



Clean Water Begins with Sejin!

SEJIN SMC WATER TANK

先進SMC儲水箱提供潔淨的水質

Outstanding in Heat Insulation

Excellent Strength

Versatile Capacity

Excellent Sanitation

Easy Assembly

Perfect Watertightness

極佳的熱絕緣性能

極佳的物理應力

多變化的體積

極佳的衛生

容易安裝

極佳的水密性



先進SMC有限公司

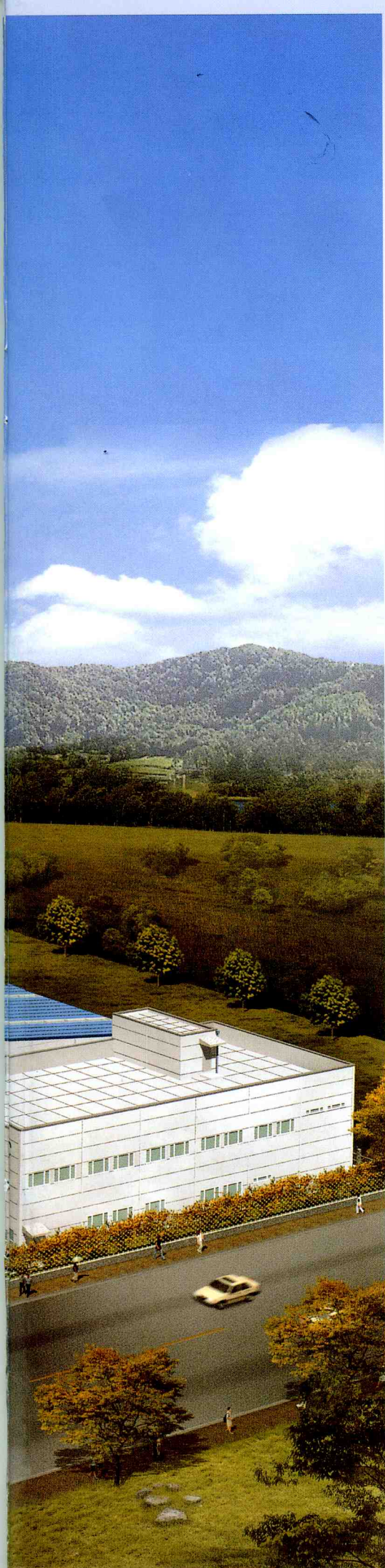
SEJIN SMC CO., LTD.

Clean Water Begins with Sejin!

The Highest Quality, Perfect Manufacture and Installation are Spirit of SEJIN

先進SMC水箱精神是生產高品質及完美的製造及按裝。





company brief history

公司簡介

- 1981.02. Sejin Industries Co. was established by CEO, Kyeong-sig Choi.
- 1986.08. Incorporated as Sejin Co., Ltd.
- 1989.01. Completed the construction of a factory in Imsil, Jeollado.
- 1990.07. Secured KS-mark. (Korean Standard KSF-4806)
- 1991.03. Acquired Q-mark (Designated as a quality assured company).
- 1991.09. Selected as a promising small & medium enterprise by Hanil Bank.
- 1991.11. Designated as a military service special case business by Military Manpower Administration.
- 1994.06. Selected as a promising leading technology business by Small & Medium Business Corporation.
- 1997.10. Company name was changed to Sejin SMC Co., Ltd.
- 1998.08. Acquired ISO 9001 certificate.
- 2000.10. Secured GQ-mark (Good Quality).
- 2002.05. Designated as a promising small & medium enterprise by Small & Medium Business Corporation.
- 2004.08. Completed the construction of a factory in Banwol, Gyeonggi-do.
- 2010.02. Acquired WRAS certificate.

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What is SEJIN SMC water tank?

