TECHNICAL SPECIFICATION

FOR

STEEL DRY CARGO CONTAINER

20’x8’x8’6’’ ISO 1CC TYPE

SPECIFICATION NO:

“CTX 20 DVDR – Domestic Spec. HH“

DATE OF ISSUE: **October, 2013**

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1.General

1.1 Scope This specification will cover the design, construction, materials, testing and inspection performances of 20'x8'x8'6" ISO. 1CC type steel dry cargo containers. These containers specified herein will be manufactured in China under strict quality control by the factory 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 -40 (-40) to +70 (+158) 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, unless otherwise mentioned in this specification.

1.3.1 ISO Container Standards (1CC type)

ISO 668 - Series 1 freight containers - Classification external dimensions and ratings(4th edition - 1988)

ISO 830 - Terminology in relation to freight container (1st edition - 1981)

ISO 1161 - Series 1 freight containers - Corner fittings Specification (4th edition - 1984)

ISO 1496-1 - Series 1 freight containers - Specification and testing.
Part 1: General cargo containers for general purposes (5th edition - 1990)

ISO 6346 - Freight containers - coding, identification and marking (3rd edition - 1995)

1.3.2 T.I.R. Certification

All the containers will be certified and complied 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 complied 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 "Cargo Containers-Quarantine Aspects and Procedures" of the Commonwealth Department of Health, Australia.

1.3.5 U.I.C. Registration

All the containers will be registered and complied 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, GL.

* Note : GL : Germanischer Lloyd (Germany)

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 45 degrees to the horizontal.

c) Lifting, full or empty, at forklift pockets using forklift truck.

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.
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	6,058 + 0mm
	- 6mm
Width	2,438 + 0mm
	- 5mm
Height	2,591 + 0mm
	- 5mm

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:	13 mm
Front and rear diagonals:	10 mm

2.2 Internal Dimensions (nominal)

Length	5,898 mm
Width	2,352 mm
Height	2,393 mm

2.3 Door opening Dimensions (nominal)

Width	2,343 mm
Height	2,280 mm

2.4 Internal cubic capacity (Nominal)

33.2 cu.m 1,172 cu.ft

2.5 Forklift pockets

Width	360 mm
Height	min. 115 mm
Center to center	2,080 mm +/- 50 mm

2.6 Ratings

Max. Gross Weight (R)	30,480 kgs	67,200 1bs
Tare Weight (design) (T)	2,000 kgs	4,410 lbs
Max. Payload (P)	28,480 kgs	62,790 lbs

3. Materials

3.1 General

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

3.2 Part specification

Parts	*Materials by JIS*
1) All steel except screws, rivets, bolts/nuts, door hardwares and other shown on drawings and specification	Anti-corrosive steel. SPA-H or equivalent Y.P. : 35 kg/mm^2 T.S. : 49 kg/mm^2
2) Rear corner posts (inner)	Rolled high tensile steel. SM50A Y.P. : 33 kg/mm^2 T.S. : 50 kg/mm^2

3) Door locking bars	Structural steel round pipe. STK400 (STK41) Y.P.: 235 N/mm^2 T.S.: 402 N/mm^2
4) Corner fittings	Casted weldable steel. SCW480 (SCW49) Y.P.: 275 N/mm^2 T.S.: 480 N/mm^2
5) Locking gear cams and keepers	S20C Y.P.: 245 N/mm^2 T.S.: 402 N/mm^2
6) Door hinges	S25C Y.P.: 265 N/mm^2 T.S.: 441 N/mm^2
7) Door hinge pins Gasket retainers	Stainless steel. SUS304
8) Door gasket	EPDM
9) Floor	bamboo floor
10) Ventilator	ABS resin labyrinth type

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

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_2 gas.

4.1.3 Interior welds - when needed - will be stitched with a minimum length of 15 mm.

4.1.4 Gaps between adjacent components to be welded will not exceed 3 mm or the thickness of the parts being welded.

4.1.5 Chloroprene 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 internal bend radii of pressed sections of steel will be not less than 1.5 time the thickness of the materials being pressed.

4.1.7 The bamboo 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 all transverse members shall be positioned by 12.5 mm +5/-1.5 mm above the plane formed by the lower faces of the bottom corner fittings.

4.2.2 The top corner fittings are to protrude 6 mm 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 4 mm for the front and nominal 3 mm for the rear.

4.2.4 The outside faces of the corner fittings will protrude from the outside faces of the sides and front wall by nominal 8 mm.

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 6.0 mm 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 and manufactured at the works approved by classification society.

4.4 Base frame structure

Base frame will be composed of two bottom side rails, eighteen cross members, and a forklift pockets

4.4.1 Bottom side rail

Each bottom side rail is built of a 155x52x30x28x4.5 mm 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 to be made of 4.0 mm thick flat steel is welded to bottom corner fitting.

4.4.2 Cross member

The cross members are made of pressed channel section steel with a dimension of 45x122x45x3.5 mm for the normal areas and 75x122x45x4.0 mm for the floor butt joints. The large one is reinforced by three 4.0 mm thick gussets.

The cross members are placed fully to withstand floor strength and welded to each bottom side rail.

4.4.3 Forklift pockets

Each forklift pocket is built of 3.0 mm thick full depth flat steel top plate and two 200 mm deep x 6.0 mm thick flat lower end plates between two channel section cross members.

The one set of forklift pockets is designed in accordance with ISO requirements.

4.5 Flooring

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

4.5.1 Floor

The bamboo floor to be constructed with 28 mm thick plywood boards are laid longitudinally on the transverse members between the 4.0 mm thick flat bar floor center rail and the 2.3 mm thick pressed angle section steel floor guide rails stitched welded to the bottom side rails.

The floor boards are tightly secured to each transverse member by self-tapping screws, and all butt joint areas and peripheries of the floor boards are caulked with sealant.

1) Wood species: Bamboo.
2) Glue: Phenol-formaldehyde resin.
3) Treatment:
    a) Preservative: Meganium or Equivalent.
        In accordance with Australian Health Department Regulations.
    b) Average moisture content will be 12% before installation.

Bamboo supplier: Nafi Nantong

4.5.2 Self-tapping screw

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

Screw heads are to be countersunk with about 2 mm 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 4.5 mm 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 10 mm slope for better drainage.

There is cut out at each end of the door sill and reinforced by a 200x75x9.0 mm 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 4.5 mm thick pressed steel outer part and 40x113x12 mm thick 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 4.0 mm thick pressed "U" section steel lower part having four internal gussets at the back of each locking cam keeper location and a 3.0 mm thick pressed steel upper 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 two 3.2 mm thick pressed channel section steel horizontal frames for the top and bottom, two 100x50x3.2 mm thick rectangular hollow section vertical frames for the post side and center side of door, 1.6 mm thick horizontally corrugated steel door panel, which are continuously welded within frames.

4.7.3 Two sets of galvanized " HH-E" or equivalent bolt on model locking assemblies with forged steel handles are fitted to each door using zinc plated steel bolts and Huck 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 of container.

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 center 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 being provided with stainless steel pins, self-lubricating nylon bushings and the Stainless steel washers, which are placed at the hinge lugs of the rear corner posts.

4.7.7 The door gasket to be made of an extruded J&C-type EPDM rubber is installed to the door peripheral frames with stainless steel gasket retainers which must be caulked with butyl sealant before installation of gasket, and fastened by stainless steel rivets at a pitch of 150 mm.

4.8 Roof structure

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

4.8.1 Roof panel

The roof panel is constructed with 1.6 mm thick die-stamped steel sheets having about 5.0 mm 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 chloroprene sealant.

4.8.2 Protection plate

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

4.9 Top side rail

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

4.10 Side wall

The trapezium section side wall is constructed with 1.6 mm thick fully vertically continuous-corrugated steel outer panels near the each post and 1.6 mm thick intermediate inner panels, which are butt welded together to form one panel and continuously welded to the side rails and corner posts.

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 to be made of a 4.0 mm thick pressed open section steel is reinforced by four internal gussets.

There is cut out at each end of the bottom end rail and reinforced by a 200x75x9.0 mm channel steel as a protection against handling equipment damages.

4.11.2 Front corner post

Each corner post is made of 6.0 mm 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 a 3.5 mm thick “Z” shaped pressing steel plate.

4.11.4 Front wall

The trapezium section front wall is constructed with 1.6 mm 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 chloroprene sealant.

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

Five (5) 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 20 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 (3) lashing rods are welded to each corner post at the position of 150 mm higher from the floor and 200 mm lower from the bottom surface of top corner fitting and middle of the 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 60 mm width x 40 mm 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 two labyrinth type small plastic ventilators.
Each ventilator is fixed to the right & left hand upper part of each side wall by three 5.0 mm dia. steel 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 SA 2 1/2 to remove all rust, dirt, mill scale and all other foreign materials.
The shot blasted surface profile shall be have a maximum peak to valley height not exceeding 50 microns and average peak to valley height of about 25 microns.

2) All door hardwires 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 Prior to assembly

All steel surfaces will be coated with 10-15 microns thick two-pack polyamide cured zinc rich epoxy primer immediately after shot blasting, and then dried up in drying room.

5.2.2 After assembly

All weldments will be shot blasted to remove all welding fluxes, splatters, burnt primer coatings caused by welding heat, and other foreign materials.
Then all blasted weldments will be coated with zinc rich epoxy primer.

5.2.3 The total dry film will be (microns):

All surface of the assembled container will be have coating system as follows:

Where	*Paint name*	*DFT (u)*
Exterior surface	Zinc rich primer	20
	Epoxy primer	40
	Top coat	40
		Total: 100
Interior surface	Zinc rich primer	20
	Epoxy high build coating	40
		Total: 60
Under structure	Zinc rich primer	20
	Bitumen	140
		Total: 160

Paint supplier: Hempel Haihong

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

6. Marking

6.1 Arrangements

The containers will be marked in accordance with ISO, TCT, UIC, 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 color fading.

2) Certification plate: Stainless steel plates to be chemically etched by acid.

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 rivets. The entire periphery except underside will be caulked with sealant.

2) The owner's serial numbers will be stamped into the top surface of left hand rear lower corner fittings.

