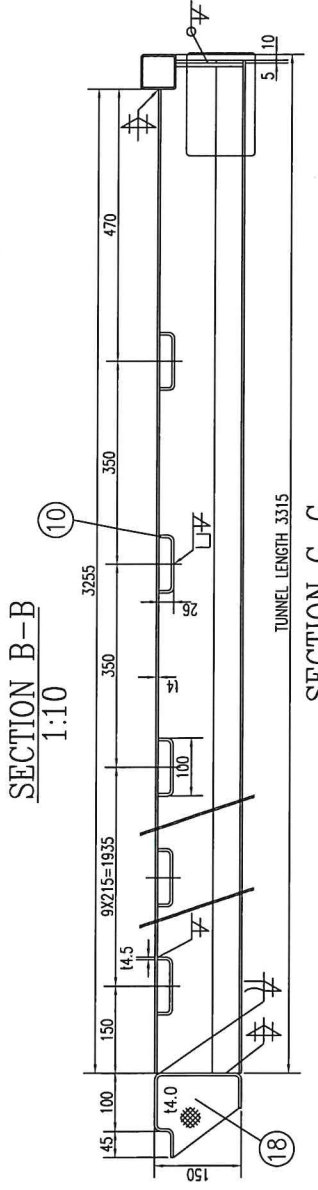
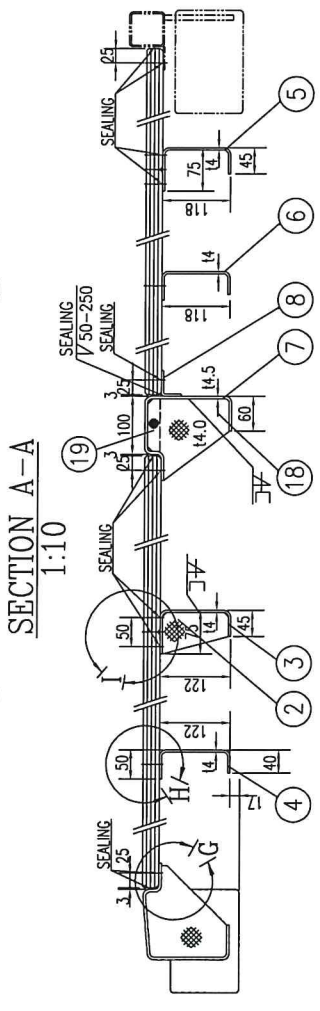
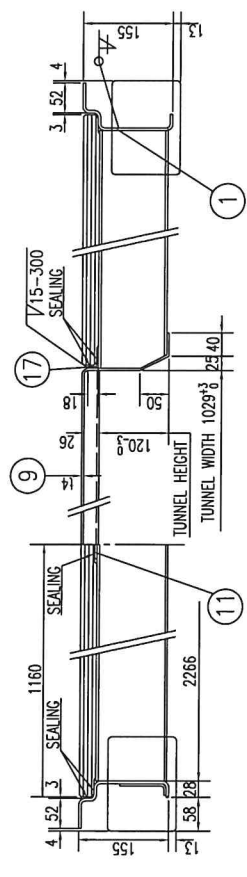
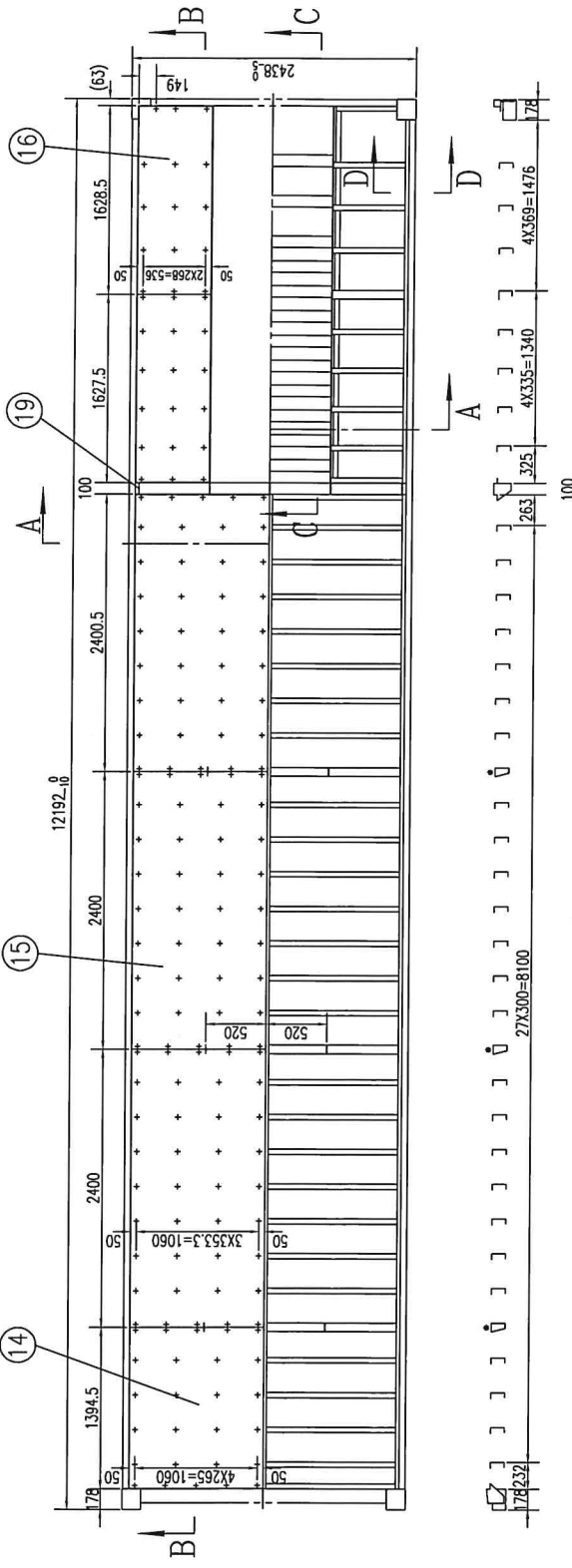