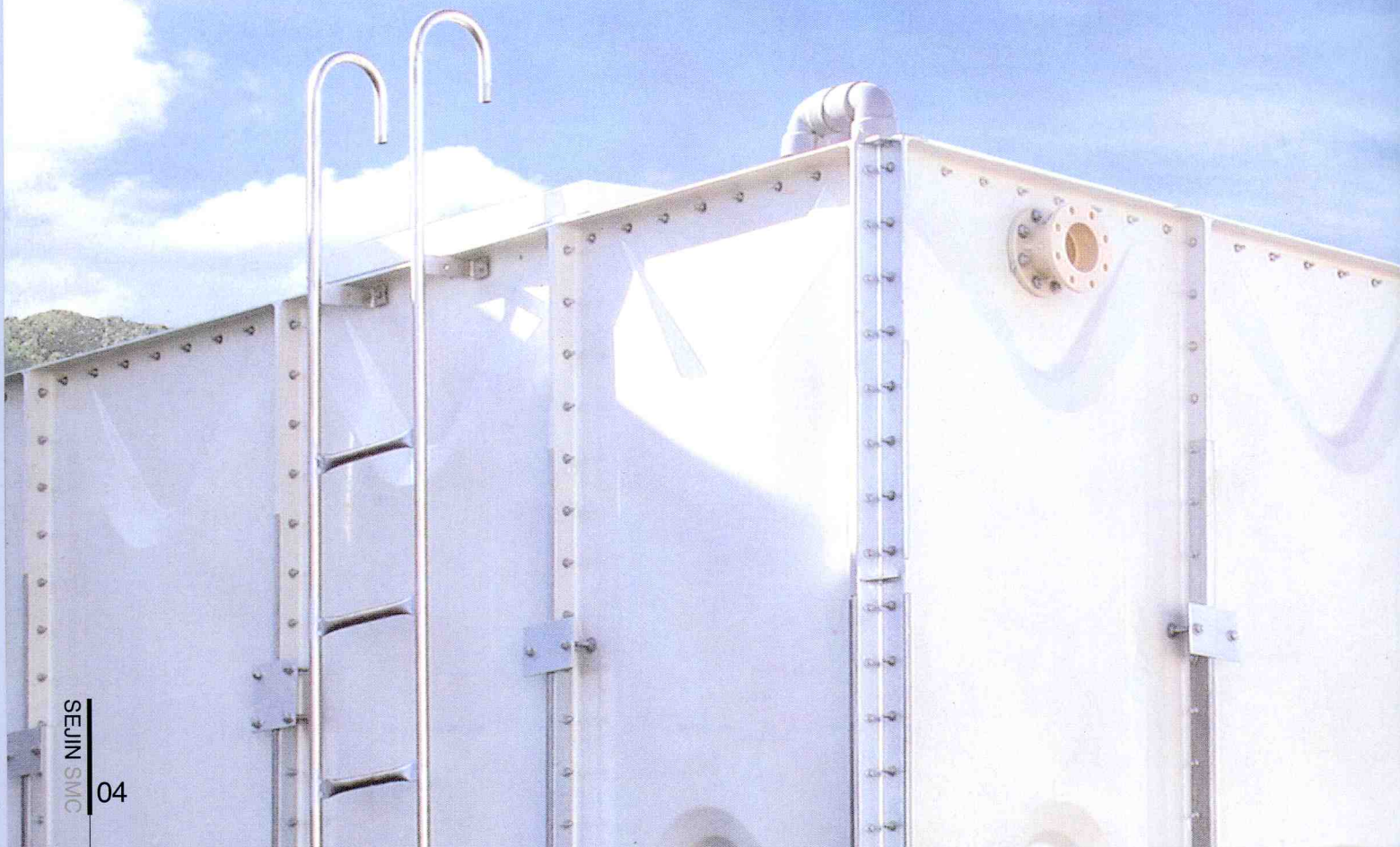
- * Sheet Molding Compound (SMC) is a mixture of unsaturated polyester resin with impregnating augmentation material, filling material and glass fiber.
The SMC water tank body (floor, wall and ceiling) is made of bolting type square SMC panels, which are molded under high heat & pressure.
- * SEJIN SMC water tanks guarantee sanitation, excellent durability, absolute water tightness, versatile capacity design and easy installation.

什麼是先進SMC儲水槽？

※由不飽和的多烯樹脂，飽和增強劑及玻璃纖維填充物等混合製成SMC加強板。

水箱是由SMC的(底板、牆板及頂板)由螺絲鎖合固定，其SMC板由高溫及高壓模具壓成。

※先進儲水箱保證潔淨，極佳的耐久性，防漏水，可變的外形及易於安裝特性。



II. Characteristics 特性

CHARACTERISTICS OF SEJIN SMC WATER TANK 先進水箱特性

1. Sanitation

- SEJIN SMC water tanks meet the Food Sanitation Act.
- Bacteria or germ formation and growth are prevented by blocking sunlight transmission completely.

2. Excellent durability

- The internal tie-rods in stainless steel are coated with PE by heat-shrink tubing process, which provides stronger corrosion resistance.
- The external components are hot dip galvanized steel, which gives semi-permanent life.

3. Absolute water tightness

- The foam type gasket with excellent elasticity and resilience assures perfect water tightness.

