Taylor-Wharton
Since 1742

INSTRUCTIONS MANUAL FOR

LNG ISO CONTAINER

Do not attempt to use or maintain these units until you read and understand these instructions. Refer to the Taylor-Wharton Safety First Booklet (TW-202) for handling cryogenic material. Do not permit untrained persons to use or maintain this equipment. If you do not understand these instructions, contact your supplier for additional information.

Safety Considerations

● Regarding the manual signs

In this User's Manual, in order to use the equipment safely and correctly, and to prevent any damage to the operator or equipment before it occurs, we will call your attention with signs such as are displayed as follows:

DANGER!	This indicates that imminent danger of death or severe injury may result if this sign is ignored and handled incorrectly.
WARNING!	This indicates that danger of death or severe injury is conceivable if this sign is ignored and handled incorrectly.
CAUTION!	This indicates that danger of injury and property damage is possible if this sign is ignored and handled incorrectly.

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1. Summary

This LNG tank container is manufactured for use in trans-shipment as well as land trailer and train transportation as a 40 ft tank container; the ISO 40ft dimension tank container frame loads a cryogenic container as well as pertaining valves and measuring instruments, and shall be used for container transport of liquefied natural gas.

The cryogenic container consists of a stainless steel inner vessel and carbon steel outer vessel, and the insulation layer consists of vacuum composite insulation, so that natural evaporation of the liquefied natural gas is kept to an absolute minimum and able to provide safe transportation. Also, the necessary valves and measuring instruments for the operation are compactly installed inside the rear operating cabinet.

In times of unloading etc., the pressurizing evaporator will use the local ground facilities, and a pressure build coil is not installed.

Each instrument of this LNG tank container is manufactured according to UN Portable Tank T75, and specifications are respectively regulated by those related laws and rules, making operational safety etc. a requirement. When using these facilities, please fully understand the function of the apparatus for correct operations, in order to safely and efficiently use the stored gas.

Section 2 : Safety Directions

2.1 Precautions for Ensuring Safety

WARNING!	If work is carried out without reading and understanding the safety information in this chapter, there is the risk of casualties.
WARNING!	The operator should always read this Manual, understand the contents, and then go about the work.
WARNING!	Please understand the physical properties of gas before using these facilities.

2.2 Protective Gear

Personal Protective Equipment

- Leather gloves
- Safety shoes

※ Anti-static clothes and safety shoes should be worn.

2.3 Warning regarding Accidents

This chapter pertains to anticipated accidents regarding usage of the LNG tank container. To prevent any injury or death incidents, please always obey warnings. Please do not use the facilities before understanding the following warnings.

2.3.1 Liquefied Natural Gas Accident Handling

WARNING!	Natural gas is a flammable gas, so there is the danger of ignition if fire or combustibles are brought in close proximity. An outbreak of fire may result in fatalities, so please fully understand the properties of the gas, and handle it with care. Immediately after handling natural gas, gas may have permeated clothes etc., so please do not smoke right away.

2.3.2 Measures if there is Leakage

WARNING!

If there is a leak, discontinue the gas supply, and remove any possible ignition sources in the vicinity. Additionally, shut off the leakage spot, and conduct ventilation, diffusion, etc.

2.3.3 Destruction by Pressure Accident

WARNING!

Please do not seal the vessel (including the pipings) containing liquefied gas. If left in a sealed state, gas vaporization may result in pressure rise, and injury and fatality accidents and equipment breakdown may occur. Please manage maintenance of the safety equipment (safety valve, etc.) of the vessel itself, so that malfunction resulting from freezing, rust, etc. does not occur.
Additionally, please do not close the safety equipment master valve under any circumstances. If you close the master valve, it results in sealed conditions, and rupture accidents and injury and fatality accidents may occur. Please open and close gently when handling valves.

2.3.4 Caution for Low Temperatures

WARNING!

The apparatus cooled by the liquefied gas is in cryogenic condition. Please wear a pair of clean leather gloves when handling it. If touched with bare hands, users may develop low temperature burn or frostbite. Also, please do not apply physical impact to the cooled apparatus. It is in a more breakable condition compared to normal temperature, and therefore there is the risk of rupture accidents.
Additionally, please avoid rapid temperature rises because of the danger of explosion.

Section 3: Apparatus Specification

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3.1 ISO Tank Container Specification

ISO Tank Container Principal Dimensions

Maximum Length	Approx. 12,192 mm
Maximum Width	Approx. 2,438 mm
Maximum Height	Approx. 2,591 mm
Maximum Loading Volume	Approx. 39,100 L
Calculated Inner Volume	Approx. 43,445 L
Tank Container Weight	Approx. 12,494 kg
Maximum Loading Capacity	Approx. 17,986 kg (Charging Coefficient C=2.364)
Tank Container Gross Weight	Approx. 30,480 kg

3.2 Vessel Specification

Loading Liquefied Gas	Liquefied Natural Gas
Vessel Category	Cryogenic Tank
Vessel Type	Horizontal Cylindrical
Insulation Type	Vacuum Composite Insulation
Design Temperature	-196 ℃
Natural Evaporation Loss	Less than 1.0 %/Day

3.2.1 Inner Vessel Specification

Inner Diameter x Total Inner Length	2,206mm x 11,756 mm
Material	SUS 304 (Shell thickness: 5.0 mm, Head thickness: 6.5 mm)
Maximum Filling Pressure	0.690 MPa (Marine Vessel Safety Act & IMDG)
Design Pressure	0.801 MPa
Pressure of Pressure Testing	1.027 MPa (Marine Vessel Safety Act & IMDG)
Pressure of Airtight Testing	0.621 MPa (Marine Vessel Safety Act & IMDG)
Primary / Secondary Safety Valve Setting Pressure	0.690 / 0.482 MPa
Maximum Loading Capacity	17,986 kg
Calculated Inner Volume	43,445 L

3.2.2 Outer Vessel Specification

Inner Diameter X Total Outer Length	2,418mm X 12,094 mm
Material	S275JR (Shell thickness: 4.8 mm) S275JR (Front head thickness: 5.4 mm) S275JR (Rear head thickness: 5.4 mm)

3.3.3 Applicable Law and Standard

American Society of Mechanical Engineering (ASME) Sec VIII div. 1
International Maritime Dangerous Goods Code (IMDG)
Canadian Standard Association (CSA) B-625

3.4 Valve/Safety Valve/Measuring Instruments, the list of accessories and functionality

3.4.1 Inside of Rear Operational Cabinet

a. Vessel Main Body

1)	PC	Name	Vacuum Gauge Valve
		Type	Vacuum Terminal Connection Mouth (PF3/8)
		Material	SUS304
		Manufacturer	Air Water Plant & Engineering Inc.
		Article	Used when measuring the vacuum level in the vacuum layer of the vessel.
2)	BD	Name	Vacuum Jacket Relief Device
		Type	Double use as the Vacuum Exhaust Port
		Material	SUS304
		Manufacturer	Air Water Plant & Engineering Inc.
		Article	Prevents a rise in pressure in the vacuum layer resulting from a leak in the inner vessel, and useable as an exhaust port at the time of vacuum removal.

b. External Pipes

1) Filling Port 1 (CGA)	Nominal Diameter	3”
	Material	SUS304
	Article	Connection port for the liquefied gas to receive and discharge the vessel.
2) Gas Recovery Port 2 (CGA)	Nominal Diameter	3”
	Material	SUS304
	Article	Connection port for the gas to receive and recover from the vessel.