SECTION B-B  
1:10



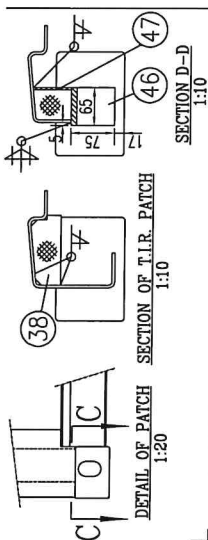
SECTION A-A  
1:10



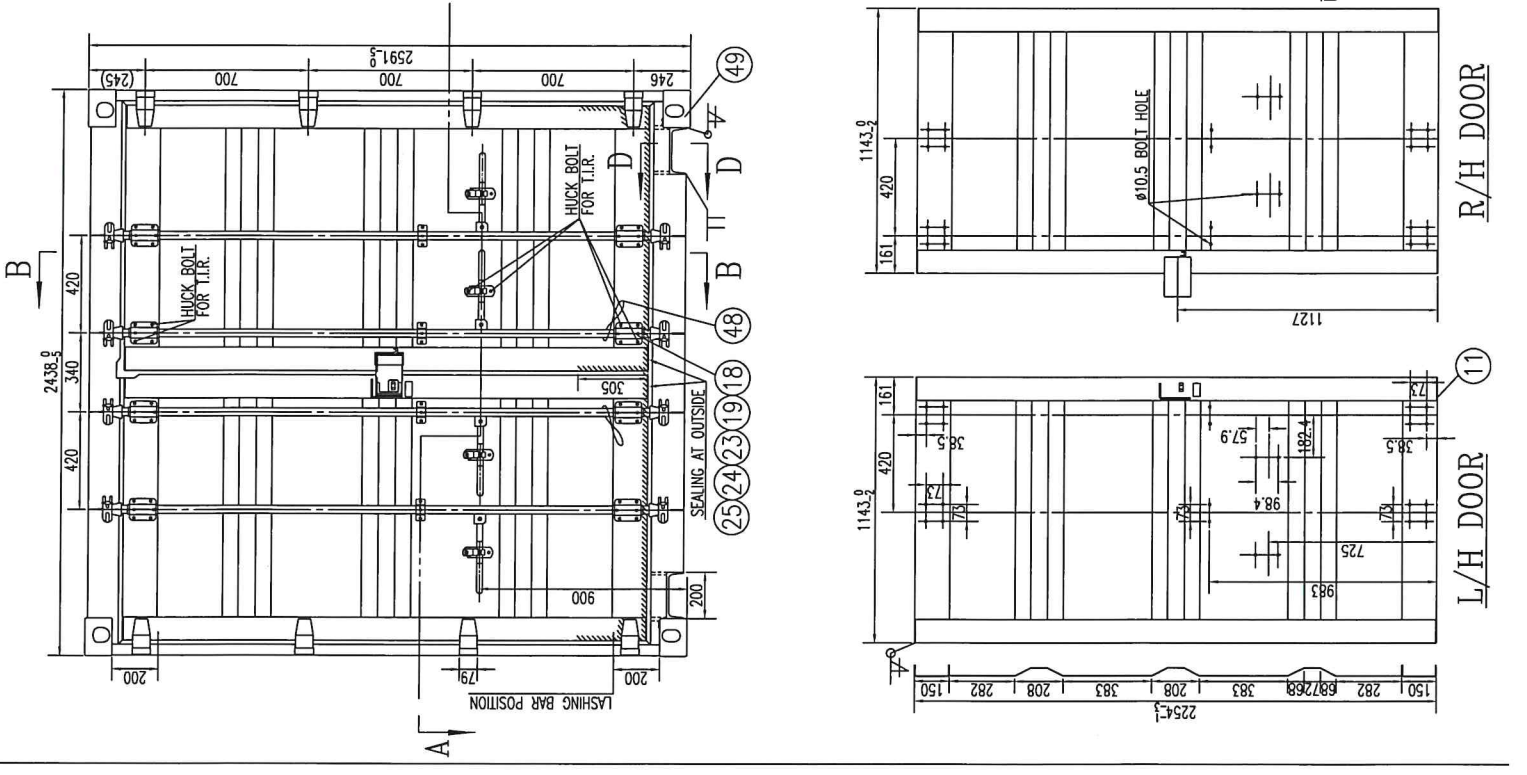
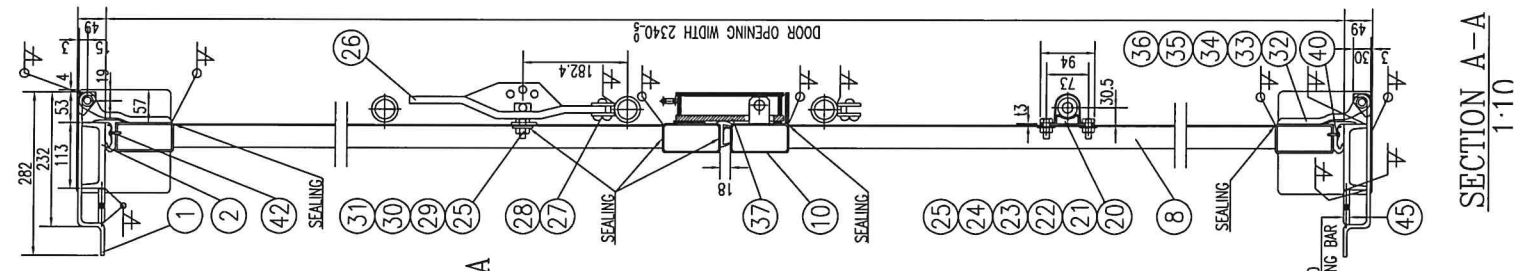
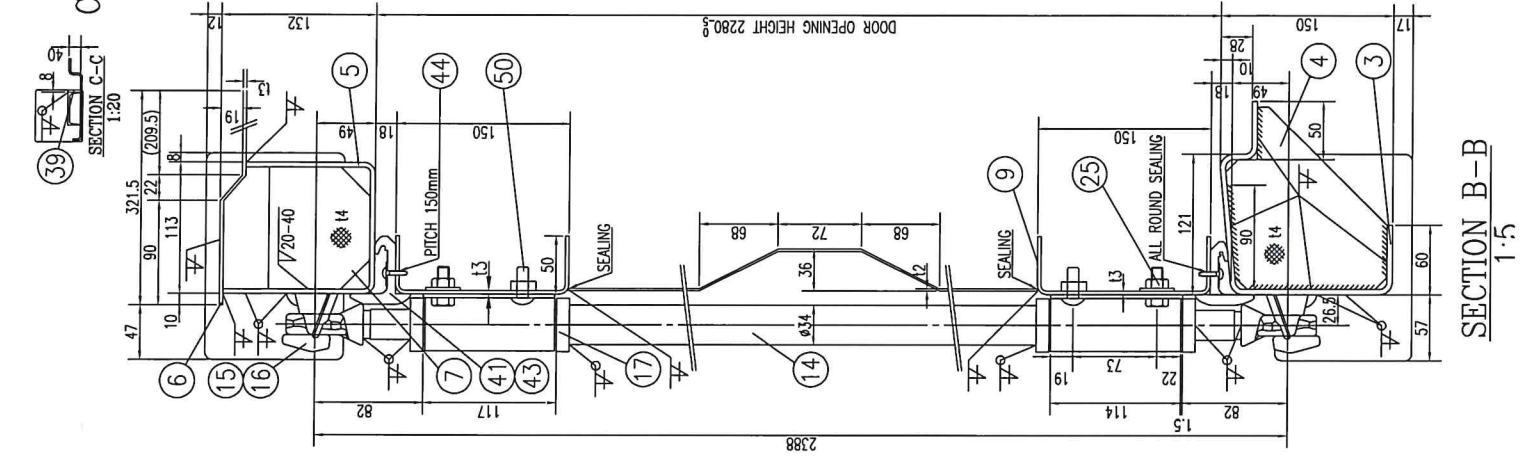