7. Testing

7.1 Prototype testing

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

Test items & loads	*Test methods*
A) Stacking Internal load : 1.8R-T Test load : 86,400 kg/post.	Hydraulic cylinder load will be applied to each corner post through top corner fittings. Offset : 25.4 mm lateral 38.0 mm longitudinal Time duration : 5 minutes
B) Lifting (from top corner fitting) Internal load : 2R-T	Lifting vertically. Time duration : 5 minutes
C) Lifting (from bottom corner fittings) Internal load : 2R-T	Lifting 45 deg. to the horizontal. Time duration : 5 minutes

D) Lifting (for forklift pockets) Internal load : 1.6R-T	Lifting by horizontal bars. Bar length : 1,828 mm Bar width : 200 mm Time duration : 5 minutes
E) Restraint (longitudinal) Internal load : R-T Test load : 2R	Hydraulic cylinder load will be applied to the bottom side rails. Two times for pulling and pushing. Time duration : 5 minutes
F) Floor strength. Test load : 5,460 kgs (12,000 lbs)	Use of a special truck. Total contact area : 284 cm^2 Wheel width : 180 mm Wheel center : 760 mm
G) Wall strength (front) Test load : 0.4(R-T)=0.4P	Compressed air bag will be used. Time duration : 5 minutes
H) Wall strength (side) Test load : 0.5(R-T)=0.5P	Compressed air bag will be used on one side only. Time duration : 5 minute
I) Wall strength (door) Test load : 0.4(R-T)=0.4P	Same as front wall strength test.
J) Roof strength (weakest part) Test load : 300 kgs	Applied area will be 600x300 mm longitudinal and transverse.
K) Racking (transverse) Test load : 15,240 kgs	Hydraulic cylinder load will be applied to the header rail through top corner fittings. Two times for pulling and pushing. Time duration : 5 minutes
L) 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. Time duration : 5 minutes
M) Operation of door	After completion of test, the operation of doors, locks, hinges, etc. will be checked.
N) Dimensions and weight	After completion of test, the dimensions and weight will be checked.
O) Weatherproofness	Inside dia. of nozzle : 12.5mm Distance : 1.5 m Speed : 100 mm/sec Pressure : 1 kg/cm^2

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

8. Guarantee

8.1 Structure

In normal use, all the containers shall be guaranteed by manufacturer to be free from defects in materials, workmanship and structure for a period of thirty (30) months 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 three (3) years from the date of acceptance of the container by the buyer.

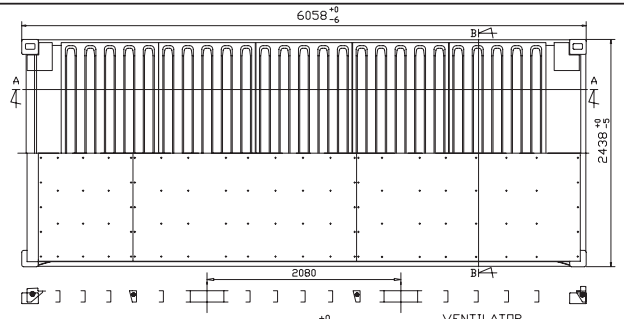
8.2.2 Corrosion is defined as rusting which exceeds RE3 (European Scale of degree of Rusting) on at least ten (10) percent of the total container surface, excluding that resulting from impact or abrasion damage, contact with solvents or corrosive chemicals and abnormal use.

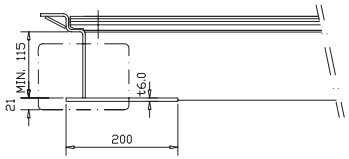
8.2.3 If the corrosion exceeds RE3 as defined above within the guarantee period, inspection of the corrosion shall be carried out by the buyer, the factory and paint manufacturer to detect the cause.
As the result of the inspection, if it is mutually agreed and accepted that the corrosion has been caused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

8.3 Decals

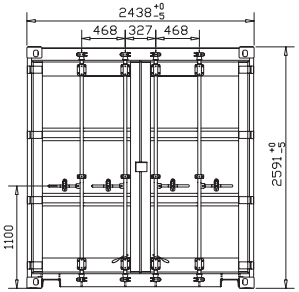
Decals applied on the container shall be guaranteed for a period of seven (7) years without peeling off, tenting or color fading if decals are supplied by the factory.

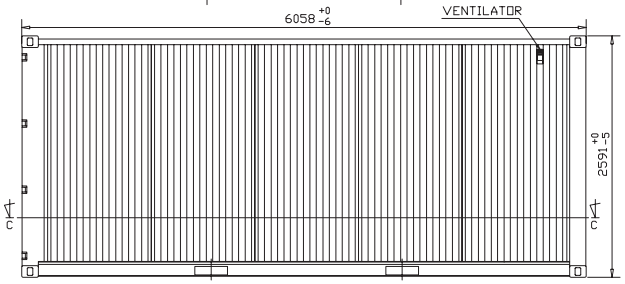
PART NAME		MATERIAL	REMARK
FRAME	SIDE RAIL	SPA-H	
	END RAIL	SPA-H	
	CORNER POST	SM50A/SPA-H	
	CROSS MEMBER	SPA-H	
PANEL	DOOR	SPA-H	
	ROOF	SPA-H	
	SIDE	SPA-H	
	FRONT	SPA-H	
WOODEN FLOOR		APITONG/HARDWOOD	
DOOR LOCKING ROD ASS'Y			

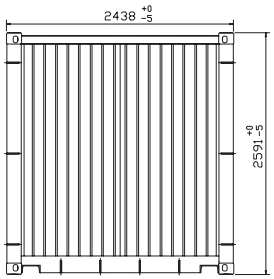


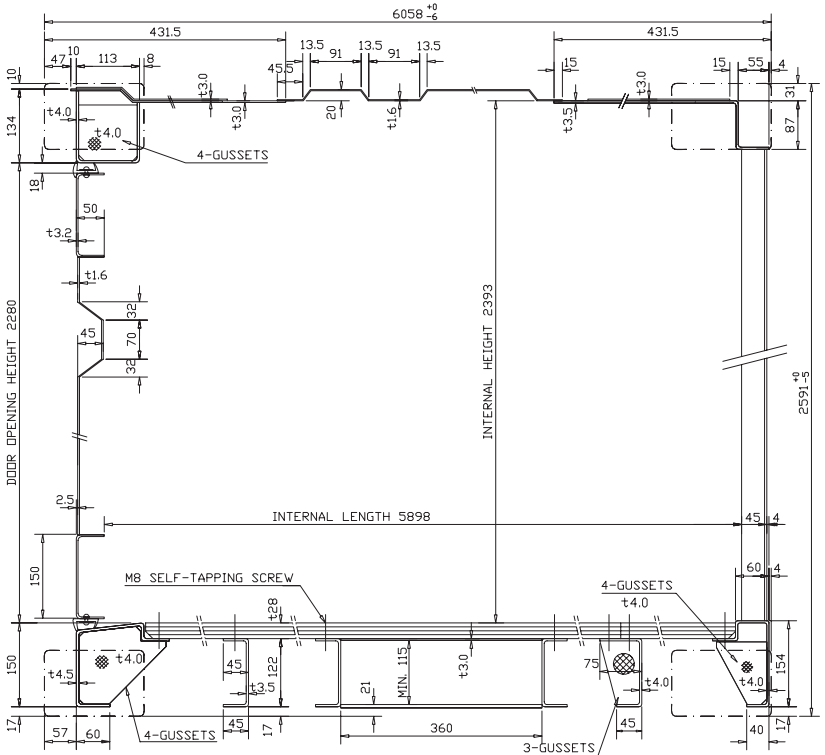


DETAIL OF FORKLIFT POCKET

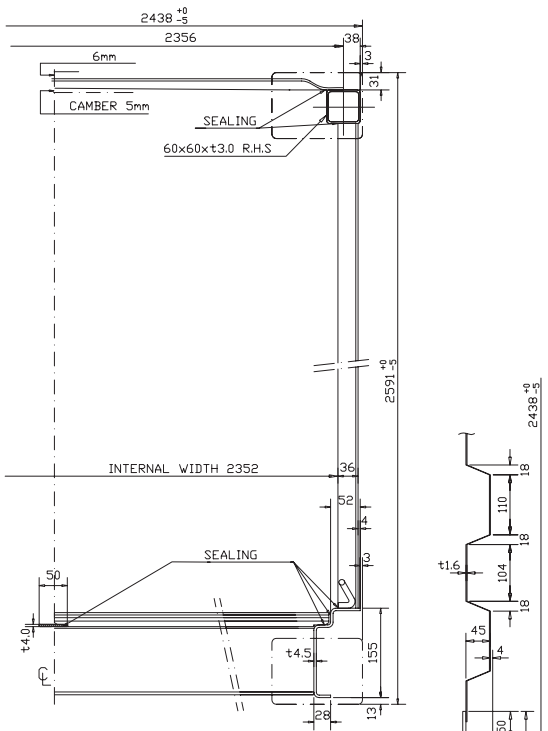








SECTION A-A S=1/10



SECTION B-B S=1/5

SECTION C-C S=1/10

DRAWING NO.	DESCRIPTION	REMARK
A20-09DE-100D	BASE ASSEMBLY	
A20-09DE-200L	DOOR ASSEMBLY	
A20-09DE-300	ROOF ASSEMBLY	
A20-09DE-400D	SIDE ASSEMBLY	R/H:1 L/H:1
A20-09DE-500C	FRONT ASSEMBLY	

CLASSIFICATION		DIMENSION			
EXTERNAL	LENGTH	6,058	+0 -6mm	19'10 1/2"	+0 -1/4"
	WIDTH	2,438	+0 -5mm	8' 0"	+0 -3/16"
	HEIGHT	2,591	+0 -5mm	8' 6"	+0 -3/16"
INTERNAL	LENGTH	5,898	mm	19' 4 13/64"	
	WIDTH	2,352	mm	7' 8 38/64"	
	HEIGHT	2,393	mm	7'10 14/64"	
DOOR OPENING	WIDTH	2,343	mm	7' 8 1/4"	
	HEIGHT	2,280	mm	7' 5 49/64"	
INTERNAL CUBIC CAPACITY		33.2	CU.m	1,172	CU.ft
MAXIMUM GROSS WEIGHT		30,480	kg	67,200	lb
TARE WEIGHT		2,000	kg	4,410	lb
MAXIMUM PAYLOAD		28,480	kg	62,790	lb
STACKING TEST LOAD(PER POST)		86,400	kg	190,480	lb
FLOOR STRENGTH LOAD		5,460	kg	12,000	lb