3) EV2	Name	Emergency Shut-off Valve
	Type	Extended Bonnet Emergency Globe Valve
	Nominal Diameter	50A
	Material	DIN EN 1.4308 (SCS13)
	Manufacturer	Herose GMBH
	Article	Remote control shutdown of liquefied gas from receiving and discharging in case of an emergency.
4) V1	Name	Top Fill Valve
	Type	Extended Bonnet Globe Valve
	Nominal Diameter	50A
	Material	DIN EN 1.4308 (SCS13)
	Manufacturer	Herose GMBH
	Article	Used to fill the liquefied gas from the upper region of the vessel (gaseous region).
5) V2	Name	Bottom Fill Valve
	Type	Extended Bonnet Globe Valve
	Nominal Diameter	50A
	Material	DIN EN 1.4308 (SCS13)
	Manufacturer	Herose GMBH
	Article	Used to fill/remove liquefied gas from the lower region of the vessel.
6) V3	Name	Gas Recovery Globe Valve
	Type	Extended Bonnet Valve
	Nominal Diameter	50A
	Material	DIN EN 1.4308 (SCS13)
	Manufacturer	Herose GMBH
	Article	Used to fill/recover the gas to/from the vessel.
7) V4	Name	Gas Drain Valve
	Type	Extended Bonnet Globe Valve
	Nominal Diameter	25A
	Material	DIN EN 1.4308 (SCS13)
	Manufacturer	Herose GMBH
	Article	Used to purge gas from inside the vessel.
8) V5	Name	Drain Valve
	Type	Extended Bonnet Globe Valve
	Nominal Diameter	10A
	Material	DIN EN 1.4308 (SCS13)
	Manufacturer	Herose GMBH
	Article	Used to purge liquefied gas and gas from the pipes to the air.

9) V6	Name	Full Trycock Valve
	Type	Extended Bonnet Globe Valve
	Nominal Diameter	15A
	Material	DIN EN 1.4308 (SCS13)
	Manufacturer	Herose GMBH
	Article	Used to confirm that the vessel is 90% filled with liquefied gas. This prevents overfilling.
10) V7, V8	Name	Drain Valve
	Type	Short Bonnet Globe Valve
	Nominal Diameter	10A
	Material	DIN EN 1.4308 (SCS13)
	Manufacturer	Herose GMBH
	Article	Used to purge liquefied gas and gas from the pipes to the air.
11) V9	Name	Pressurizer Valve (Entrance)
	Type	Extended Bonnet Globe Valve
	Nominal Diameter	25A
	Material	DIN EN 1.4308 (SCS13)
	Manufacturer	Herose GMBH
	Article	Used to send liquid to the pressure Building Vapouriser
12) V14	Name	Pressurizer Bypass Valve
	Type	Extended Bonnet Globe Valve
	Nominal Diameter	15A
	Material	DIN EN 1.4308 (SCS13)
	Manufacturer	Herose GMBH
	Article	Used to connect the Gas Recovery Port Line and the Pressure Building Vapouriser. (※Normally Open)
13) V15	Name	Level Gauge Drain Valve (GAS)
	Type	Extended Bonnet Globe Valve
	Nominal Diameter	10A
	Material	DIN EN 1.4308 (SCS13)
	Manufacturer	Herose GMBH
	Article	Used to drain the impurity which accumulates in the pipes of the LP Gauge and purge gas.
14) V16	Name	Level Gauge Drain Valve (LIQUID)
	Type	Extended Bonnet Globe Valve
	Nominal Diameter	10A
	Material	DIN EN 1.4308 (SCS13)
	Manufacturer	Herose GMBH
	Article	Used to drain the impurity which accumulates in the pipes of the HP Gauge and purge gas.

15) V26	Name	Pressurizer Valve (Outlet)
	Type	Extended Bonnet Globe Valve
	Nominal Diameter	50A
	Material	DIN EN 1.4308 (SCS13)
	Manufacturer	Herose GMBH
	Article	Used to receive return gas from the pressurizer.
16) V27	Name	Secondary Safety Valve Manual Valve
	Type	Short Bonnet Globe Valve
	Nominal Diameter	25A
	Material	DIN EN 1.4308 (SCS13)
	Manufacturer	Herose GMBH
	Article	This is the Master Valve of Changeover Valve, VSV2. (※Normally Open)
17) V28	Name	Drain Cock
	Type	Ball Valve
	Nominal Diameter	1/2”
	Material	DIN EN 1.4409 (Stainless Steel)
	Manufacturer	Meca-Inox
	Article	Used to drain the impurity and water which accumulates in the discharge pipes.
18) VSV1	Name	Changeover Valve (Primary)
	Type	Ball Valve (3-way)
	Nominal Diameter	1-1/2”
	Material	DIN EN CC491K (Bronze)
	Manufacturer	Herose GMBH
	Article	This is the Master Valve of the Primary Safety Valve SV1 and SV2. (※Normally Open)
19) VSV2	Name	Changeover Valve (Secondary)
	Type	Ball Valve (3-way)
	Nominal Diameter	1”
	Material	DIN EN 1.4308 (SCS13)
	Manufacturer	Herose GMBH
	Article	This is the Master Valve of the Secondary Safety Valve SV3 and SV4. (※Normally Open)
20) VN1	Name	Level Gauge Valve
	Type	3-Valve Manifold
	Nominal Diameter	½”
	Material	SUS316
	Manufacturer	Wika
	Article	Used as the Master Valve for the Level Gauge

21) SV1, SV2	Name	Primary Safety Valve
	Type	Angle type Safety Valve
	Nominal Diameter	1” x 1-1/2”
	Setting Pressure	690 kPa
	Material	DIN EN 1.4308 (SCS13)
	Manufacturer	Herose GMBH
	Article	Protects the Inner Vessel during times of abnormal pressure rise.
22) SV3, SV4	Name	Secondary Safety Valve
	Type	Angle type Safety Valve
	Nominal Diameter	3/4” x 1”
	Setting Pressure	482 kPa
	Material	DIN EN 1.4308 (SCS13)
	Manufacturer	Herose GMBH
	Article	Protects the Inner Vessel during times of abnormal pressure rise.
23) SV5, SV7	Name	Plumbing Safety Valve
	Type	Angle type Safety Valve
	Nominal Diameter	3/8”
	Setting Pressure	1103 kPa
	Material	DIN EN 1.4308 (SCS13)
	Manufacturer	Herose GMBH
	Article	Prevents the liquid from sealing in the filling line and protects the pipes.
24) L1	Name	Liquid Level Indicator
	Type	732.14-F-HSG330#-5Q-UZZZSZZ-ZZZZ
	Nominal Diameter	1/2” NPT x Φ160
	Range	0~1500 mmHG
	Material	Principal Part SUS316L
	Manufacturer	WIKA
	Article	Indicates the liquefied gas amount stored inside the vessel.
25) P1	Name	Pressure Gauge
	Type	Bourdon Tube
	Nominal Diameter	½” NPT x Φ100
	Range	0~1.75 MPa
	Material	Principal Part SUS316 L
	Manufacturer	WIKA
	Article	Indicates the gaseous region pressure level in the Inner Vessel.

26) DS	Name	Drain Separator
	Type	DS
	Material	SUS304/SUS304TP-S
	Manufacturer	Taylor-Wharton Malaysia Sdn. Bhd.
	Article	Stores the drain in the upper pipes of the Level Gauge.
27) P.B.C. 1	Name	Pressure Building Vapouriser
	Type	PAS 2814 SS L20
	Nominal Diameter	1-½" x 2"
	Range	0 ~ 0.69 MPa
	Material	Tubing, ASTM-A790 with Aluminium fins
	Manufacturer	Cryoquip
	Article	To build up inner vessel pressure
28) CV1	Name	Check Valve
	Type	Lift type
	Nominal Diameter	15A
	Material	DIN EN 1.4308 (SCS13)
	Manufacturer	Herose GMBH
	Article	To prevent back pressure along pressurizer by pass line
29) FA	Name	Flame Arrestor
	Type	Flame Arrestor
	Nominal Diameter	40A
	Material	SUS316
	Manufacturer	Elmac Technologies Ltd.
	Article	Prevents flashback at the time of outgassing.