19	TUNNEL CLOSING PLATE	2	SPA-H 14.0X26X100	2-C10	
18	TUNNEL BOLSTER GUSSET	3	SPA-H 14.0		
17	ANGLE STEEL	2	SPA-H 13.0X5X18	L=3240	
16	WOODS	4	ARTONOK/RESINUM 18-18V	PLYWOOD	
15	WOOD2	6	ARTONOK/RESINUM 18-18V	PLYWOOD	
14	WOOD1	2	ARTONOK/RESINUM 18-18V	PLYWOOD	
13	SELF-TAPPING SCREW	3446	S20C M8X45	ZINC PLATED	
12	B.S.R. REINFORCEMENT	4	SPA-H 14.0X80X18	L=250	
11	FLAT STEEL	1	SS400 14.0X50X6580		
10	TUNNEL BOW	12	SPA-H 14.0X26X100	L=1029	
9	CK04-05-112 TUNNEL PLATE	1	SPA-H 14.0		
8	ANGLE STEEL	2	SPA-H 14.0X35X45	L=614	
7	CK08-40MC-107 TUNNEL BOLSTER	1	SPA-H 14.5		
6	OUTRIGGER(SMALL)	2	SPA-H 14.0X50X118X40	L=614 L=2	
5	OUTRIGGER(LARGE)	2	SPA-H 14.0X75X118X45	L=614 L=2	
4	CROSS MEMBER(SMALL)	25	SPA-H 14.0X50X122X40	L=2266 L=2	
3	CROSS MEMBER(LARGE)	3	SPA-H 14.0X75X122X45	L=2266 L=2	
2	CROSS MEMBER GUSSET	9	SPA-H 14.0		
1	CK04-40MC-104 BOTTOM SIDE RAIL	2	SPA-H 14.5		
	ITEM Dwg. NO.		DESCRIPTION	QTY	MATERIAL
					REMARK
					CX10-4012-100
	MARKET/FILE NO./NAME		DATE		底框裝配
	DESIGNED				BASE ASSEMBLY
	CHECKED				