MARK	Q'TY	REV. FILE NO.	SIGNATURE	DATE
DESIGNED			APPROVED	
CHECKED			DATE	

TITLE: GENERAL ASSEMBLY

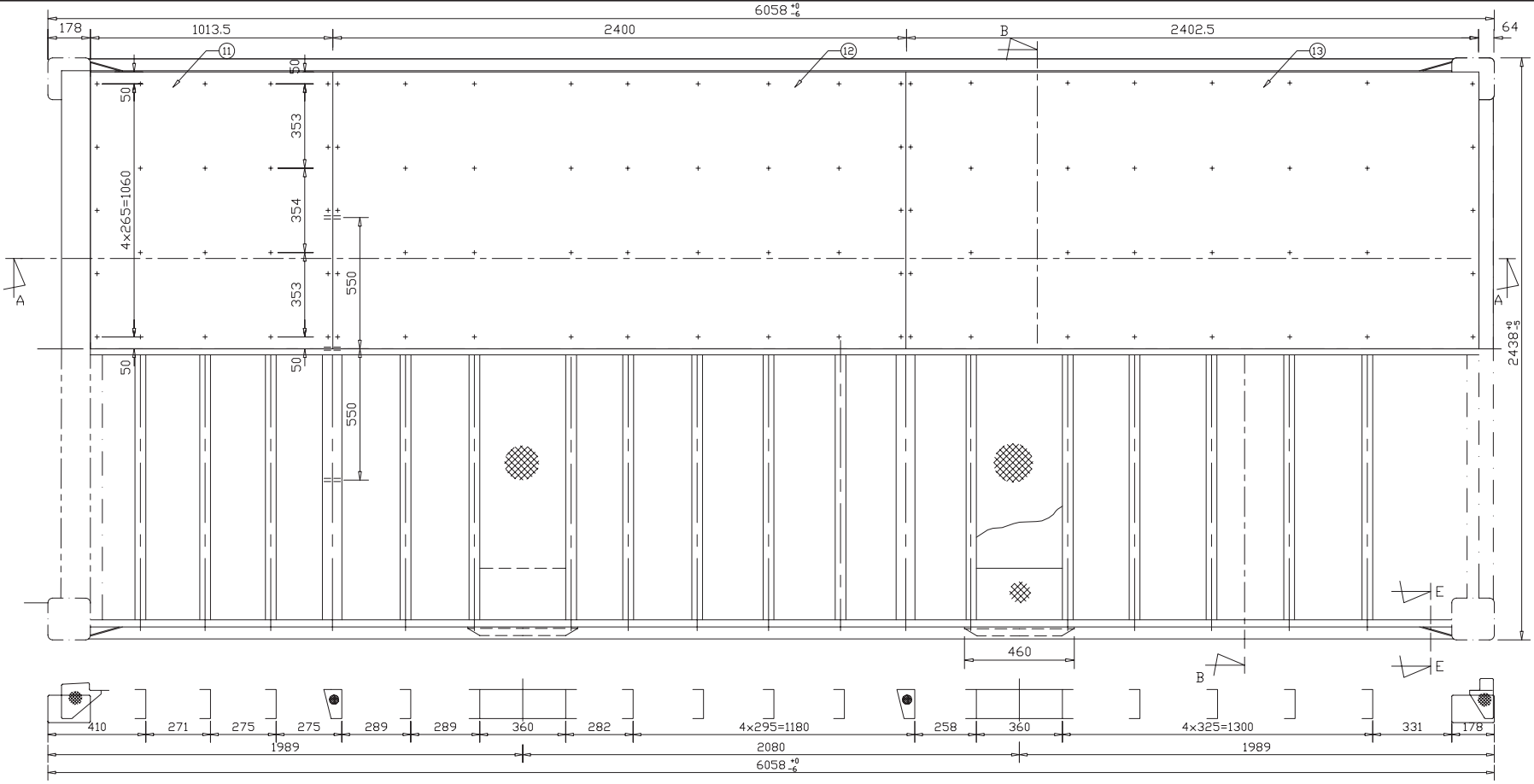
OWNER

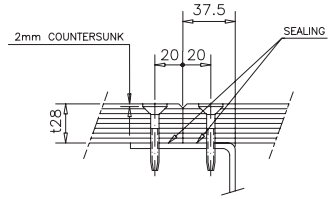
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ISSUE: 201204

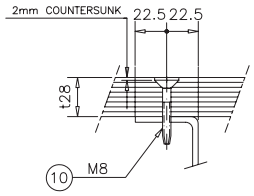
W'T(KG): 2,000 SCALE: 1:60

DRAWING NO. A20-09DE-000

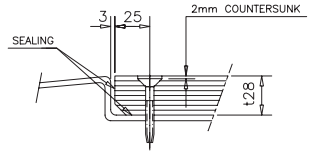




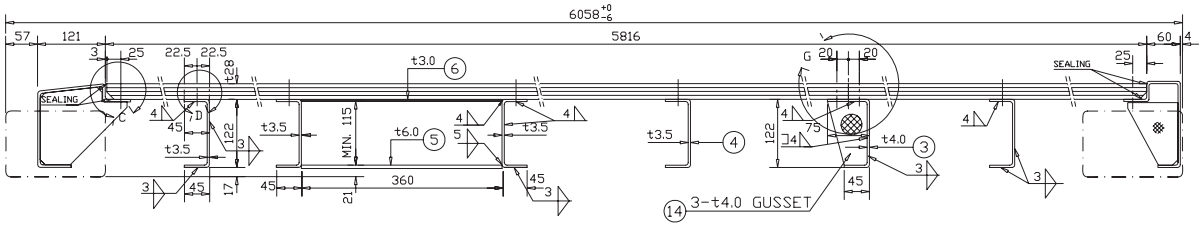
DETAIL OF "G" S=1/4



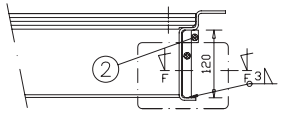
DETAIL OF "D" S=1/4



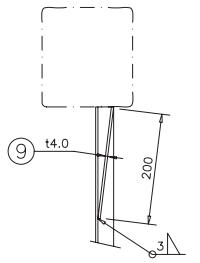
DETAIL OF "C" S=1/4



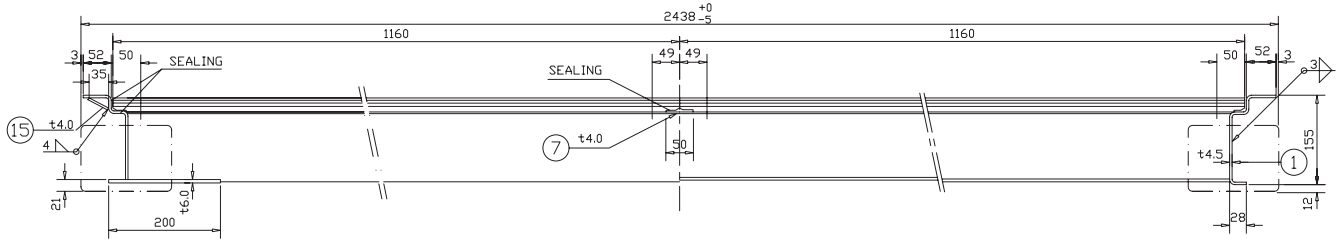
SECTION A-A S=1/10



SECTION E-E S=1/10



SECTION F-F S=1/10



SECTION B-B S=1/10

ITEM NO.	DRAWING NO.	DESCRIPTION	CHINESE	Q'TY	MATERIAL (SIZE)	REMARK
15	-131B-126	FLP REINFORCEMENT		4	SPA-H t4.0	
14	-23-125	CROSS MEMBER GUSSET		6	SPA-H t4.0	
13	-123B-122	WOOD 3		2	APITONG/KERUING 19-PLY t28	PLYWOOD
12	-123B-121	WOOD 2		2	APITONG/KERUING 19-PLY t28	PLYWOOD
11	-123B-120	WOOD 1		2	APITONG/KERUING 19-PLY t28	PLYWOOD
10	-01-119A	SELF-TAPPING SCREW		188	S20C M8x45	ZINC PLATED
9	-132B-118	BOTTOM SIDE RAIL REINFORCEMENT		4	SPA-H t4.0	
7	-113B-116A	CENTER RAIL		1	SPA-H t4.0	3 PCS
6	A20-09DE-106A	FORKLIFT POCKET UPPER PLATE		2	SPA-H t3.0	
5	-23-105	FORKLIFT POCKET LOWER PLATE		4	SPA-H t6.0	
4	A20-09DE-104A	CROSS MEMBER		16	SPA-H t3.5	SMALL
3	-123D-103	CROSS MEMBER		2	SPA-H t4.0	LARGE
2	CL201/05-102	FRONT PATCH		2	SPA-H t6.0	
1	-123D-101	BOTTOM SIDE RAIL		2	SPA-H t4.5	OUTER