3.4.2 Air Instrumentation Pipe Arrangement

1) AP1	Name	Air Supply Pressure Gauge
	Type	Bourdon Tube
	Nominal Diameter	G1/2 X Φ 100
	Range	0~1.37 MPa
	Material	Principal Part SUS316L
	Manufacturer	WIKA
	Article	Indicates the air pressure level for the Emergency Shut-off Valve Control.

2) AV1	Name	Air Supply Valve 1
	Type	SS-45XS8
	Nominal Diameter	1/2”
	Material	Stainless Steel
	Manufacturer	Swagelok.
	Article	Used for the switching operation of the Emergency Shut-off Valve **at the side operation room** in an emergency.
3) AV3, AV4	Name	Air Supply Valve 2
	Type	SS-45XS8
	Nominal Diameter	1/2"
	Material	Stainless Steel
	Manufacturer	Swagelok
	Article	Used for the switching operation of the Emergency Shut-off Valve **on the left/ right front of the vessel** in an emergency.
4) FCV1	Name	Fire Check Shut Off valve
	Type	FC4
	Nominal Diameter	1/4"
	Material	SUS304
	Manufacturer	Ara Pneumatik
	Article	To vent air supply in the event of fire.
5) ASR	Name	Air Supply Regulator
	Type	J-251-V-B
	Nominal Diameter	1/4"
	Material	CDA 360 BRASS
	Manufacturer	Generant
	Article	To regulate air supply to operate EV2
6) CP	Name	Air Supply Connection
	Type	40SF
	Nominal Diameter	1/2"
	Material	SUS304
	Manufacturer	Nitto Kohki Co. Ltd.
	Article	Air Connection Port to the Container Trailer.

Section 4: Loading and Unloading LNG

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4.1 Replacement (Purging)

When loading LNG into the vessel for the first time, it is necessary to first fully replace the air with nitrogen gas.

1) Confirm that VSV1, VSV2, and VN1 are set to “Open”, and that all the other valves are set to “Close”.
2) Detach the Stoppage Plate from the Filling Port, and flange connect the Nitrogen Gas Feeder Line. Set the Nitrogen Gas Feeder Valve to “Open”.
3) Set EV2, V1, and V2 to “Open”, and slowly introduce the 0.39 MPa nitrogen pressure to the vessel. Please work while monitoring the Inner Vessel Pressure Gauge, P1.
4) Set the base station side Nitrogen Gas Feeder Valve to “Close”.
5) Set all the valves to “Open”, and emit nitrogen from each line until the internal pressure of the vessel becomes 0.05 MPa.
6) Set all the valves to “Close” except VSV1, VSV2, and VN1.
7) Detach the Nitrogen Gas Feeder Pipe from the Filling Port, attach the Stoppage Plate, and the replacement work is complete.

※ If there is an established procedure etc., for the respective base station side, follow that process.

4.2 Cooling down

When loading LNG into the vessel for the first time, it is necessary to have a cool-down. The operation is done by LNG.

1) Confirm that VSV1, VSV2, and VN1 are set to “Open”, and that all the other valves are set to “Close”.
2) Detach the Stoppage Plate from the Filling Port and the Gas Recovery Port, and connect the Loading Arm on the base station side.
3) Replace the Loading Arm inside with nitrogen gas.
4) Set the Supply Valve on the base station side to “Open”.
5) Set V3 to “Open”, and if there is nitrogen gas sealed inside the vessel, discharge it.
6) Set EV2 and V2 to “Open”, and introduce LNG into the vessel. During work, constantly monitor Inner Vessel Pressure Gauge, P1 and Liquid Level Indicator, L1 while pouring the liquid. If the

internal pressure of the vessel rises, set V1 to “Open” as deemed appropriate, and fill the upper region of the vessel and lower the pressure.

7) LNG starts to accumulate in the tank inner vessel after continuing for 20 to 30 minutes. When the fill volume reaches approximately 6000 L, set V2 and the Supply Valve of the base station side to “Close”, and discharge the residual liquid inside the Loading Arm to the stack on the base station side.
8) Keep V3 set to “Open”.
9) Detach the Loading Arm from the Filling Port, and attach the Stoppage Plate.
10) When the volume of gas emitted from the Gas Recovery Port diminishes, the cool-down work is complete.
11) Set V3 to “Close”.
12) Detach the Loading Arm from the Gas Recovery Port, and attach the Stoppage Plate.

※ If there is an established procedure etc., for the respective base station side, follow that process.

4.3 Loading Operation

1) Confirm that VSV1, VSV2, and VN1 are set to “Open”, and that all the other valves are set to “Close”.
2) Detach the Stoppage Plate from the Filling Port and the Gas Recovery Port, and connect the Loading Arm on the base station side.
3) Replace the Loading Arm inside with nitrogen gas.
4) Set the Supply Valve on the base station side to “Open”.
5) Set EV2, V2, and V3 to “Open”, and fill LNG into the vessel. During work, constantly monitor Inner Vessel Pressure Gauge, P1 and Liquid Level Indicator, L1 while filling. If the internal pressure of the vessel rises, set V1 to “Open” as deemed appropriate, and fill the upper region of the vessel and lower the pressure.
6) When LNG becomes close to 90% of the internal volume of the vessel, please carefully “Switch” V7 as deemed appropriate, so that it does not become filled more than 90%.
7) When the vessel is 90% filled, set V1, V2, V3, and the Liquid Transfer Valve on the base station side to “Close”, and discharge the residual liquid from the Loading Arm to the stack on the base station side.
8) Set EV2 to “Close”.
9) Detach the Loading Arm from the Filling Port and the Gas Recovery Port, and attach the Stoppage Plate.
10) Check the Inner Vessel Pressure Gauge, P1 and the Liquid Level Gauge, L1.
11) Set all the valves except VSV1, VSV2, and VN1, to “Close” to finish the loading operation.
12) The loading operation is complete.

※ If there is an established procedure etc., for the respective base station side, follow that process.

4.4 Unloading Operation

4.4.1 When unloading using the receiving Base Station pump

1) Set VSV1, VSV2, and VN1 to “Open”, and confirm that all the other valves are set to “Close”.
2) Detach the Stoppage Plates from the Filling Port and the Gas Recovery Port, and connect the Joint for Pump of the receiving base station via the Charge Hose, etc.
3) Replace the Charge Hose inside with nitrogen gas.
4) Set EV2, V2, and V3 to “Open”, and start cool-down of the receiving pump.
5) After cool-down of the receiving pump is complete, activate the pump. LNG is unloaded through EV2 and V2. During work, constantly monitor Inner Vessel Pressure Gauge, P1 and Liquid Level Gauge, L1 during the unloading operation.
6) If the discharge pressure of the pump drops drastically, please stop the operation.
7) Set EV2, V2, V3, and the Liquid Transfer Valve to “Close”, and discharge the residual liquid inside the Charge Hose into the stack in the base station side.
8) Set V5 to “Open”, and blow the residual liquid in between EV2 and V2.
9) Set V5 promptly to “Close” after finishing the blow.
10) Detach the Charge Hose from the Filling Port and the Gas Recovery Port, and attach the Stoppage Plate.
11) The unloading operation is complete.

※ If there is an established procedure etc., for the respective base station side, follow that process.