4. Versatile capacity design

- Various panels make installation of tanks possible in any dimensions or capacities.
(L-shape, U-shape, square-shape)

5. Easy installation

The installation of tank is very user-friendly even in the restricted area by using standardized bolting type panels.

6. Outstanding insulation performance

Pre-insulated panels are also available as an option. By using the PU foam insulated panels, the temperature change of the water in the tank can be minimized at high or low environmental temperature.

1. 潔淨

- 先進水箱可達食品衛生要求。
- 完全阻隔陽光可防止細菌及藻類生長。

2. 極佳的耐久性

- 水箱內部由耐腐蝕的不銹鋼拉桿加強應力。
- 水箱外部由半永久性的熱浸鍍鋅鐵件組成。

3. 絕佳的水密性

- 發泡的止水帶絕佳彈性及可靠度，保證完美的水密性。

4. 可變化的體積

可做成各種形狀的水箱(L形，U形，方形等)

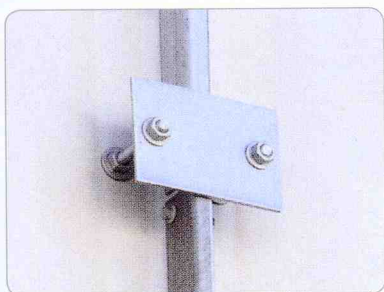
5. 易於按裝

按裝容易在極困難的區間，施工容易。

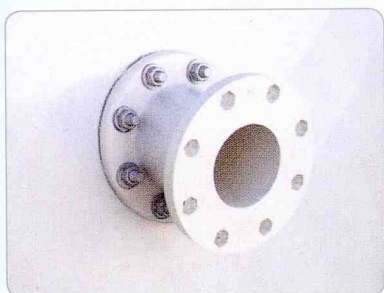
6. 極佳的熱絕緣性能

在選用PU發泡絕緣材料的熱絕緣板儲水槽，可使用在高溫或低溫的環境，
使水箱內的水溫做極小變化。

III. Reinforcement members 加強配件



1. External reinforcement
(Upper piece-HDG)
外部加強件



2. Flange (SMC)
法蘭



III. Reinforcement members 加強配件



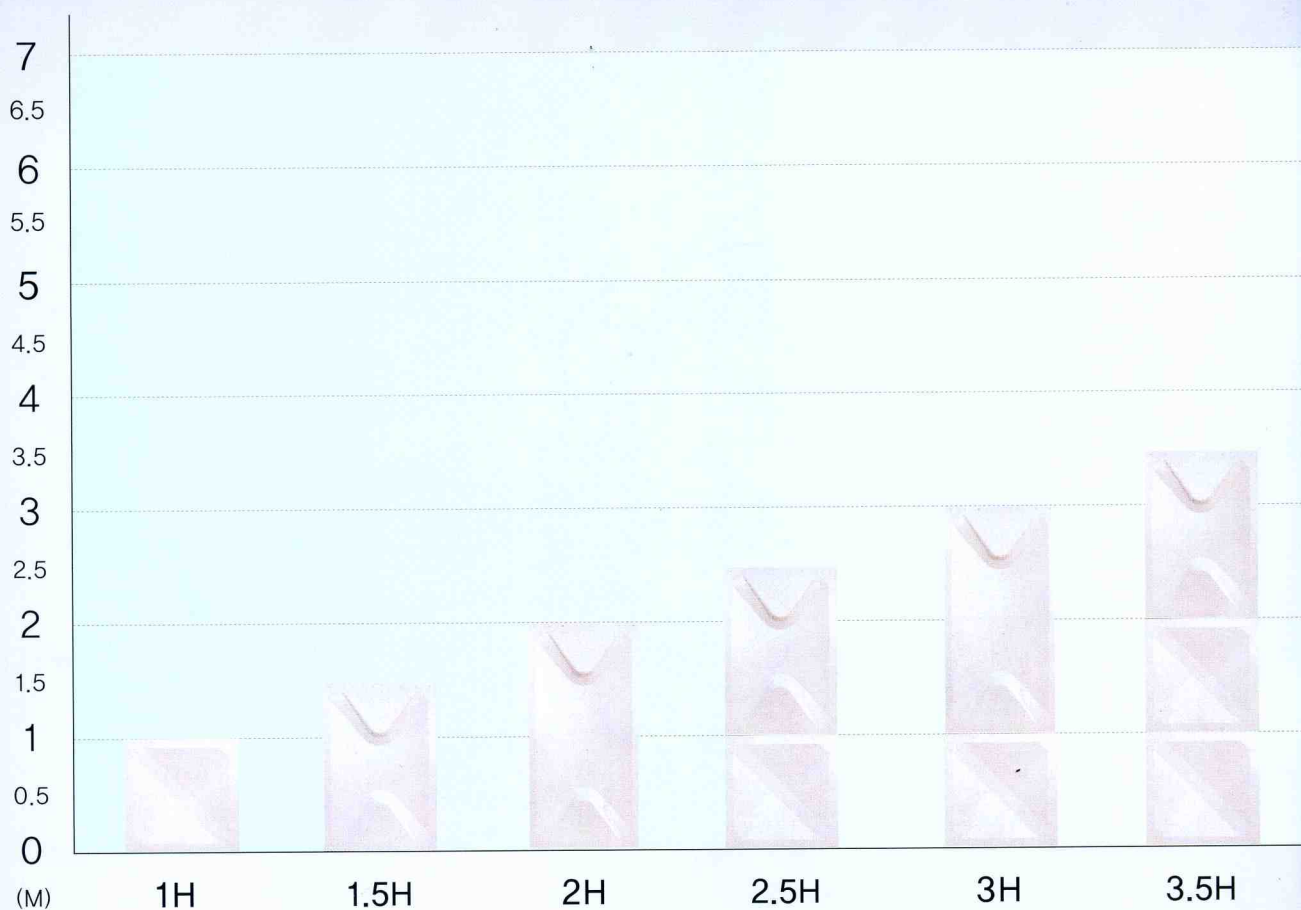
3. Bolts for roof panel
(High tensile plastic)
頂板加強螺絲