MARK	Q'TY	REV. FILE NO.	SIGNATURE	DATE
DESIGNED			APPROVED	
CHECKED			DATE	

TITLE: BASE ASSEMBLY

OWNER

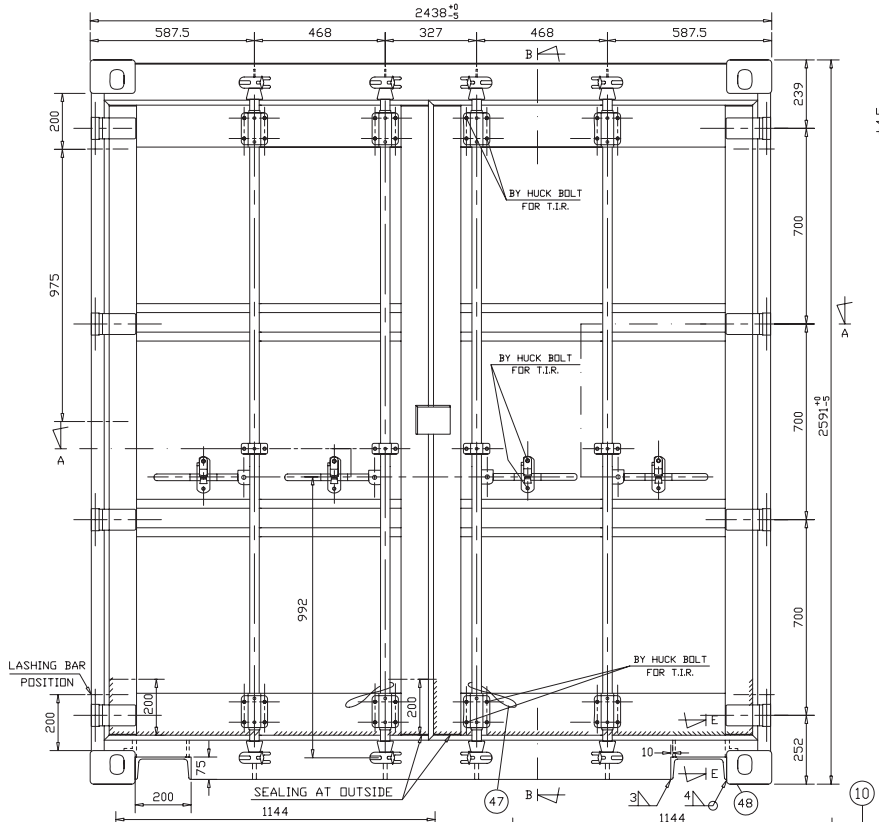
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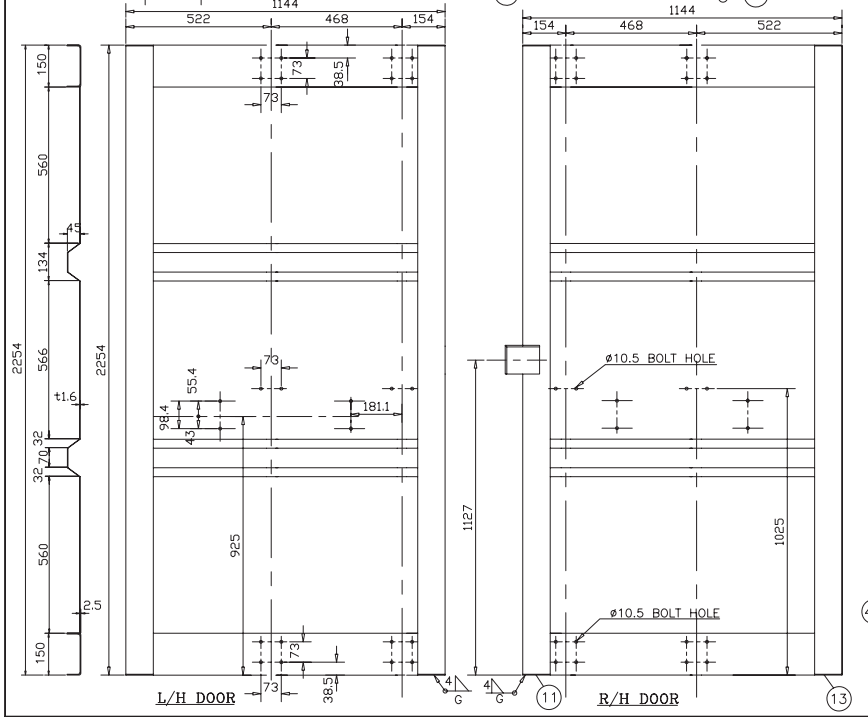
W'T(KG)

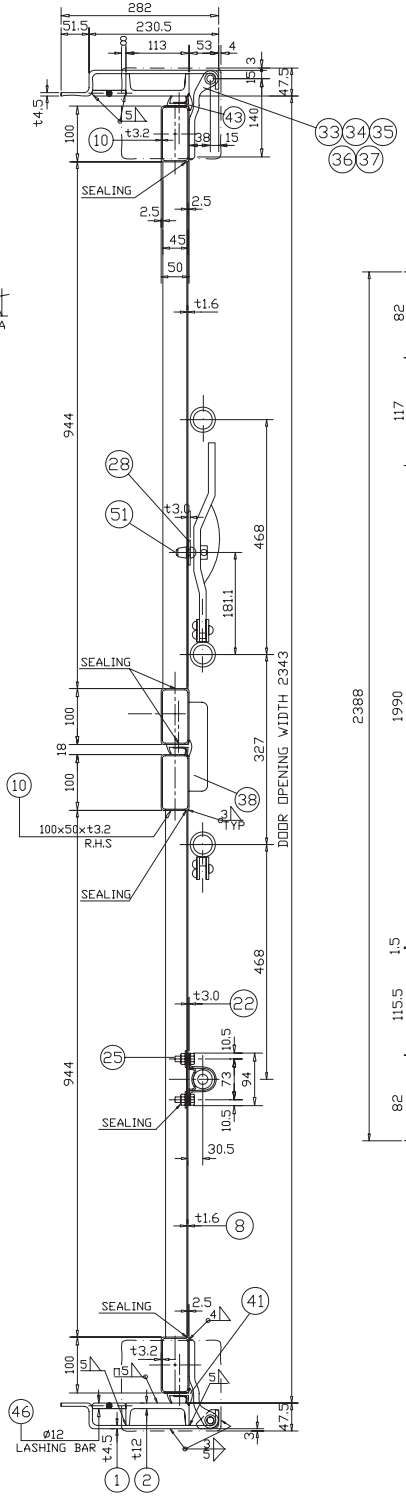
SCALE 1:20

DRAWING NO. A20-09DE-100D

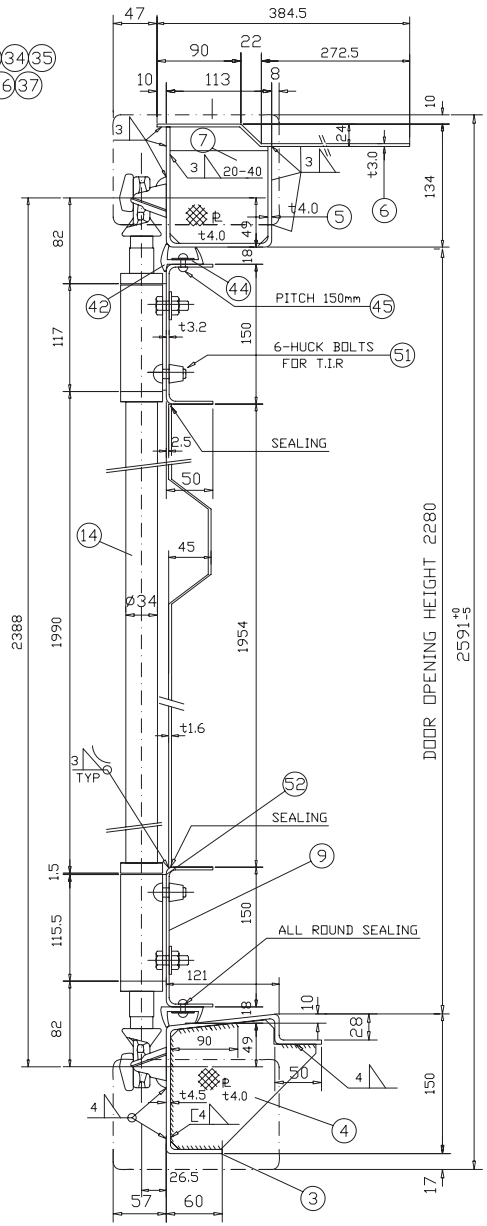
F21



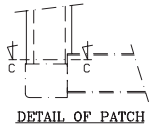




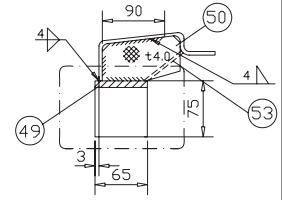
SECTION A–A (S=1/10)



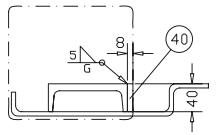
SECTION B–B (S=1/6)



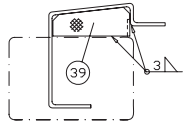
DETAIL OF PATCH



SECTION E–E (S=1/6)



SECTION C–C



DETAIL OF T.I.R PATCH

53	113B–261	PATCH	2	SPA–H	
52	–01–258	BEARING BRACKET BARRIER TAPE	8	E.P.D.M. t1.0	
51	–01–257	HUCK BOLTS	6	S45C ø10	19x4 25x1 30x1 ZINC PLATED
50	·19–256A	GUEEST	2	SPA–H t4.0	
49	·81B–255	CHANNEL STEEL	2	SS41 200x75xt9.0	
48		CORNER FITTING	4	SCW49	TOP & BOTTOM
47		ROPE	2	NYLON	
46	–23–254	LASHING BAR	6	S20C ø12	ZINC PLATED
45	–17–253	STAINLESS STEEL RIVET	80	STAINLESS ø4.8x16.7	
44	–81–252	GASKET RETAINER	4	STAINLESS t1.0 (SUS304)	HORIZONTAL
43	–81–251	GASKET RETAINER	3	STAINLESS t1.0 (SUS304)	VERTICAL
42	–19–250	GASKET	1	E.P.D.M	RIGHT J&C–TYPE
41	–19–249	GASKET	1	E.P.D.M	LEFT J&C–TYPE
40	–23–248	PATCH	2	SPA–H t6.0	
39	·23–247A	T.I.R. PATCH	R/H 1 L/H 1	SPA–H t3.0	
38	·LB–00D	LOCK BOX	1SET		
37	·01–245A	HINGE PIN	8	STAINLESS ø12(SUS304)	
36	–01–244	HINGE BUSH	16	NYLON	
35	–19–243	HINGE WASHER	8	STAINLESS	
34	·01–242A	HINGE LUG	16	SS41 t8.0	ZINC PLATED
33	–01–240	HINGE BLADE	8	S25C	ZINC PLATED
28	·01–235A	RETAINER BARRIER TAPE	4	E.P.D.M. t3.0	
25	–01–232	B.N.W.	42 SET	S45C M10	ZINC PLATED
22	·01–229A	BEARING BRACKET BARRIER TAPE	4	E.P.D.M. t3.0	
14		LOCKING ROD	4	STK41 ø34xt3.0	GALV
11	–23–216	PATCH	8	SPA–H t3.0	
10	–23–219	SQUARE TUBE	4	SPA–H 100x50xt3.2	
9	113N–210	HORIZONTAL MEMBER	4	SPA–H t3.2	
8	113N–208	DOOR PANEL	2	SPA–H t1.6	
7	–23–207	DOOR HEADER GUSSET	4	SPA–H t4.0	
6	·113–206	DOOR HEADER	1	SPA–H t3.0	
5	·113–205	DOOR HEADER	1	SPA–H t4.0	LOWER
4	–19–204	DOOR SILL GUSSET	4	SPA–H t4.0	
3	09DE–203A	DOOR SILL	1	SPA–H t4.5	
2	·37A–202	CORNER POST	2	SM50A t12	INNER
1	·09DE–201	CORNER POST	R/H 1 L/H 1	SPA–H t4.5	OUTER