4.4.2 When unloading using the receiving Base Station Pressurizing Vaporizer

1) Set VSV1, VSV2, and VN1 to “Open”, and confirm that all the other valves are set to “Close”.
2) Detach the Stoppage Plates from the Filling Port, the Gas Recovery Port and the Pressurization Liquid Outlet Port, and connect to the Charge Hose of the receiving base station side.
3) Replace the Charge Hose inside with nitrogen gas.
4) Set V3, and V9 to “Open”.
5) If the internal pressure of the vessel rises due to pressurizing operation from the base station side, set EV2 and V2 to “Open” and start unloading. During work, constantly monitor Inner Vessel Pressure Gauge, P1 and Liquid Level Gauge, L1 during the unloading operation.
6) When there is no residual LNG left, set EV2, V2, V3, and V9 to “Close”, and discharge the residual liquid inside the Charge Hose into the stack in the base station side.
7) Set V5 to “Open”, and blow the residual liquid in between EV2 and V2.
8) Set V5 promptly to “Close” after finishing the blow.
9) Detach the Charge Hose from the Filling Port, the Gas Recovery Port, and the Pressurization Liquid Outlet Port, and attach the Stoppage Plate.
10) The unloading operation is complete.

※ If there is an established procedure etc., for the respective base station side, follow that process.

Section 5: Valve Operation Chart

Section 5: Valve Operation Chart

TAG No.	Valve Name	Receiving	Discharging	Shipboard/Running
EV2	Emergency Shut-off Valve	O	O	X
V1	Top Fill Valve	Δ	X	X
V2	Bottom Fill Valve	O	O	X
V3	Gas Recovery Valve	O	O	X
V4	Gas Drain Valve	X	X	X
V5	Drain Valve	X	X	X
V6	Full Trycock Valve	Δ	X	X
V7	Drain Valve	X	X	X
V8	Drain Valve	X	X	X
V9	Pressurizer Valve (Entrance)	X	O	X
V14	Pressurizer Bypass Valve	X	Δ	X
V15	Liquid Level Gauge Drain Valve (Gas)	X	X	X
V16	Liquid Level Gauge Drain Valve (Liquid)	X	X	X
V26	Pressurizer Outlet valve	X	O	X
V27	Secondary Safety Valve Manual Valve	Δ	X	X
V28	Drain Cock	X	X	X
VSV1	Changeover Valve	O	O	O
VSV2	Changeover Valve	O	O	O
VN1	Level Gauge Valve	O	O	O

Sign O : Valve Open

X : Valve Close

Δ : Switching, Valve Setting

Section 6: Caution Regarding Unloading LNG Tank Container

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In transhipping a tank container to a ship, trailer, or train, please do work with extreme care, after sufficiently understanding the cautionary notes below. If handled incorrectly, it is possible to cause tank container frame deformation, or physical loss or damage to the trailer chassis, etc.

6.1 There are 4 corner fittings on both the upper and lower corners of this container for transhipping. When transhipping to a trailer chassis, a ship, or a train, use the upper 4 corner fittings to transfer by hoisting vertically, and lowering vertically. When transhipping the tank from a ship etc., generally a gantry crane is used, and transhipit to a trailer chassis. The twist lock serves as a junction in the trailer chassis. After loading the tank container, please check that the twist lock is fixed securely, so that it will not come off during transportation. The fixation of the tank container to the ship is the responsibility of the ship side.

1) Caution for temporarily placing a tank container

When you transhipa tank container, you may have to place it temporarily. When you place it temporarily, you have to select a flat place where there is enough space for a large-sized heavy machine, like a top lifter etc., to move back and forth, that has fire extinguisher installed, has no fire-hazardous objects around, and is off-limits to the public.

2) Precaution to load on a ship

When loading a tank container on a ship, check the internal pressure of the vessel in advance; if the pressure is high, discharge in a safe location to lower it, and please act very carefully so that the safety valves etc., will not operate during shipping. Lock the doors of the operation cabinet etc., and please thoroughly check the doors, etc., so that they will not open during shipping.

When loading on a ship, according to Ship Safety Act, the tank container will be put on the ship deck. Additionally, please be warned that the movable load on the upper part of said container is limited to one container-load (less than 30,480kg).

Section 7: Caution Regarding LNG Tank Container Operation (Reference)

Section 7: Caution Regarding LNG Tank Container Operation (Reference)

7.1 In operating the LNG Tank Container, the utmost attention is required for vehicle safety and accident prevention. Especially in road traffic, please do not jump start, suddenly stop, suddenly accelerate, turn sharply, etc.

7.2 Please try to ensure that the crew gets enough rest both mind and body, and to maintain their physical condition in order for safe and secure operation and monitoring.

7.3 When traveling by trailer etc., a transportation plan must be carried, and the predetermined roads must always be travelled.

7.4 The movement monitor individual should constantly check the internal pressure of the vessel during vehicle travel, and please be careful that it does not go above 0.39MPa. Additionally, please record the pressure inside the vessel on a regular basis.

7.5 Except for during emergencies, please do not discharge LNG on public roads.

7.6 If there is a rise in the pressure inside the vessel, and it is considered necessary to discharge LNG, please do so at the nearest designated place.

7.7 While traveling, the crew should refrain from smoking except in allowed places.

7.8 When traveling inside of a factory yard for receiving, discharging of LNG, or gas discharge, please travel safely following the guidance of an attendant.

7.9 The crew records driving daily reports for every operation, and please submit these to the supervisor. Additionally, any special notes must be reported.

7.10 When operating a vehicle, such as a trailer etc., for a long period of time, poor road conditions were encountered, or a large shock was received, stop at a safe spot on the way, and please perform inspection to confirm that there is no gas leakage, no abnormal rise in the internal pressure of the vessel, or no frost.

7.11 If stopped while traveling, please select a safe place with little traffic and that is more than 15m from any sources of fire. Please set the side brakes and set chocks to the wheels.

7.12 If the crew parks while traveling, please do not leave the LNG Tank Container vicinity. If leaving is a necessity, please stay within range where constant monitoring is possible.

7.13 When you move the LNG Tank Container at the quay, please note the following points:

- The hoses are detached.
- The ground wire is detached.
- Primary Safety Valve Master Valve is open.
- Rear control cabinet door is completely closed.
- The chock is detached.
- There is no fear of ignition sources for any gas leakage from the cargo handling facilities etc.
- Confirm with the supervisor that all the handling is completed.

Section 8: Counter-measures for Abnormalities during Transportation (Reference)

Section 8: Counter-measures for Abnormalities during Transportation (Reference)

8.1 After taking emergency measures for any abnormal situations during travel, such as leaks, fire, abnormal internal pressure of the vessel, traffic or train accidents, etc., please call the predetermined emergency contact, and obtain instructions for the safety maintenance thereafter.

8.2 If you are unable to stop the liquid gas leak even after emergency measures, secure a safety perimeter around the vehicle, and please report to the nearest police, fire department, and community-based disaster management office for assistance.

8.3 If the leaked gas catches fire, attempt preliminary measures to extinguish the fire, and report to the fire department and police. If it is possible to move to a large safe location, please move it to a safe place. Please try to ensure a safe perimeter until the emergency support, police, or the fire department arrives.

8.4 If a sudden rise in the internal pressure of the vessel is confirmed, move immediately to a safe location, and please lower the pressure by discharging via the Gas Drain Valve. Afterwards, please move to the nearest predetermined factory to repair and take appropriate measures.