DESIGNED LULI/MIA  
CHECKED YU/ONGHUA  
DATE 2014.06.10



50	HUCK BOLT	6 S45C $\phi 10 \times 19/20$ 5/1
49	CORNER FITTING	4 SOW480
48	ROPE	2 N10N $\phi 6$
47	GUSSET	2 SPA-H 14.0X200K55 L=63
46	CHANNEL STEEL	2 SS400 200X75X9.0 L=65
45	LASHING BAR	4 SS400 $\phi 10$ ZINC PLATED
44	BLIND RIVET	84 SUS304 $\phi 4.8$
43	GASKET RETAINER	4 SUS304
42	GASKET RETAINER	3 SUS304
41	GASKET	1 E.P.D.M. R. J-C TYPE
40	GASKET	1 E.P.D.M. L. J-C TYPE
39	PATCH	2 SPA-H 16.0 40X49
38	T.I.R. PATCH	2 SUS304 SPA-H 13.0
37	LOCK BOX	1 SS400
36	HINGE PIN	8 SUS304 $\phi 12$
35	HINGE BUSH	16 N10N
34	HINGE WASHER	8 BRASS/SUS304 11.5
33	HINGE LUG	16 SS400 18.0 ZINC PLATED
32	HINGE BRACE	8 S25C ZINC PLATED
31	RETAINER BUSH	4 SS400 ZINC PLATED
30	HANDLE RETAINER	4 SS400 LOWER GALV.
29	HANDLE RETAINER	4 SS400 UPPER GALV.
28	HANDLE RIVET	4 S10C ZINC PLATED
27	HANDLE HINGE	4 SS400 GALV.
26	HANDLE	4 S25C GALV.
25	B.N.W.	4X5T/S45C M10 ZINC PLATED
24	BRACKET BUSH	20 N10N OUTER
23	BRACKET BUSH	20 N10N INNER
22	SHIM	8/B EP.D.M.
21	BEARING BRACKET	4 SS400 SMALL OUTER ONLY
20	BEARING BRACKET	4 SS400 SMALL INNER ONLY
19	BEARING BRACKET	8 SS400 LARGE OUTER ONLY
18	BEARING BRACKET	8 SS400 LARGE INNER ONLY
17	ANTI-BACKING RING	16 SS400 GALV.
16	LOCK CAM KEEPER	2 SUS304 S20C ZINC PLATED
15	LOCK CAM	2 SUS304 S20C GALV.
14	LOCKING ROD	4 STRA00 BAR10.0 GALV.
13		
12		
11	PATCH	8 SPA-H 13.0 99X48
10	SQUARE TUBE(INNER)	4 SPA-H 100X50X3.2 L=248
9	HORIZONTAL MEMBER	4 SPA-H 130X50X3.0X50 L=93
8	DOOR PANEL	2 SPA-H 12.0
7	DOOR HEADER GUSSET	4 SPA-H 14.0
6	DOOR HEADER(UPPER)	1 SPA-H 13.0
5	DOOR HEADER(LOWER)	1 SPA-H 14.0
4	DOOR SILL GUSSET	4 SPA-H 14.0
3	DOOR SILL	1 SPA-H 14.5
2	CORNER POST(INNER)	2 SM490A 110 L=2355
1	CORNER POST(OUTER)	2 SUS304 SPA-H 16.0



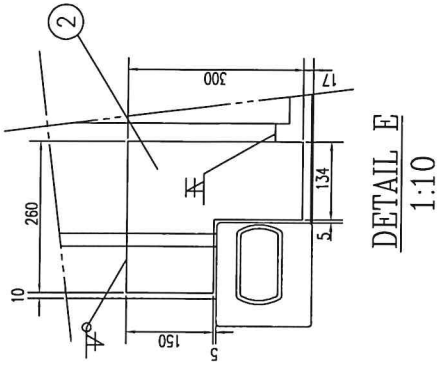
MARKET/ITEM NO.	NAME	DATE
DESIGNED	LZ/LINA	
CHECKED	YUONGHUA	
DATE		
ITEM DWG. NO.	DESCRIPTION	RTY MATERIAL
	门端装配	
	DOOR ASSEMBLY	
		CX10-4012-200(R)