ITEM NO.	DRAWING NO.	DESCRIPTION	CHINESE	Q'TY	MATERIAL (SIZE)	REMARK

MARK	Q'TY	REV. FILE NO.	SIGNATURE	DATE
DESIGNED			APPROVED	
CHECKED			DATE	

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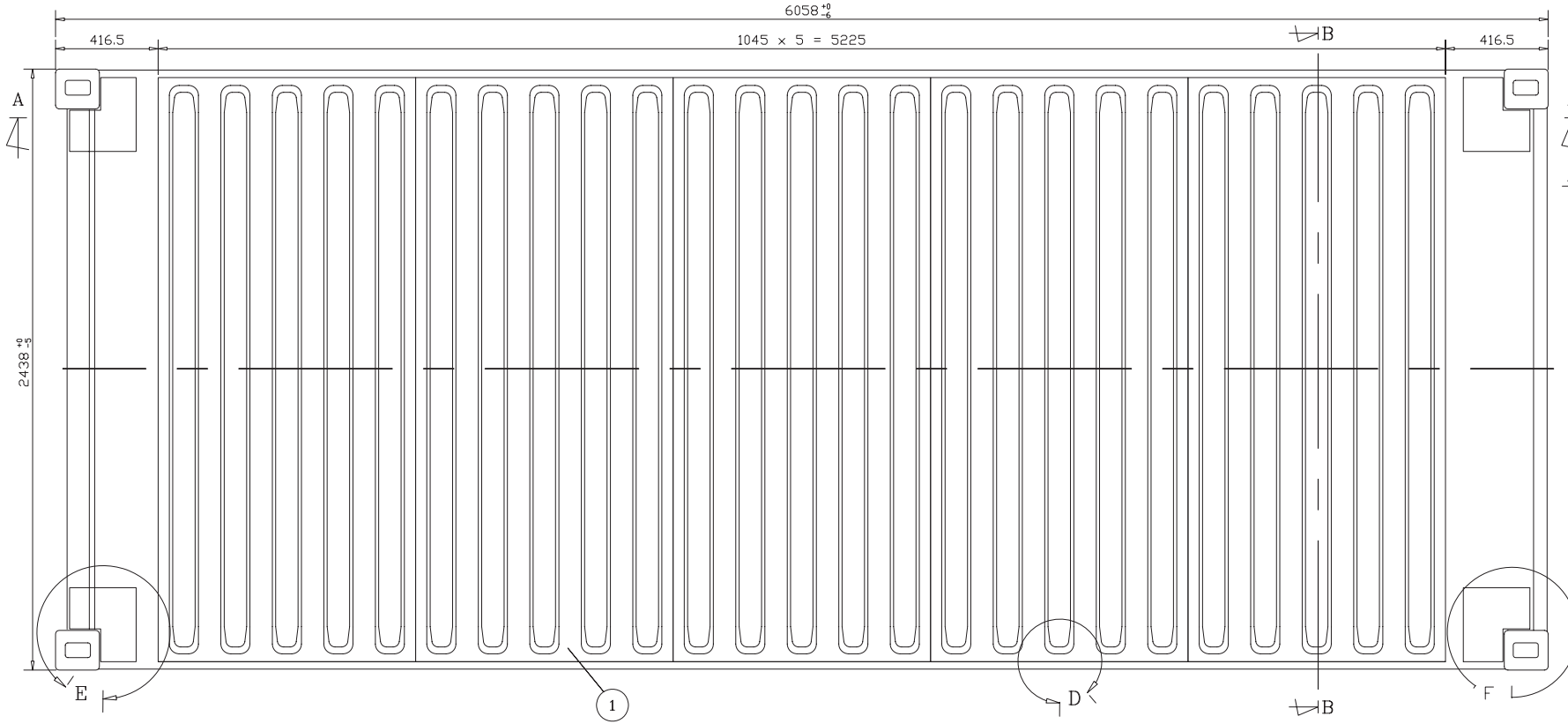
OWNER

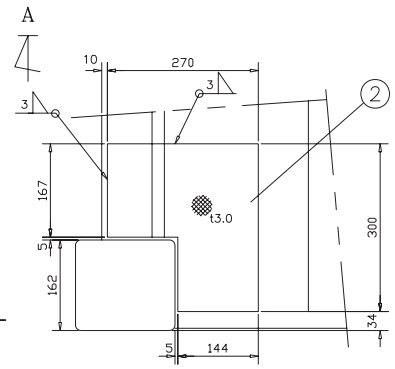
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W'T(KG) SCALE 1:20

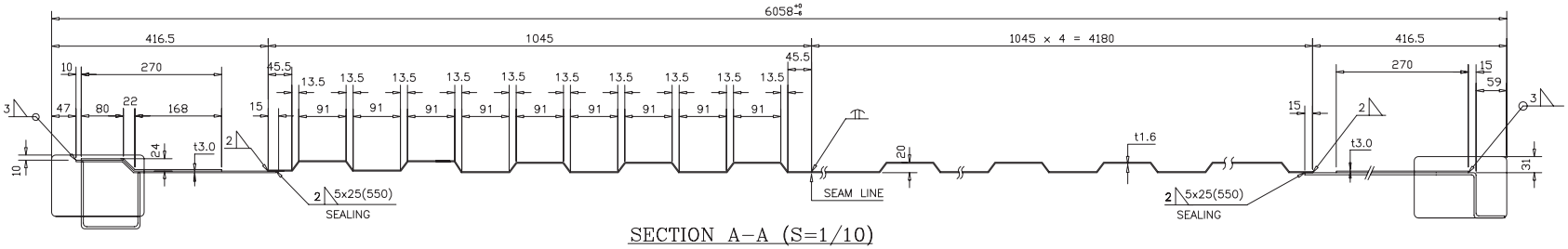
DRAWING NO. A20–09DE–200L

F22

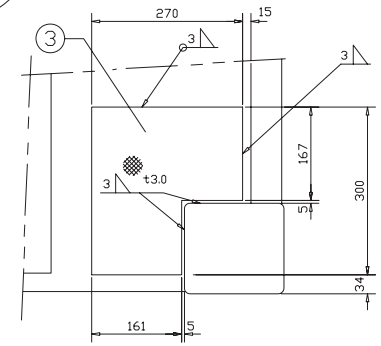




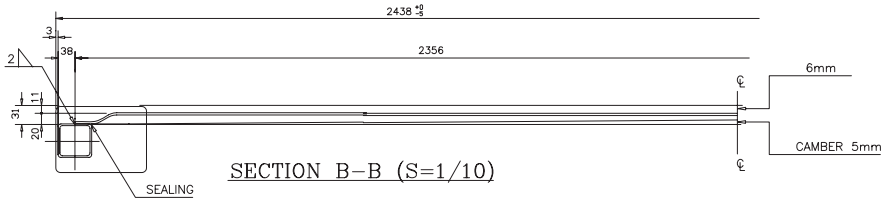
DETAIL OF E (S=1/10)



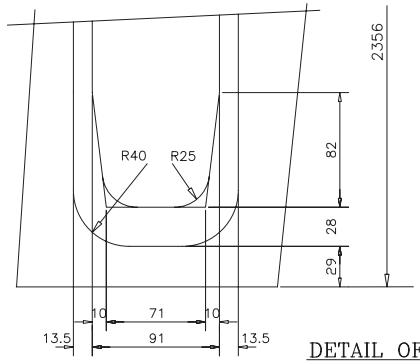
SECTION A-A (S=1/10)



DETAIL OF "F" (S=1/10)



SECTION B-B (S=1/10)



DETAIL OF "D" (S=1/4)

ITEM NO.	DRAWING NO.	DESCRIPTION	CHINESE	Q'TY	MATERIAL (SIZE)	REMARK
3	09DE-305	ROOF GUSSET		2	SPA-H t3.0	FOR FRONT
2	23B-304A	ROOF GUSSET		R/H1 L/H1	SPA-H t3.0	FOR REAR
1	-317-301	ROOF PANEL		5	SPA-H t1.6	

MARK	Q'TY	REV. FILE NO.	SIGNATURE	DATE
DESIGNED		APPROVED		
CHECKED		DATE		

TITLE: ROOF ASSEMBLY

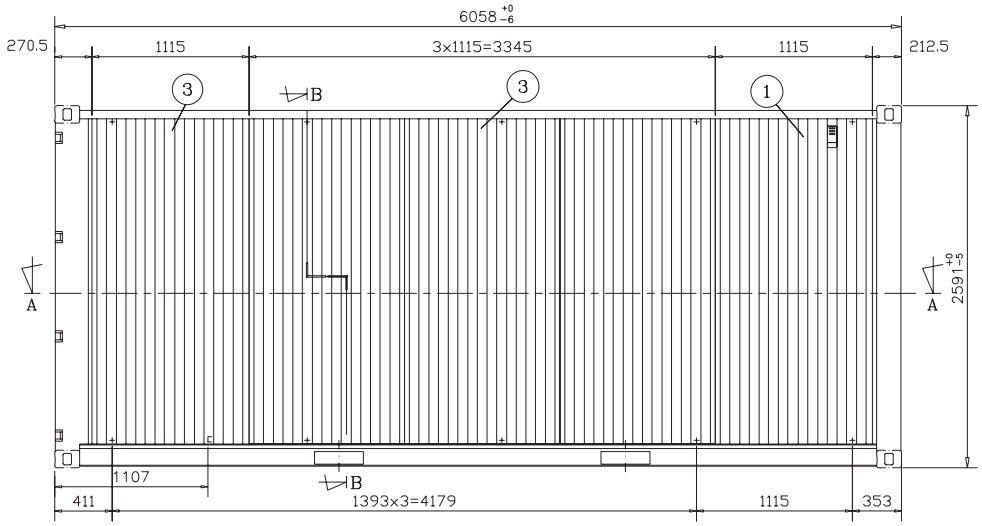
OWNER

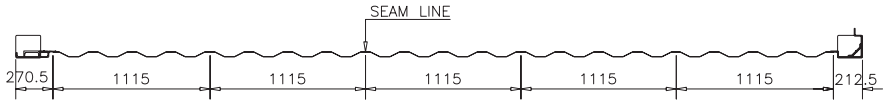
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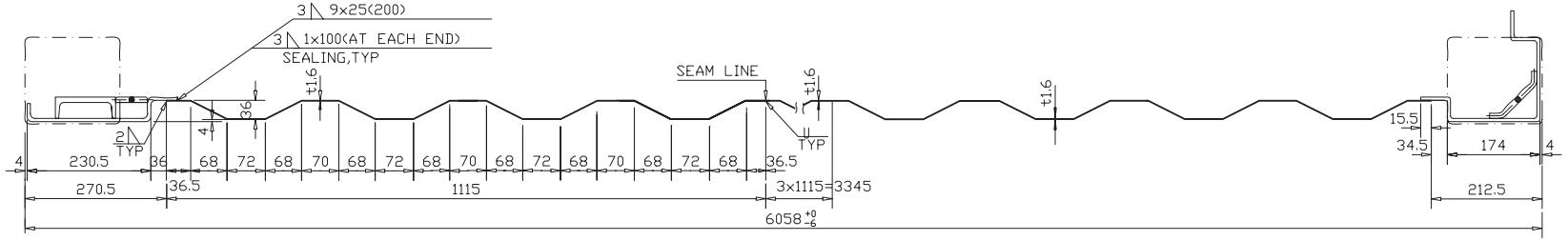
W'T(KG) SCALE 1:20