8.5 Please take the following measures if a traffic accident, such as a collision etc, occurs:

- If there is an injured person, please put first priority on their rescue.
- Please secure the safety in the vicinity by using red flags, a smoke candle, etc., to draw the attention of anyone nearby.
- Please check for abnormalities of both the tank container and vehicle, and if a leak is present, after implementing emergency measures, report to the nearest police and fire department.
- Please try to prevent any secondary disaster.

8.6 Measures when the vehicle breaks down and cannot move on a railway crossing:

- If there is time, please ask the help from other cars to move and escape.
- If there is not enough time to move, please run as fast as possible in the direction that the train will come from, stand more than 50 m on the outside of the railway crossing and stay in a place where the train is recognizable from 800 m away while considering the terrain, and signal the train using a red flag and smoke candle. When the train safely stops, explain the situation, and please obtain the help necessary to move outs of the railway crossing.

8.7 Take the following measures an abnormality is recognized in the environment of the operation route:

- If there is a fire in the vicinity of the operation route, please change the route, make a large detour, and take a safe route. If there is no safe route available, please take refuge in a place as safe as possible, and try to monitor for safety. If it is difficult to move the vehicle because of traffic conditions, please maintain maximum distance from other vehicles. To protect against any fires in close proximity, please contact the fire department and police for help to prepare water for sprinkling.
- For other weather conditions including thunderstorms, storms, snowfall, etc., please consider the principle of safety first respective to the condition, act cautiously, and do not engage in reckless travel to hurry.

8.8 On the ship, please check the pressure inside of the vessel on a regular basis, and if an abnormal rise in pressure is confirmed and it is anticipated that the Safety Valve will be activated, discharge the gas from the Gas Drain Valve to lower the pressure to an appropriate pressure for the Inner Vessel.

- When releasing gas, please confirm the safety of the surroundings, and ensure that there are no sources of fire, etc.
- When releasing gas, please report to the captain in advance, and ask for consent for the operation.

Section 9: Maintenance and Repair of LNG Tank Container (Reference)

Section 9: Maintenance and Repair of LNG Tank Container (Reference)

9.1 As a basic principle, repair of vessels, piping, valves, instruments, PBC, and others shall be outsourced to manufacturers.

9.2 Simple repairs – such as backlash or damage of bolts, nuts, and gaskets – shall be done by the individual(s) in charge of tank inspection and maintenance.

9.3 If fittings or other instruments of piping are removed or loosened for maintenance or repair, a nitrogen leak test is required once the equipment is restored. Nitrogen purging is required before loosening or removing fittings or other instruments.

9.4 In case of using fire for maintenance, gas inside the vessel and piping must be completely purged by nitrogen to secure the safety of the site and surroundings before any commencement of work.

Section 10: Supervision of the LNG Tank Container (Reference)

Section 10: Supervision of the LNG Tank Container (Reference)

10.1 The owner of the LNG Tank Container must assign a supervisor or equivalent (hereby referred to as "Supervisor" in the following section) to handle the matters concerning ensuring the safety of the tank container and the travelling vehicle.

10.2 The Supervisor must constantly be aware of the condition of the tank container, the vehicle, and the crew, and must take the necessary measures for the safe travel of the tank container and vehicle.

10.3 The Supervisor must educate and train the crew on every occasion regarding the basic properties of LNG and its gas, information concerning cryogenic temperature as well as the structure and the treatment of the Tank Container, and prevention of disaster and procedures and countermeasures to take in the event of abnormalities.

10.4 When the tank container and vehicle are parked under traveling conditions in a parking lot for a prolonged period of time because of holidays or some other reason, or left in a container storage location for an extended period of time, the Supervisor should be able to monitor the pressure inside of the vessel and conditions conducive to the safe release of gas.

10.5 When suspending travel of the tank container and vehicle for maintenance, repair, or inspection, etc., and parking at another office or in a factory yard for an extended period of time, or parking at the tank container storage location for a long time, the Supervisor should make safety management measures of the tank container and the vehicle clear.

10.6 The owner of the tank container and vehicle should establish a system to be able to organize an emergency dispatch and the ability to deal with the incident safely. Additionally, please provide an evacuation factory along the travel route for inspections, gas discharge, rest, etc.

10.7 The Supervisor must inspect the daily running report of the tank container and vehicle on every occasion of travel, instruct the crew thoroughly on instruction matters, and confirm matters reported by the crew.

The instruction matters are as follows:

- the weather condition(s) of the day
- the construction site(s) on the designated traveling route or on closely adjacent road(s), traffic restriction hour(s), and detour route(s)
- predicted congestion intervals
- places for rest and temporary inspections along the route
- emergency contact(s)
- special notification matter(s) from the police, etc. regarding road traffic

- the address, map, and route of the factory designated for evacuation
- other matters necessary for safe traveling

Reported matters are as follows:

- record of the pressure inside the vessel during travel
- actual situations and their treatment respective to the instructions
- abnormalities in the tank container and vehicle at the time of travel
- record of work and facilities along the transportation route
- other matters deemed necessary to report

10.8 The Supervisor should organize and keep the records concerning travel.

10.9 Please confirm that the parking area and the container storage location provides good ventilation, is safe from fire, and there is no fear of occurrence of disaster, and please have a leak detector and fire extinguisher available.

Section 11: Daily Inspection of the LNG Tank Container (Reference)

Section 11: Daily Inspection of the LNG Tank Container (Reference)

Vehicle inspection is done according to vehicle inspection standards established in the Road and Transportation Vehicle Law, and tank container inspection will be conducted as follows:

11.1 Tank users shall visually check vessels to confirm that there is no abnormal frosting, etc.

11.2 Tank users shall check to confirm whether or not there are any cracks or defects in vessel attachments and container frames.

11.3 Tank users shall check that when the tank is filled, it is not overfilled.

11.4 Tank users shall check for abnormal pressure inside the vessel.

11.5 Tank users shall check whether or not each valve is properly switched (opened or closed).

11.6 Tank users shall check for leaks, damage, and abnormalities in the pneumatic piping which controls the emergency shut-off valve.

11.7 Tank users shall check whether or not impurity is pooled inside the flame arresters.

11.8 Tank users shall check the condition of ground wires and clips.

11.9 Tank users shall check whether or not the rear operation room is kept tidy.

11.10 Tank users shall check if the operation room door is opened or closed.

11.11 Tank users shall check the availability of vehicle equipment, portable equipment, and spare parts.

The crew will conduct tank container and vehicle inspection daily, and any imperfections must be immediately reported to the supervisor, and maintenance conducted in order to keep the tank container and vehicle in best condition. The supervisor must confirm that the tank container and vehicle are always kept maintained in best condition.

Section 12: Container Maintenance and Inspection (Reference)

Section 12: Container Maintenance, Inspection, and Plans etc. (Reference)

12.1 Container maintenance methods and plan approval

UN Portable Tank T75 inspection and maintenance methods and plan etc. require Maritime Authority approval. If maintenance is outsourced, the consignee must apply to and gain the approval of the Department of Transportation with jurisdiction.

12.2 Regular inspection

Following initial inspection at time of manufacture, regular inspection is conducted at a frequency not exceeding 5 years. Inspection details are as follows:

- Visual check and structural check of both inner and outer regions
- Airtight test
- Actuation check of attached equipment
- Capacity check and alignment examination of pressure safety equipment
- Vacuum level check

12.3 Interim inspection

2.5 years after the initial inspection but before the regular inspection, an interim inspection will be conducted according to the following:

- Visual check and structural check of both inner and outer regions
- Airtight test
- Actuation check of attached equipment
- Capacity check and alignment examination of pressure safety equipment
- Vacuum level check

12.4 Special inspection

Conducted in the case that damage, corrosion, or leakage is obvious, or any defects of the vessel are found. The range of the special inspection will depend on the vessel damage or deterioration, and inspection details will be chosen from the initial inspection program.