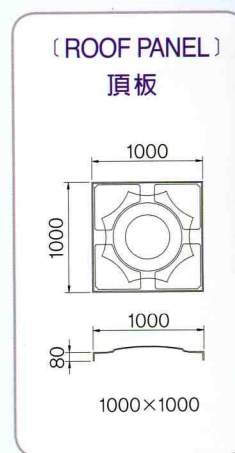
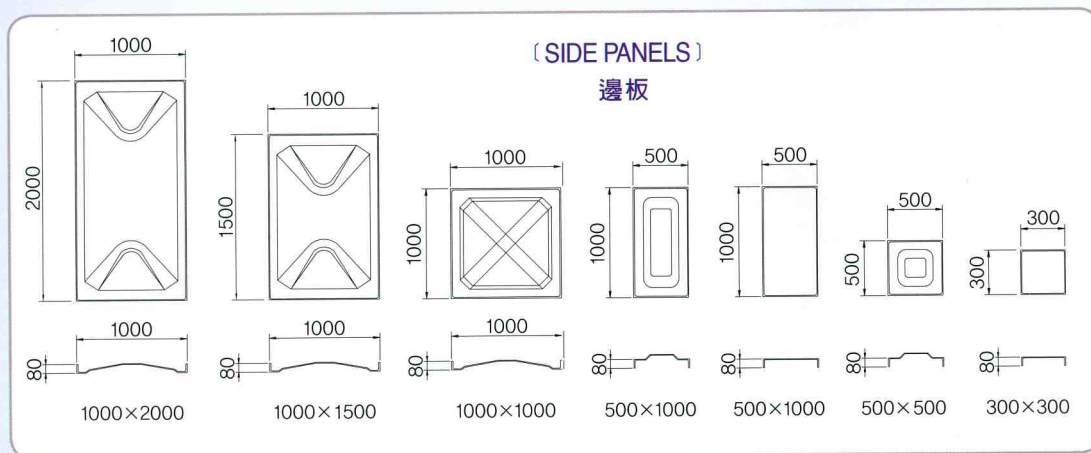
4. Base frame(HDG steel)
底座(熱浸鍍鋅鐵)