DRAWING NO. A20-09DE-300

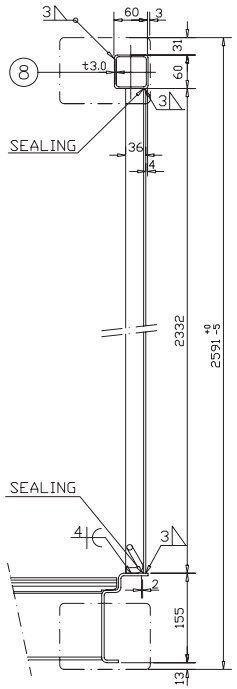
F23



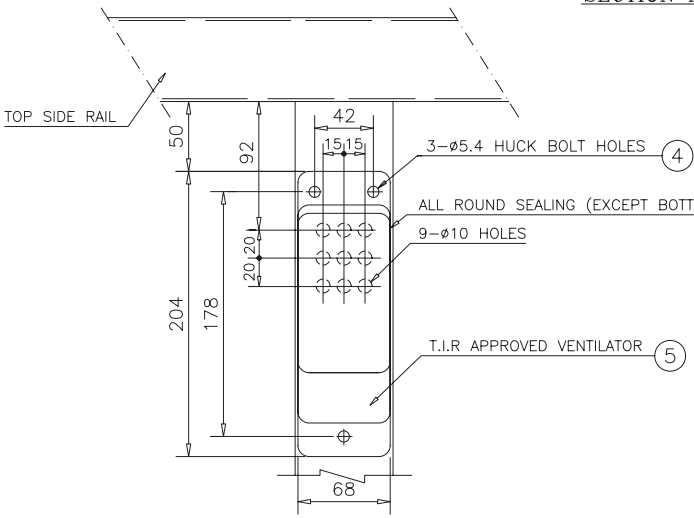




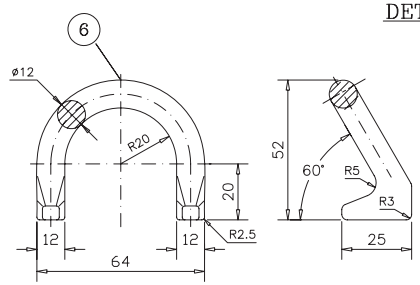
SECTION A–A S=1/10



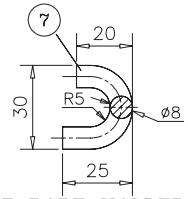
SECTION B–B S=1/10



DETAIL OF VENTILATOR S=1/4



DETAIL OF LASHING RING S=1/2



DETAIL OF ROPE HOLDER S=1/2

ITEM NO.	DRAWING NO.	DESCRIPTION	CHINESE	Q'TY	MATERIAL (SIZE)	REMARK
8	23–409	TOP SIDE RAIL		2	SPA–H 60x60xt3.0	
7	01–408	ROPE HOLDER		2	S20C ø8	ZINC PLATED
6	73–407	LASHING RING		20	S20C ø12	ZINC PLATED
5	01–406	VENTILATOR COVER		2	ABS	
4	23–405	HUCK BOLT		6	STAINLESS STEEL	ø5
3	9DE–403	SIDE PANEL		8	SPA–H t1.6	INNER
1	A20–09DE–401A	SIDE PANEL		2	SPA–H t1.6	OUTER (WITH VENT)

MARK	Q'TY	REV. FILE NO.	SIGNATURE	DATE
DESIGNED		APPROVED		
CHECKED		DATE		

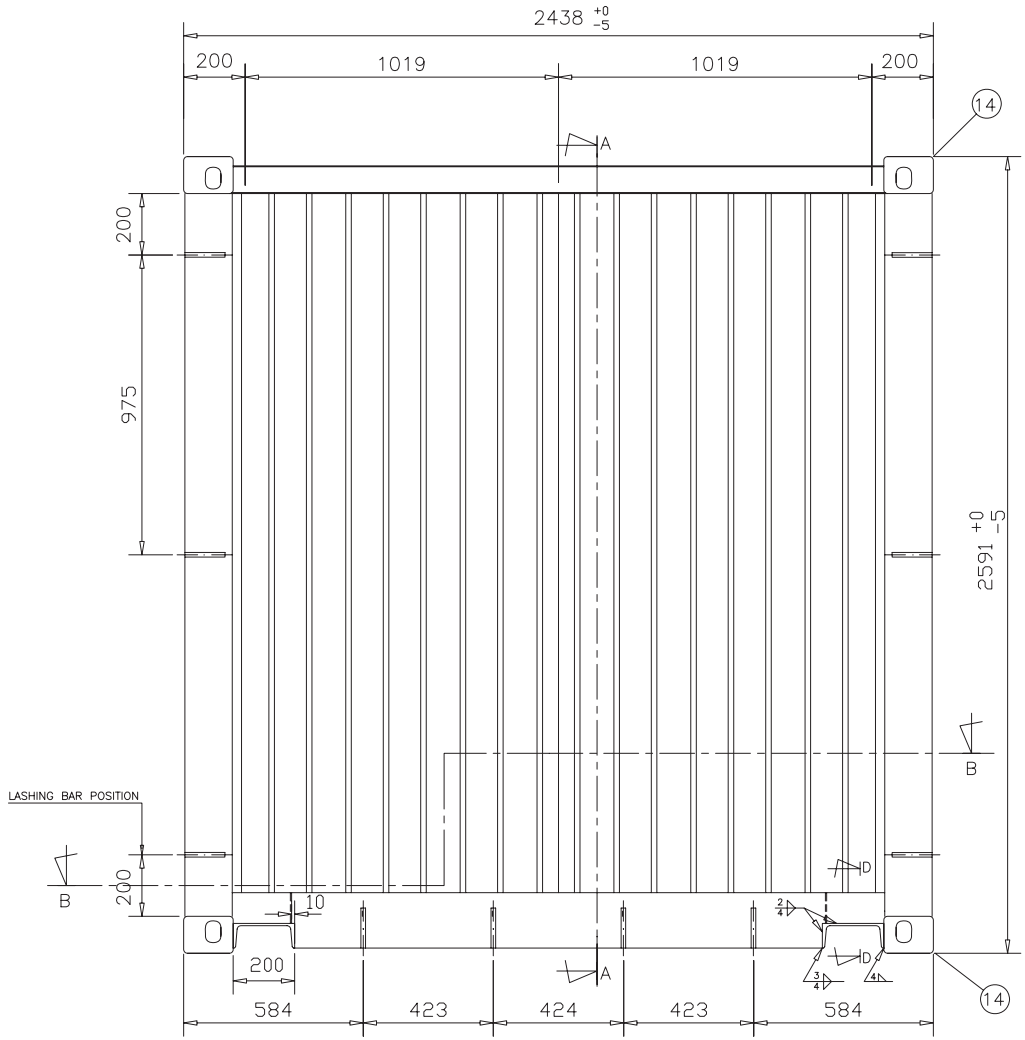
TITLE: SIDE ASSEMBLY

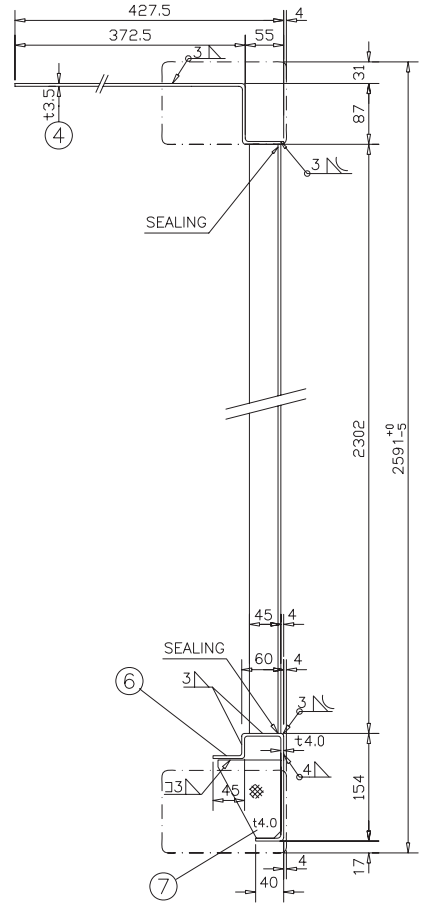
OWNER:

TYPE: ISO–1CC 20'x8'x8'6"

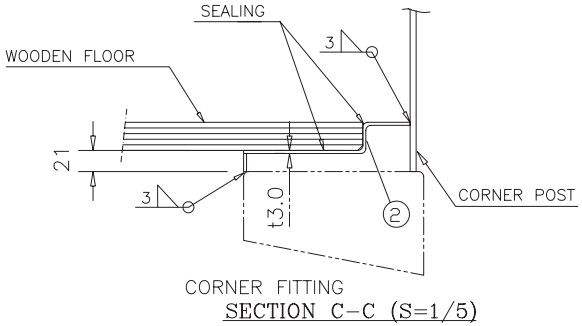
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DRAWING NO. A20–09DE–400D