12.5 Maintenance and inspection record

At least 2 consecutive preceding regular maintenance inspection records must be appropriately saved. Additionally, special inspection records must be saved until the next regular inspection. Documents related to tank structure and strength etc. necessary for maintenance and inspection must always be managed and saved.

Section 13: Regular Voluntary Inspection (Reference)

Section 13: Regular Voluntary Inspection (Reference)

There is no legal obligation, but conduct inspection to comply with the LNG semi trailer.

13.1 External visual inspection

A visual inspection is conducted once per day before the commencement of work, after completing work, and during parked conditions.

- Pressure gauge, Level gauge display and actuation check
- Valve switch and display check (whether or not each valve properly switches)
- Pipes, fittings, gaskets, O-ring etc. check for any damage or cracks
- Abnormal frost and condensation
- Delamination, cracking, or corrosion etc. of paint
- Fire extinguisher attachment condition
- Regular disaster prevention tools content check
- Documents and records check
- Other overall visual appearance

13.2 Leak inspection

To be conducted for every liquid filling and discharge operation. Leak detector and soap are used (bubble leak test).

- Inspect for leaks on pipes, valves, fittings, and other instruments.

13.3 Airtight test

To be conducted at least once a year.

- The test is to be conducted at 1.1 times higher than the maximum filling pressure of the vessel, pipes, valves, and fittings.

13.4 Safety valve actuation inspection

To be conducted at least once a year.

- Remove the safety valve, and use the safety valve actuation test device to conduct test.

13.5 Pressure gauge inspection

To be conducted at least once a year.

- The pressure gauges must be removed and tested with a standard pressure tester.

13.6 Differential pressure gauge inspection

To be conducted at least once a year.

- The gauges must be compared with a standard differential pressure gauge (U-shaped tube, etc).

13.7 Valve inspection

To be conducted at least once a year.

- Operation condition, external appearance, and seat leakage must be checked.

Section 14: Records (Reference)

Section 14: Records (Reference)

14.1 Create records for all the inspection items, and keep these records.

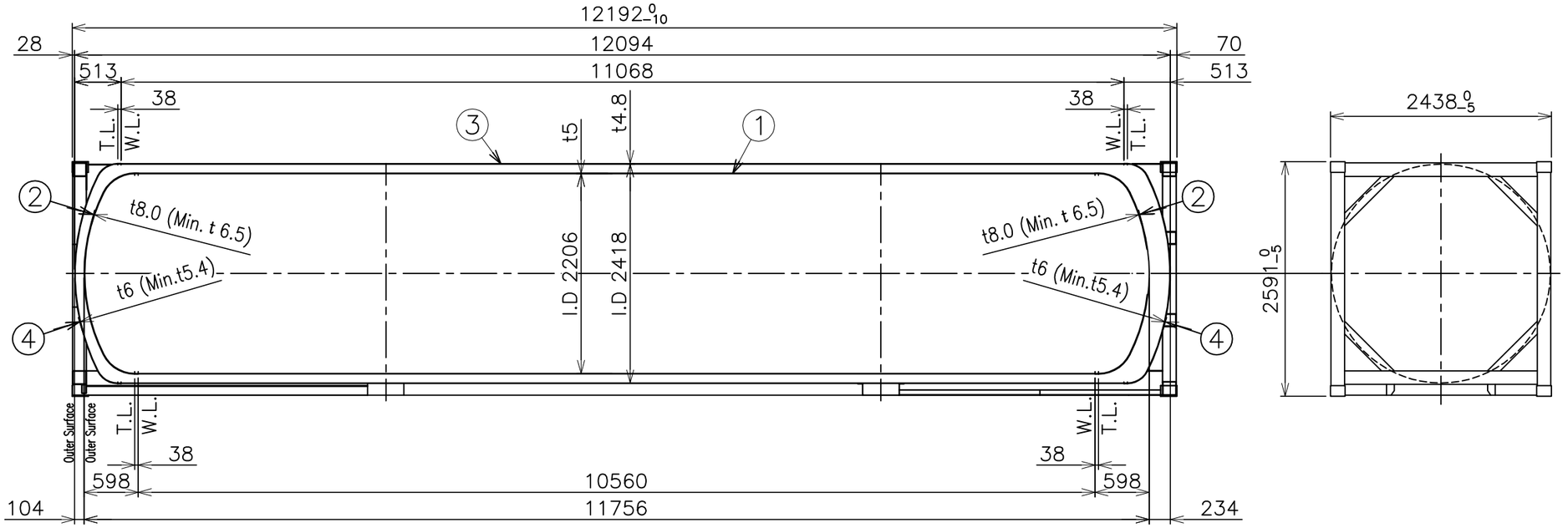
14.2 Please create records of all the maintenance and repairs, and keep these records.

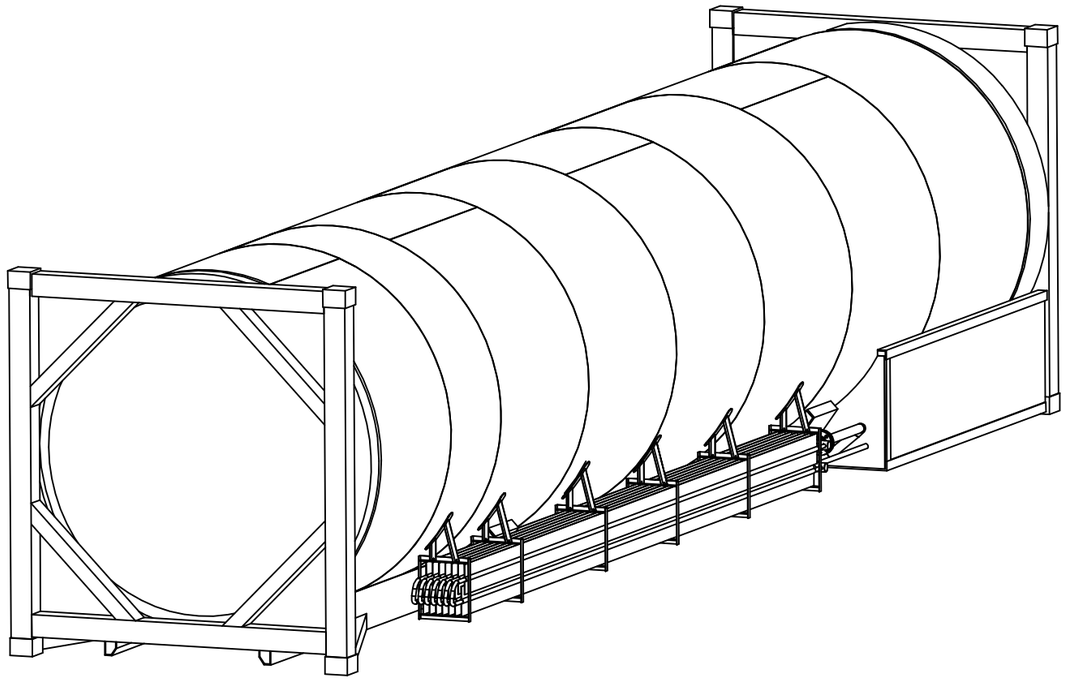
14.3 Please create records about the cargo work and keep these records.