SECTION B-B  
1:5

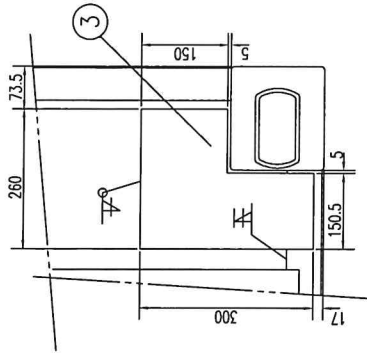
SECTION A-A  
1:10

R/H DOOR

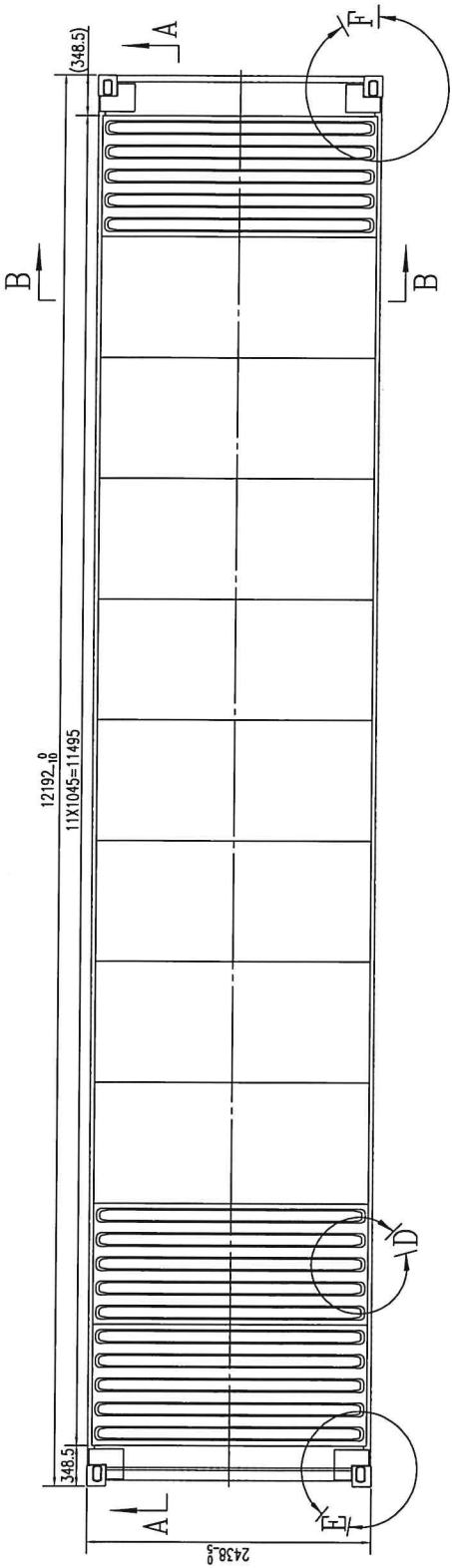
L/H DOOR



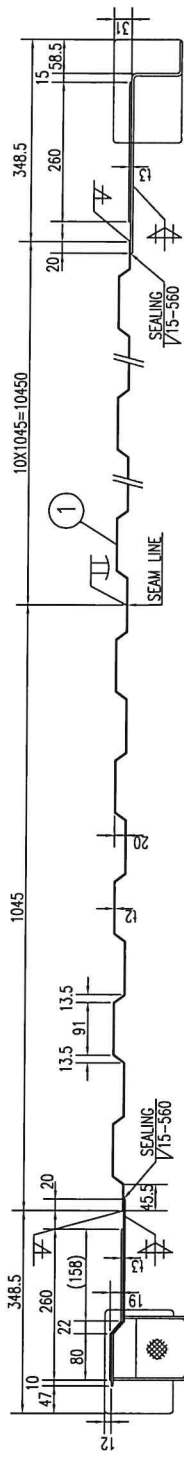
DETAIL E  
1:10



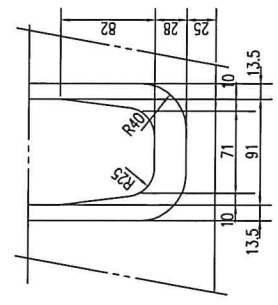
DETAIL F  
1:10



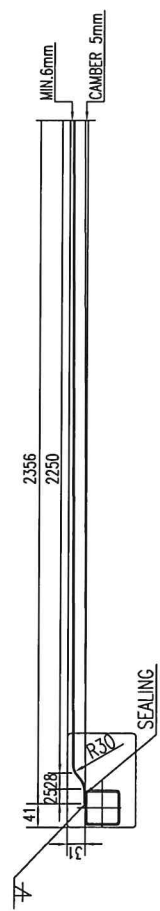
SECTION A-A  
1:10



SECTION B-B  
1:10

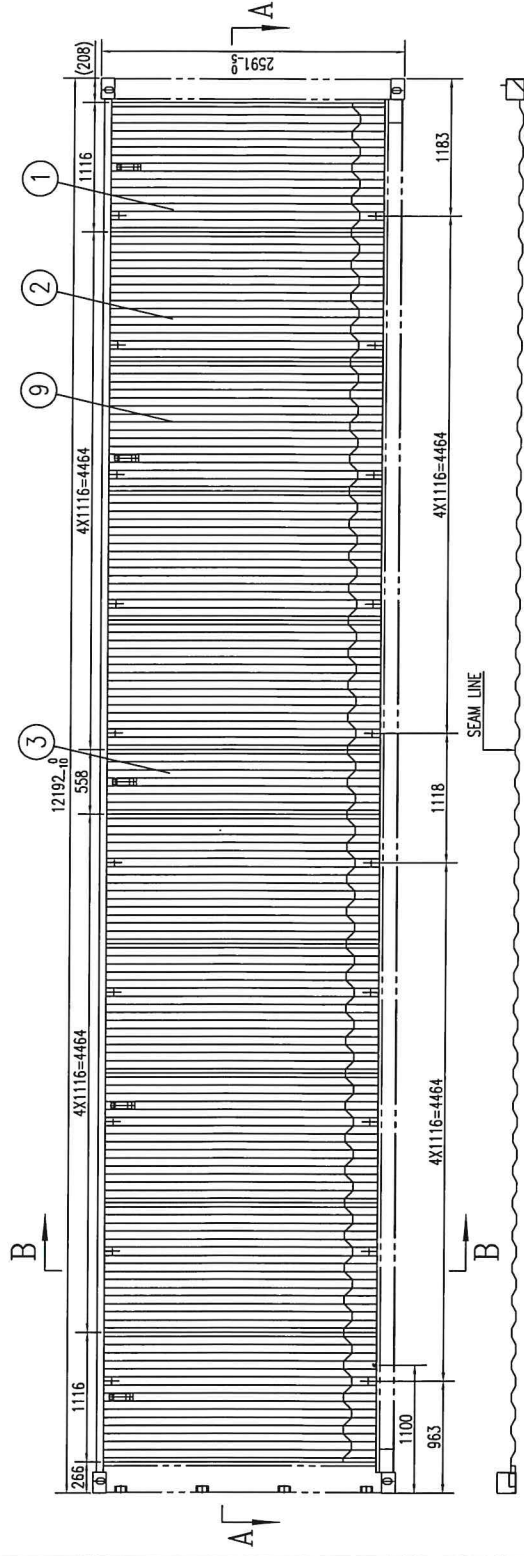


DETAIL D  
1:5

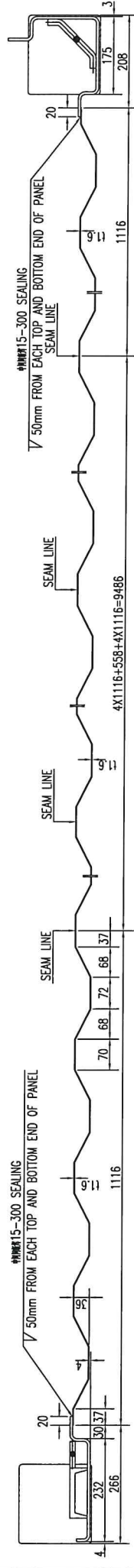
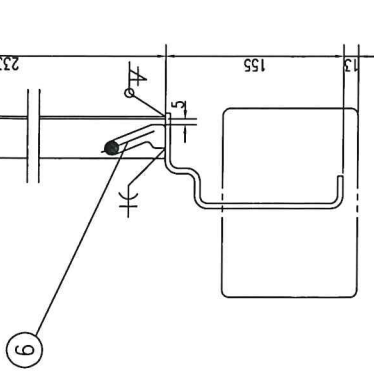