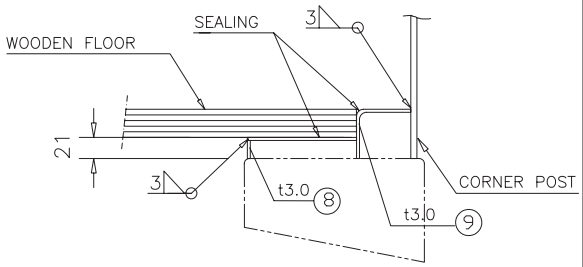


SECTION A–A (S=1/8)



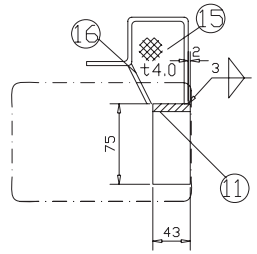
CORNER FITTING

SECTION C–C (S=1/5)

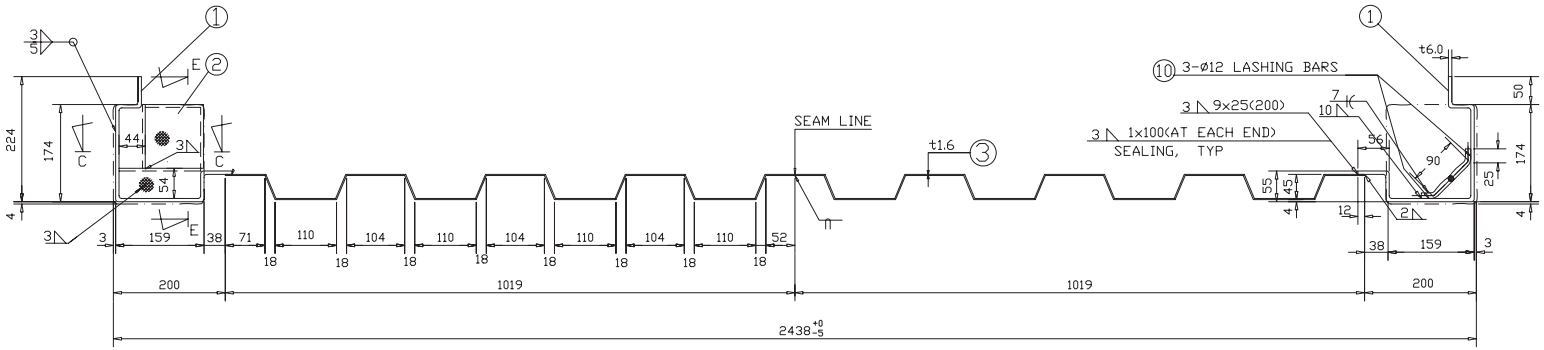


CORNER FITTING

SECTION E–E (S=1/5)



SECTION D–D (S=1/5)



SECTION B–B (S=1/10)

ITEM NO.	DRAWING NO.	DESCRIPTION	CHINESE	Q'TY	MATERIAL (SIZE)	REMARK
16		PATCH		2	SPA-H t4.0/t3.0	
15		GUSSET		2	SPA-H t4.0	
14		CORNER FITTING		4	SCW49	TOP BOTTOM
11		REINFORMENT PLATE		2	SS41 200x75xt9.0	
10		LASHING BAR		6	SS41 ø12	ZINC PLATED
9		BOTTOM CORNER STIFFENER	R/H 1 L/H 1		SPA-H t3.0	SMALL
8		TIR PATCH		2	SPA-H t3.0	
7		BTM END RAIL GUSSET		4	SPA-H t4.0	
6		BOTTOM END RAIL		1	SPA-H t4.0	
4		TOP END RAIL		1	SPA-H t3.5	
3		FRONT PANEL		2	SPA-H t1.6	
2		BOTTOM CORNER STIFFENER	R/H 1 L/H 1		SPA-H t3.0	LARGE
1		FRONT CORNER POST	R/H 1 L/H 1		SPA-H t6.0	

MARK	Q'TY	REV. FILE NO.	SIGNATURE	DATE
DESIGNED			APPROVED	
CHECKED			DATE	

TITLE: FRONT ASSEMBLY

OWNER

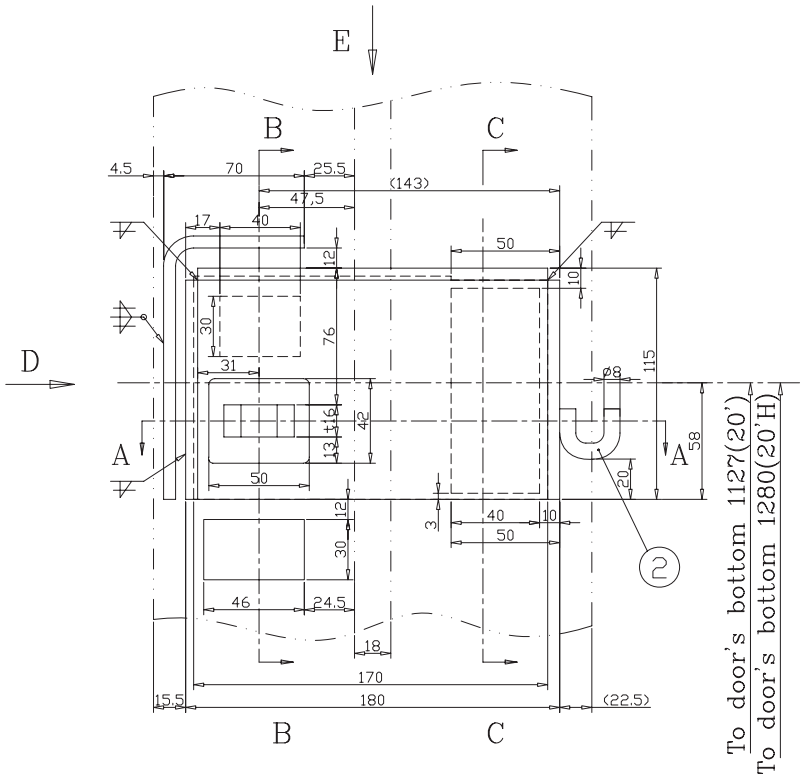
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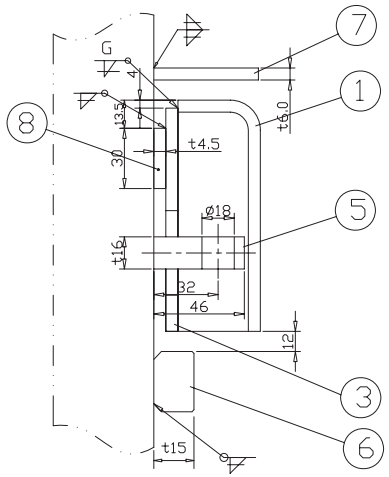
W'T(KG)

SCALE: 1:20

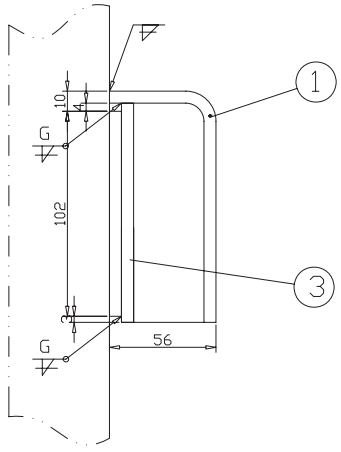
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F25

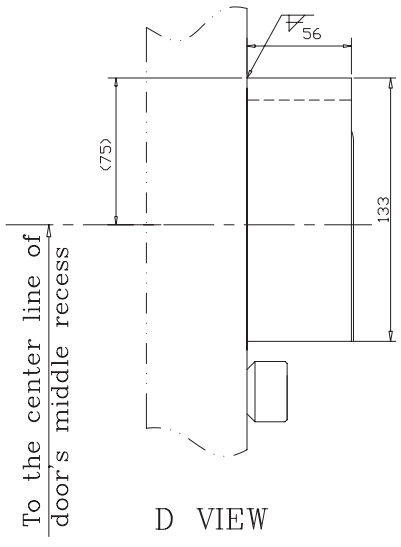




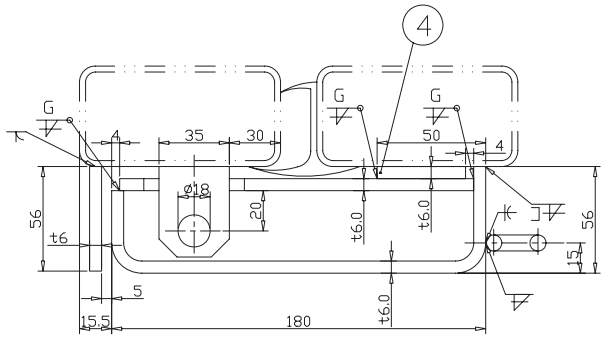
B – B



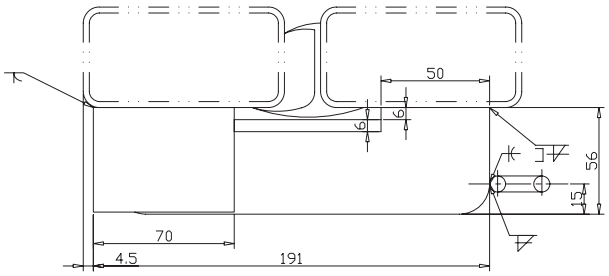
C – C



D VIEW



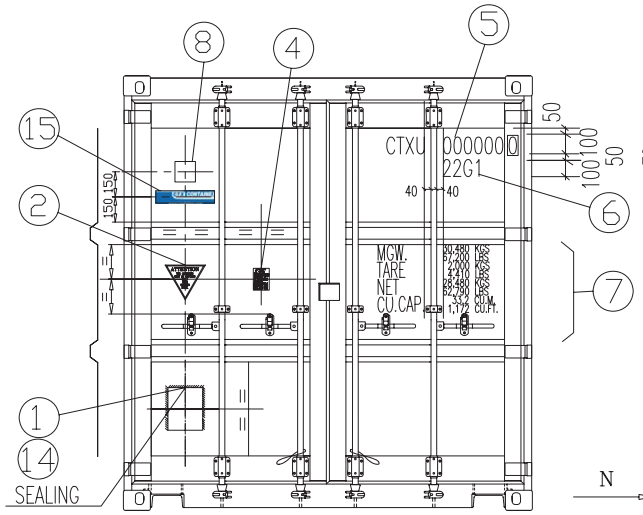
A – A



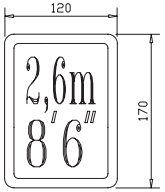
E VIEW

ITEM NO.	DWG. ON	DESCRIPTION		Q'TY	MATERIAL(SIZE)	REMARK
8	-LB-00-08	PATCH 2	垫板 2	1	SPA-H t4.5	
7	-LB-00D-07	PLATE 2	封板 2	1	SPA-H t6.0	
6	-LB-00D-06	PLATE 1	封板 1	1	SS41 t15	外购
5	-LB-00D-05	LOCK HOLE	锁扣	1	SS41 t16	外购
4	-LB-00B-04	PATCH 1	垫板 1	1	SPA-H t6.0	
3	-LB-00B-03	BOTTOM PLATE	锁盒底板	1	SS41 t6.0	外购
2	-LOCK-408	HOLDER	绳钩	1	S20C	外购
1	-LB-00D-01	BOX PLATE	锁盒面盖	1	SPA-H t6.0	