14.4 Please create records about the travels and keep these records.

14.5 Please create records concerning other necessary matters and keep these records.

Attachment-1





Specification		
Applicable Law	Marine Vessel Safety Act	
Tank Type	Portable Tank	
Tank Form	Horizontal Cylindrical Double Walled	
Items	Inner Shell	Outer Jacket
Loading Liquiefied Gas	Liquefied Natural Gas	–
Warm Full Volume	43,445 L (11,477 gal)	–
Maximum LNG Volume	39,100 L (10,329 gal)	–
Maximum LNG Load	17,986 kg (39,652 lb)	–
Design Pressure	801 kPaG (116.1 PSIG)	F.V.
MAWP	690 kPaG (100 PSIG)	–
MARVS	690 kPaG (100 PSIG)	–
Design Temperature	−195~+40℃	−28~+50℃
Pressure Test	1027 kPaG (149 PSIG)	–
Pneumatic Test	621kPaG (90 PSIG)	100 kPaG (14.5 PSIG)
X-ray Test	100%	–
Insulation Method	Vacuum Insulation(Composite Insulation Materials)	
Tare Weight	Approx 12,494 kg(27,545 lb)	
Max Gross Weight	Approx 30,480 kg(67,197 lb)	

〖Remarks〗

Maximum LNG Payload: 90% of Full Volume
LNG Density: 0.46kg/L(3.84lb/gal)
MARVS: Maximum Allowable Relief Valves Setting
MAWP: Maximum Allowable Working Pressure

ITEM	P.NO	TITLE	QTY.	MATERIAL SPEC
	4	Outer Head	2	Carbon Steel S275JR
	3	Outer Shell	1	Carbon Steel S275JR
	2	Inner Head	2	Stainless Steel SA240-304
	1	Inner Shell	1	Stainless Steel SA240-201LN

REV.	REASON	DESCRIPTIONS	DATE	BY	CH'D	APP'D
15	B	REVISED AS PER CLOUD	08.09.17	HZL	ASK	HA
14	B	REVISED AS PER CLOUD	18.04.17	HZL	ASK	HA
13	B	REVISED AS PER CLOUD	12.01.17	HZL	ASK	HA
12	B	REVISED AS PER CLOUD	05.01.16	HZL	ASK	HA
11	B	REVISED AS PER CLOUD	20.12.16	HZL	ASK	HA
10	B	REVISED AS PER CLOUD	06.12.16	HZL	ASK	HA
9	B	REVISED AS PER CLOUD	08.11.16	HZL	ASK	HA

REASON: A.Customer request B.Design changes C.Correction of errors D.Other

SIMILAR TO:

NO. SHTS.: 2

SHT. NO.: 1

DO NOT SCALE DRAWING

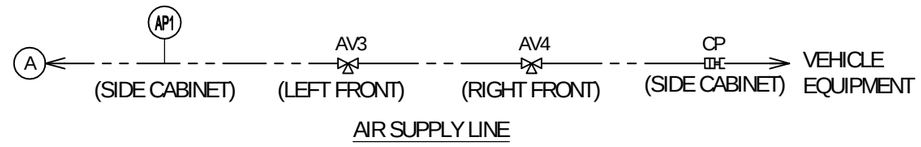
PART NAME: LNG 40ft TANK CONTAINER
LNGT-43200 L-100 PSI
HITACHI HIGH-TECH
AW CRYO
GENERAL ARRANGEMENT DRAWING

DRAFTSMAN	SOFI	17.02.16
DESIGN ENGINEERING	HAI	17.02.16
REVIEWER	ASK	17.02.16
APPROVAL	HA	17.02.16

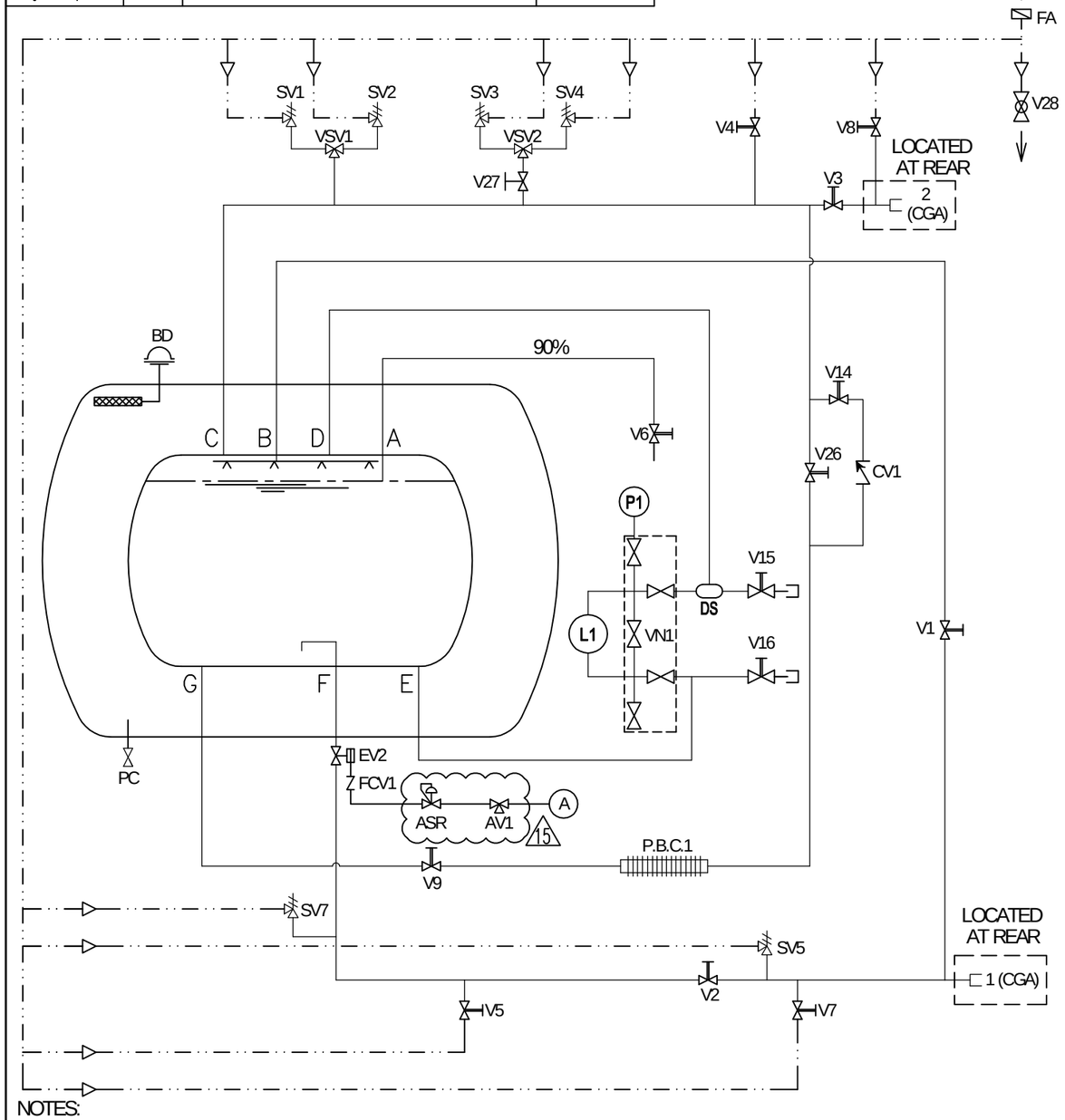
TAYLOR-WHARTON MALAYSIA
SHAH ALAM, MALAYSIA

NUMBER	REV
3001000-M	15

Specification					
Applicable Law		Marine Vessel Safety Act			
Items		Inner Shell	Internal Piping	External Piping	Release Piping
Design Pressure	kPaG (PSIG)	801 (116.1)	801 (116.1)	1103 (160)	—
MAWP	kPaG (PSIG)	690 (100)		—	—
Design Temperature	℃	−195 ~ +40			—