SECTION B-B  
1:10

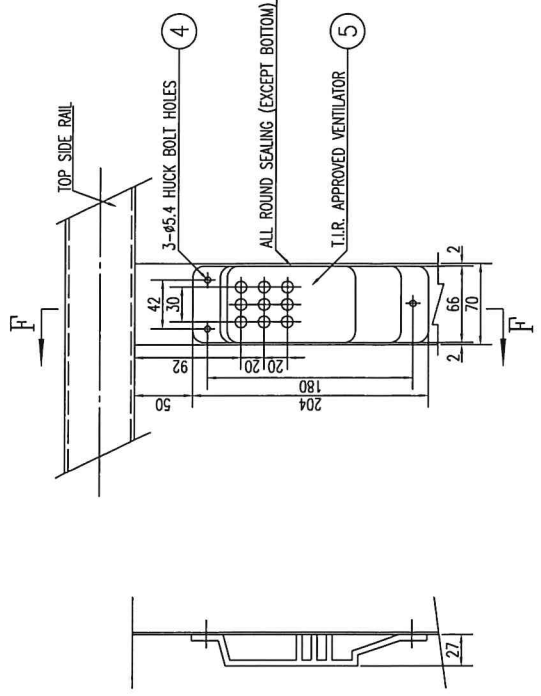
3	ROOF GUSSET(FRONT)	2	SPA-H 13.0
2	ROOF GUSSET(REAR)	2	SPA-H 13.0
1	ROOF PANEL	11	SPA-H 12.0
ITEM	DWG. NO.	DESCRIPTION	QTY. MATERIAL
			REMARK
			CX10-4012-300
			项装配
			ROOF ASSEMBLY
	MARK/TYPE/FILE	NO./NAME	DATE
	DESIGNED	L/XPAN	
	CHECKED	Zou JJ	



SECTION B-B  
1:5



SECTION A-A  
1:10



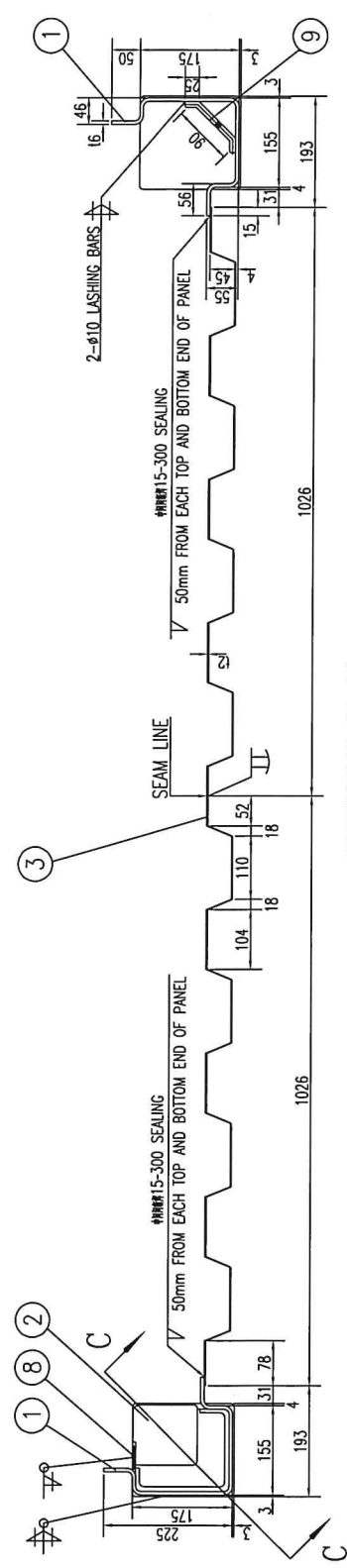
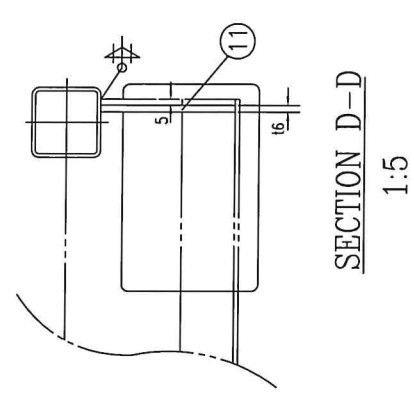
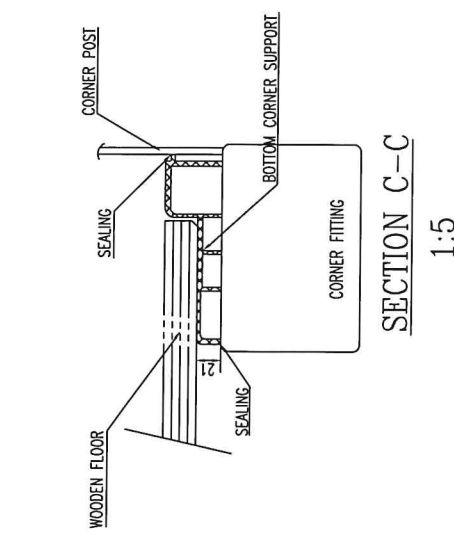
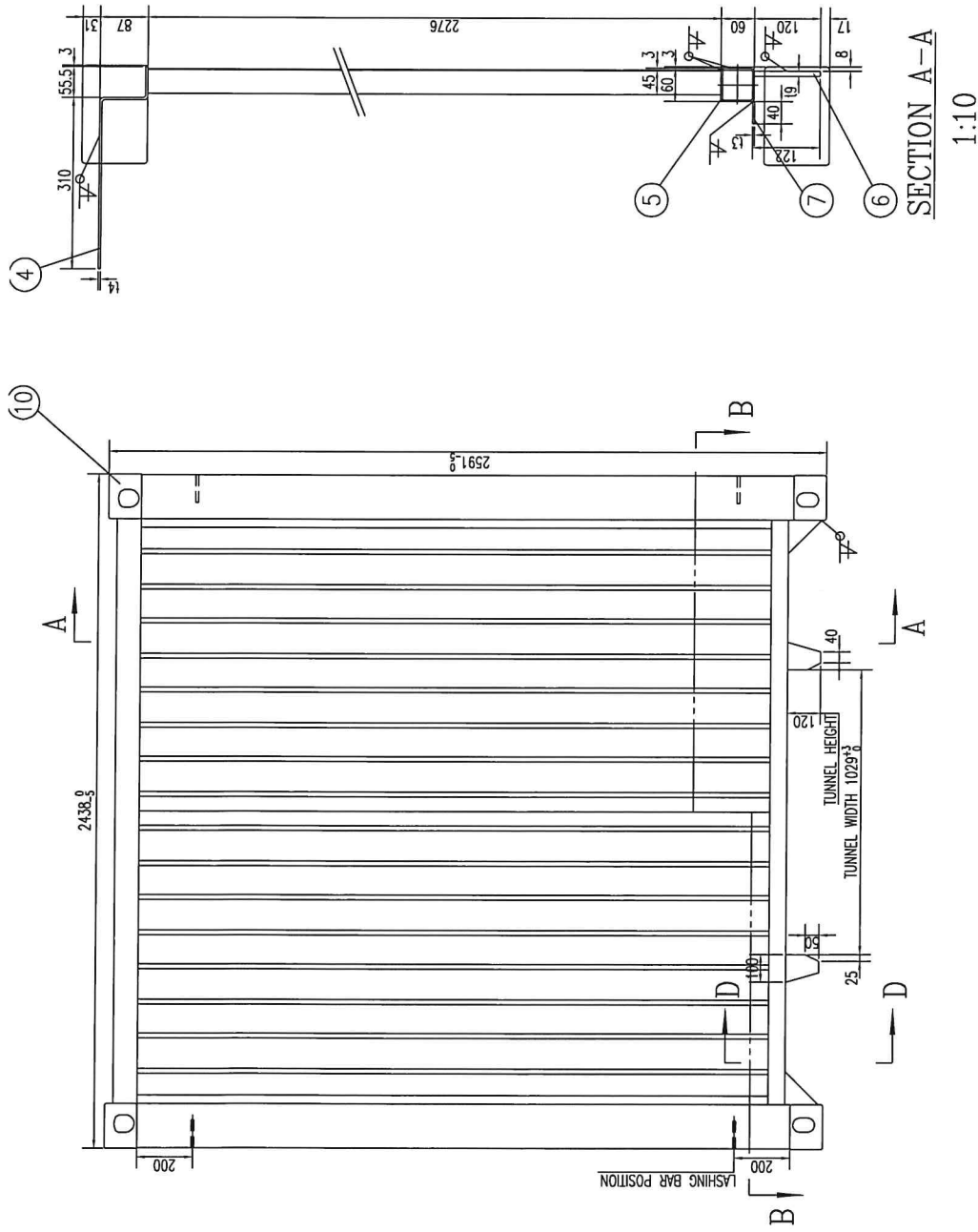
SECTION F-F  
1:5