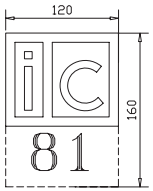
					TITLE: LOCK COVER ASSEMBLY 图 名: 锁盒总图	DRAWING NO. 图 号 LB-00D	DESIGNED	CHECKED	APPROVED	DATE
					MATERIAL 材料:	W'T 重量: KGS	Q'TY 数量:			



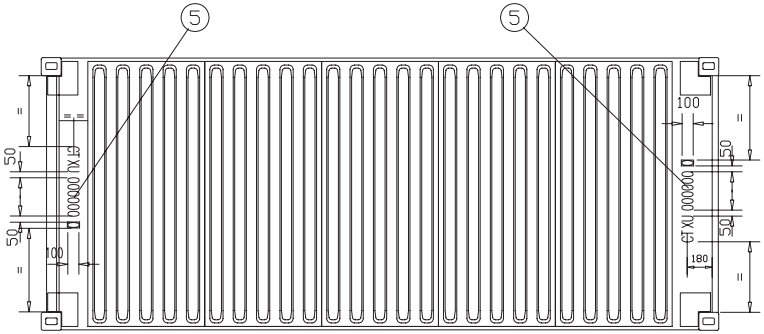
N VIEW

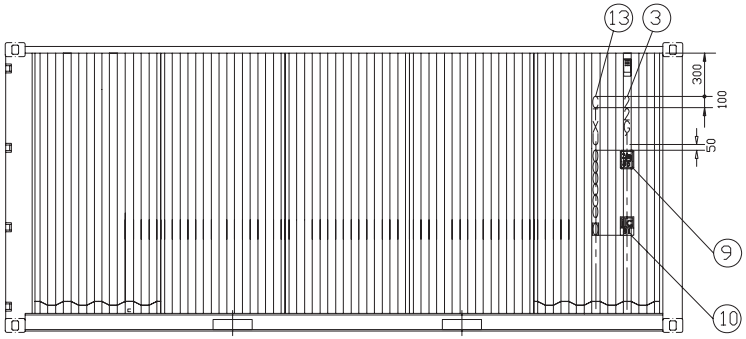


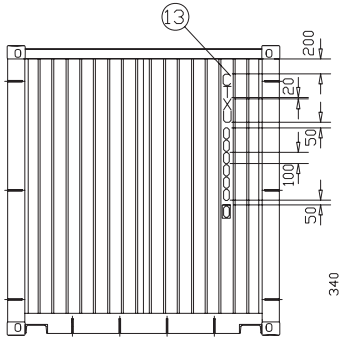
9 DETAIL

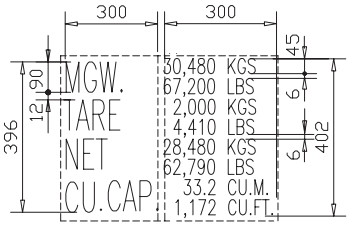


10 DETAIL

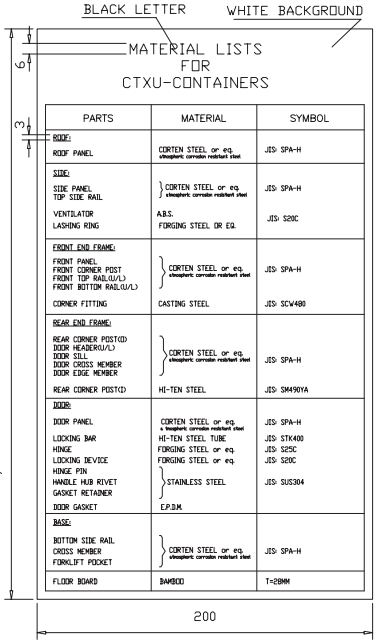




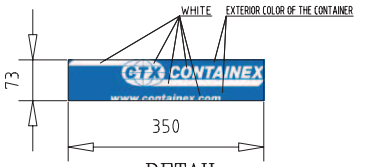




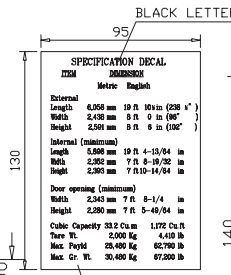
7 DETAIL



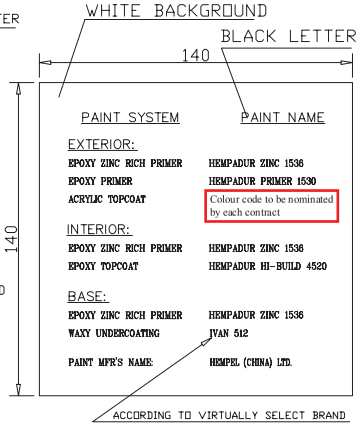
12 DETAIL



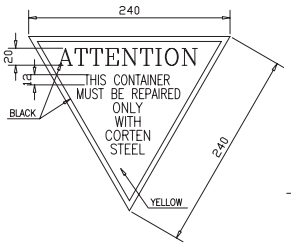
15 DETAIL



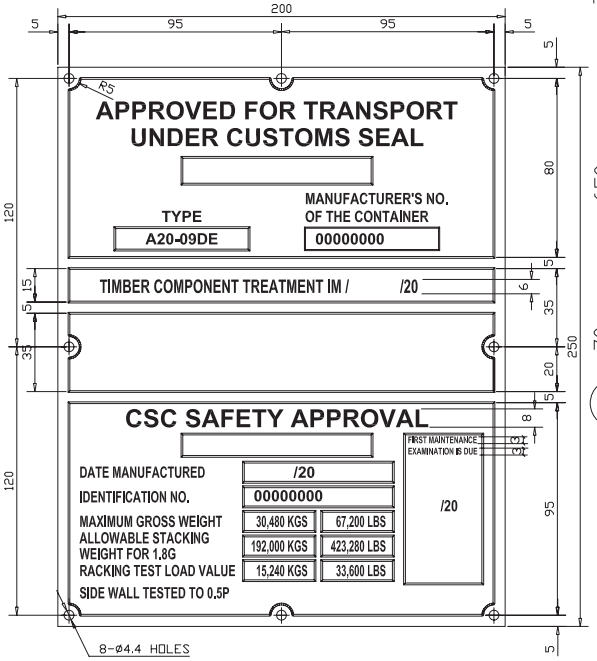
4 DETAIL



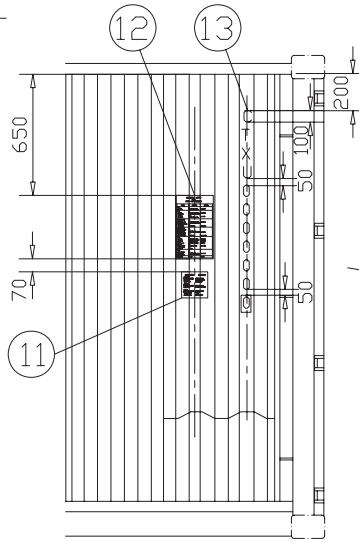
11 DETAIL



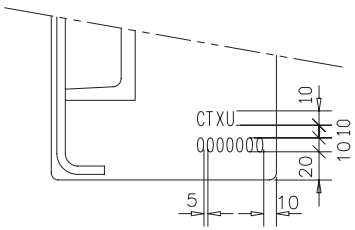
2 DETAIL



1 DETAIL



RIGHT WALL-REAR INSIDE MARKING 右侧壁内部标志



STAMPED OF OWNER'S SERIAL NO. LEFT LOWER TOP CORNER FITTING
箱主号打在左下角件上面

ITEM NO.	DRAWING NO.	DESCRIPTION	CHINESE	Q'TY	MATERIAL (SIZE)	REMARK
15		OWNER'S DOOR LOGO		1	DECAL KISSCUT	
14		RIVET		8	STAINLESS STEEL	ø4x8.2
13		OWNER'S CODE & SERIAL NO.(INSIDE)		4	DECAL KISSCUT	WHITE
12		MATERIAL LIST MARK		1	DECAL	BLACK ON WHITE
11		PAINT LIST MARK		1	DECAL	BLACK ON WHITE
10		UIC MARK		2	DECAL KISSCUT	WHITE
9		HEIGHT MARK		2	DECAL	BLACK ON YELLOW
8		CLASS EMBLEM		1	DECAL	
7		WEIGHT & CAPACITY		1	DECAL KISSCUT	WHITE
6		SIZE & TYPE CODE		1	DECAL KISSCUT	WHITE
5		OWNER'S CODE & SERIAL NO.		3	DECAL KISSCUT	WHITE
4		DIMENSION MARK		1	DECAL	BLACK ON WHITE
3		SIZE & TYPE CODE		2	DECAL KISSCUT	WHITE
2		"CORTEN STEEL" MEBLEM		1	DECAL	BLACK ON YELLOW
1	A20-09DE-711	CONSOLIDATED PLATE		1	SUS304 t0.8	

MARK	Q'TY	REV. FILE NO.	SIGNATURE	DATE
DESIGNED			APPROVED	
CHECKED			DATE	

TITLE: MARKING

OWNER
TYPE ISO-1CC 20'x8'x8'6"
W'T(KG) SCALE 1:50

DRAWING NO. A20-09DE-700-145 (CTXU)

F27