Symbol	Name		Material
A	Overfill Protection Line, 90%	3/8", Sch.40, SEAMLESS	SA312−TYPE 304
B	Liquid Fill Line	2.0", Sch.10, SEAMLESS	SA312−TYPE 304
C	Gas/ Safety Line	2.0", Sch.10, SEAMLESS	SA312−TYPE 304
D	Liquid Level Gauge − Upper Line	1/4", Sch.40, SEAMLESS	SA312−TYPE 304
E	Liquid Level Gauge − Lower Line	1/4", Sch.40, SEAMLESS	SA312−TYPE 304
F	Liquid Discharge Line	2.0", Sch.10, SEAMLESS	SA312−TYPE 304
G	Pressurising Liquid Discharge Line	1.0", Sch.10, SEAMLESS	SA312−TYPE 304



TAG NO.	DESCRIPTION	MODEL	SIZE	MATERIAL
1	FILL CONNECTION LIQUID PHASE/ DISCHARGE	CGA CONNECTOR	3"	BRONZE
2	GAS RECOVERY CONNECTION	CGA CONNECTOR	3"	BRONZE
EV2	EMERGENCY SHUT-OFF VALVE	ACTUATED GLOBE VALVE, EXTENDED	2"	STN STL
V1	TOP FILL VALVE	GLOBE VALVE, EXTENDED STEM	2"	STN STL
V2	BOTTOM FILL VALVE	GLOBE VALVE, EXTENDED STEM	2"	STN STL
V3	GAS RECOVERY VALVE	GLOBE VALVE, EXTENDED STEM	2"	STN STL
V4	GAS DRAIN VALVE	GLOBE VALVE, EXTENDED STEM	1"	STN STL
V5	DRAIN VALVE	GLOBE VALVE, EXTENDED STEM	1/4"	STN STL
V6	FULL TRYCOCK VALVE (90 %)	GLOBE VALVE, EXTENDED STEM	3/8"	STN STL
V7	DRAIN VALVE	GLOBE VALVE, SHORT STEM	1/4"	STN STL
V8	DRAIN VALVE	GLOBE VALVE, SHORT STEM	1/4"	STN STL
V9	PRESSURIZER ENTRANCE VALVE	GLOBE VALVE, EXTENDED STEM	1"	STN STL
V14	PRESSURIZER BYPASS VALVE	GLOBE VALVE, EXTENDED STEM	1/2"	STN STL
V15	LIQUID LEVEL GAUGE DRAIN VALVE (GAS)	GLOBE VALVE, EXTENDED STEM	1/4"	STN STL
V16	LIQUID LEVEL GAUGE DRAIN VALVE (LIQUID)	GLOBE VALVE, EXTENDED STEM	1/4"	STN STL
V26	PRESSURIZER OUTLET VALVE	GLOBE VALVE, EXTENDED STEM	2"	STN STL
V27	SECONDARY SAFETY VALVE MANUAL VALVE	GLOBE VALVE, SHORT STEM	1"	STN STL
V28	DRAIN COCK	BALL COCK	1/2"	STN STL
CV1	CHECK VALVE	CHECK VALVE	1/2"	STN STL
VSV1	CHANGOVER VALVE	BALL VALVE	1 1/2" x 1"	BRONZE
VSV2	CHANGOVER VALVE	BALL VALVE	1" x 3/4"	STN STL
VN1	LEVEL GAUGE VALVE	NEEDLE VALVE	1/4"	STN STL
SV1	PRIMARY SAFETY VALVE 690kPa	ANGLE TYPE	1" x 1 1/2"	STN STL
SV2	PRIMARY SAFETY VALVE 690kPa	ANGLE TYPE	1" x 1 1/2"	STN STL
SV3	SECONDARY SAFETY VALVE 482kPa	ANGLE TYPE	3/4" x 1"	STN STL
SV4	SECONDARY SAFETY VALVE 482kPa	ANGLE TYPE	3/4" x 1"	STN STL
SV5	PLUMBING SAFETY VALVE 1103kPa	ANGLE TYPE	3/8" x 3/8"	STN STL
SV7	PLUMBING SAFETY VALVE 1103kPa	ANGLE TYPE	3/8" x 3/8"	STN STL
P.B.C.1	PRESSURE BUILDING VAPORIZER	PAS 2814 SS L20	1 1/2" x 2"	STN STL
L1	LIQUID LEVEL INDICATOR	STD-LNG APPLICATION	1/4"	STN STL
P1	INNER VESSEL PRESSURE GAUGE	STD-LNG APPLICATION	1/4"	STN STL
DS	DRAIN SEPARATOR	ORIGINAL	1/4"	STN STL
FA	FLAME ARRESTER	STD - LNG APPLICATION	1 1/2"	STN STL
BD	VACUUM JACKET RELIEF DEVICE	LIFTING PLATE	2"	STN STL
PC	VACUUM GAUGE VALVE	NEEDLE VALVE	3/8"	STN STL
AV1	AIR SUPPLY VALVE 1	3-WAY BALL VALVE - 'T' PORT	1/2" ODT	STN STL
AP1	AIR SUPPLY PRESSURE GAUGE	LOWER MOUNT	1/2" ODT	STN STL
AV3	AIR SUPPLY VALVE 3	3-WAY BALL VALVE - 'T' PORT	1/2" ODT	STN STL
AV4	AIR SUPPLY VALVE 4	3-WAY BALL VALVE - 'T' PORT	1/2" ODT	STN STL
CP	AIR SUPPLY CONNECTION	QUICK COUPLING	1/2" ODT	STN STL
FCV1	FIRE CHECK SHUT OFF VALVE	HEAT ACTIVATED VALVE	1/4" FNPT	STN STL
ASR	AIR SUPPLY REGULATOR	REGULATOR	1/4" FNPT	BRASS

NOTES:

1. ALL GLOBE VALVES WITH EXTENDED STEM ARE OF STAINLESS STEEL BODY & TOPWORK, TYPE 01341, "NON-FIRE SAFE".
2. ACTUATED GLOBE VALVE, STAINLESS STEEL BODY & TOPWORK.

	Safety Valve		Level Gauge Valve
	Emergency Shut−off Valve		Extension Bonnet Globe Valve
	Vacuum Gauge Valve		Check Valve
	Outer Tank Safety Equipment		Short Bonnet Valve

REV.	REASON	DESCRIPTIONS	DATE	BY	CH'D	APP'D
15	B	REVISED AS PER CLOUD	08.09.17	HZL	ASK	HA
14	B	REVISED AS PER CLOUD	18.04.17	HZL	ASK	HA
13	B	REVISED AS PER CLOUD	12.01.17	HZL	ASK	HA
12	B	REVISED AS PER CLOUD	05.01.16	HZL	ASK	HA
11	B	REVISED AS PER CLOUD	20.12.16	HZL	ASK	HA
10	B	REVISED AS PER CLOUD	06.12.16	HZL	ASK	HA
9	B	REVISED AS PER CLOUD	08.11.16	HZL	ASK	HA

REASON: A.Customer request B.Design changes C.Correction of errors D.Other

SIMILAR TO:

NO. SHTS.: 2 SHT. NO.: 2

DO NOT SCALE DRAWING

PART NAME: LNG 40ft TANK CONTAINER
LNGT−43200 L−100 PSI
HITACHI HIGH−TECH
AW CRYO
GENERAL ARRANGEMENT DRAWING

		DATE
DRAFTSMAN	SOFI	17.02.16
DESIGN ENGINEERING	HAI	17.02.16
REVIEWER	ASK	17.02.16
APPROVAL	HA	17.02.16

TAYLOR−WHARTON MALAYSIA
SHAH ALAM, MALAYSIA

NUMBER	REV
3001000−M	15