ITEM	QTY	DESCRIPTION	UNIT	REMARK
9	WITH VENT.	SIDE PANEL(INNER III)	4	SPA-H 11.6 L=1116X2332-E
8		TOP SIDE RAIL	2	SPA-H 60X60X3.0 L=11836
7		ROPE HOLDER	2	SS400 Ø8 ZINC PLATED
6		LASHING RING	40	SS400 Ø12 ZINC PLATED
5		VENTILATOR COVER	10	ABS
4		BUCK BOLT	30	AL Ø5
3	WITH VENT.	SIDE PANEL(INNER I)	2	SPA-H 11.6 L=558X2332-E
2		SIDE PANEL(INNER J)	12	SPA-H 11.6 L=1116X2332-E
1	WITH VENT.	SIDE PANEL(OUTER)	4	SPA-H 11.6 L=1116X2332-E
		ITEM QTY NO.		DESCRIPTION QTY MATERIAL REMARK
				側壁裝配
				CX10-4012-400
		WORK/TYPE/FILE NO./NAME /DATE		SIDE ASSEMBLY
		DESIGNED /ZUI/MA		
		CHECKED /YUONGHUA		
		DATE		

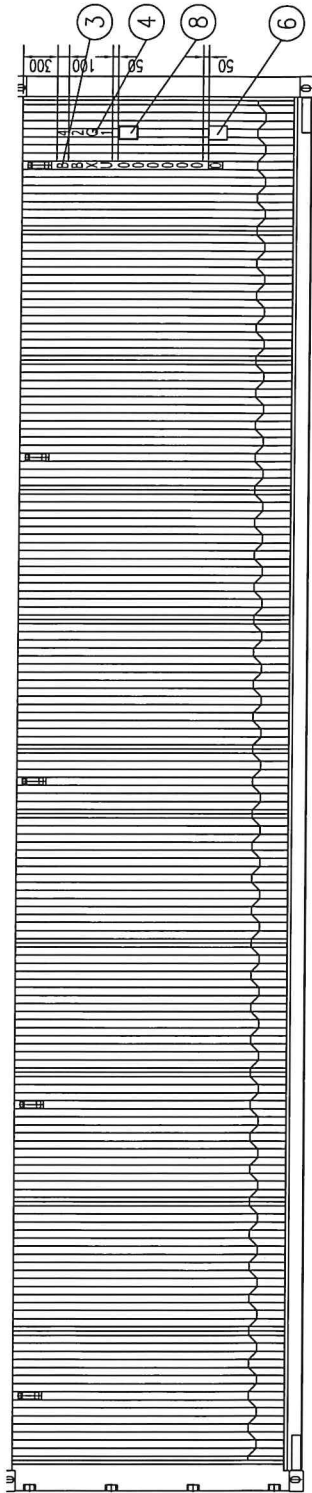
DETAIL OF LASHING RING  
1:2

DETAIL OF VENTILATOR  
1:5

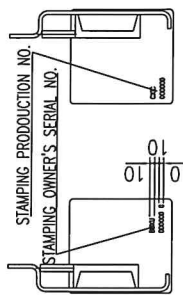
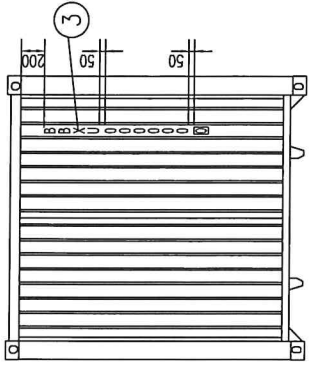
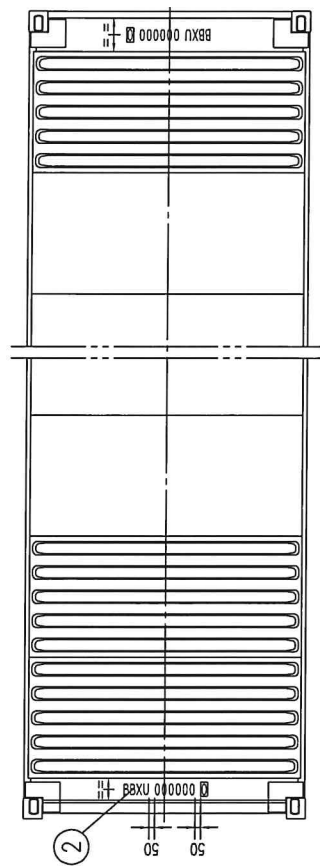
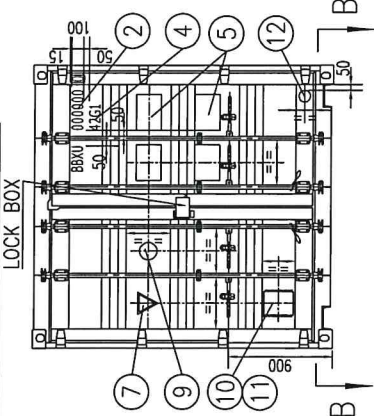
DETAIL OF ROPE HOLDER  
1:2



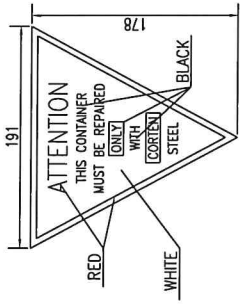
11	TUNNEL END PATCH	2	SPA-H 16.0		
10	CORNER FITTING	4	SCM480		
9	LASHING BAR	4	SS400 Ø10 ZINC PLATED		
8	PATCH	2	SPA-H 13.0 13820		
7	WOOD SUPPORT	2	SPA-H 13.0X539X21 L=40		
6	BOTTOM END RAIL(LOWER)	2	SS400 19.0X165X120		
5	BOTTOM END RAIL(UPPER)	1	SPA-H 14.0		
4	TOP END RAIL	1	SPA-H 14.0		
3	FRONT PANEL	2	SPA-H 12.0 1026X2276		
2	CX06-025-502/BOTTOM CORNER SUPPORT	2	POLYPROPYLENE		
1	CX06-80-501 FRONT CORNER POST	2	SPA-H 16.0		
ITEM	QTY	DESCRIPTION	MATERIAL	REMARK	
				CX10-4012-500	
				備註記	
MARK/FILE NO.	NAME	DATE	FRONT ASSEMBLY		
DESIGNED	LX/MW				
CHECKED	Zou JJ				
DATE					



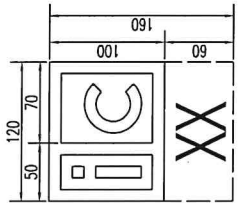
**INSIDE OF CONTAINER**



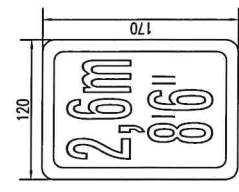
**SECTION B-B**



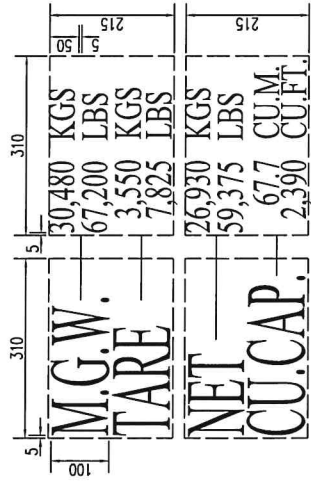
⑦ DETAIL



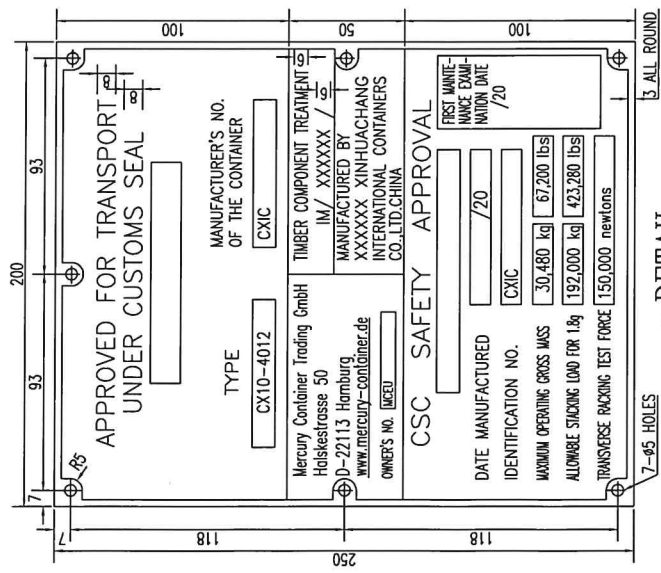
⑥ DETAIL



⑧ DETAIL



⑤ DETAIL



⑩ DETAIL

ITEM	QTY	DESCRIPTION	MATERIAL	REMARK
12	1	DECAL		
11	7	SUS304 BLIND RIVET		
10	1	CX21-40MCE-70 CONSOLIDATED DATA PLATE		
9	1	DECAL		
8	2	DECAL		
7	1	DECAL		
6	2	DECAL		
5	1/2	DECAL		
4	4	DECAL		
3	3	DECAL		
2		DECAL		
1		DECAL		

NOTE:  
1: BODY COLOUR: RAL 5010  
OWNER'S SERIAL NO.: MCEU486040-486069

MARKET/TYPE	NO. NAME	DATE	MARKING DRAWING
DESIGNED	LUJUNA		
CHECKED	YUQINGHUA		