IV. Composition of SEJIN SMC Tank panels 組成板片

SIDE PANEL COMPOSITION BY HEIGHT 組成各種水箱高度的邊板



FREE CAPACITY DESIGN (FOR ANY SHAPES & DIMENSIONS) 各種板片





底板



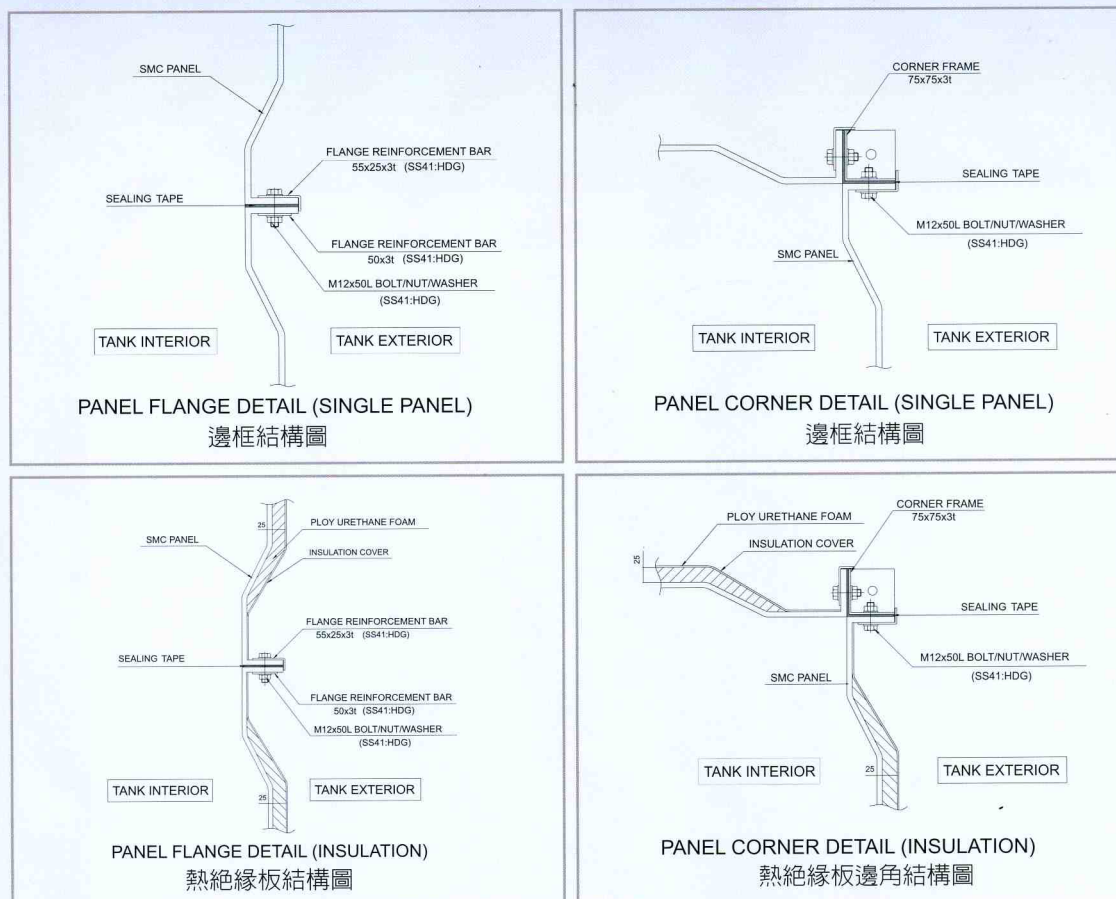
人孔及排水板



V. Assembly of SEJIN SMC panels 結構圖

ASSEMBLY DETAILS OF SEJIN SMC TANK

結構圖



METHODS OF SEJIN SMC PANELS ASSEMBLY

先進模板特性

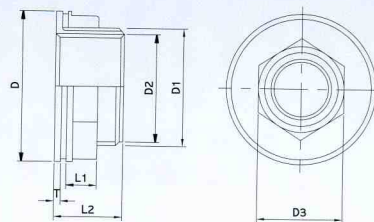
SMC panels can be assembled using either 90° joint or 45° joint. SEJIN SMC water tank adapted the 90° joint is more user-friendly due to easy handling and stable joint performance. 先進模板專用易於操做及穩定性高的90°接合法。

Joint Method Classification	90° Joint	45° Joint
Shapes of Flange		
Sealing Material 止水帶	Sealing material in tape shape is easy to handle. 止水帶易於按裝	Required special packing for + and T-joints 止水帶需特殊工具
Tank Mounting on the Base Frame 基礎台	Base frame and panel flange are joined together using bolts. 基礎台與水箱邊框用螺絲固定	Special devices are required for fixing panels onto base frame. 必需使用特殊工具固定

VI. Fittings 配件

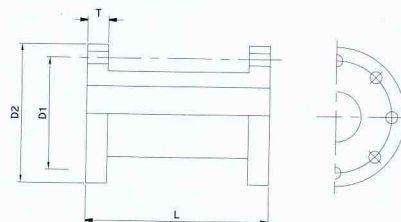
FITTINGS OF SEJIN SMC TANK 配件

◆ SOCKET (BS / SUS) 開口



nominal dia	D	D1	D2	D3	L1	L2	T
20A	55	33,5	24,1	38	10	25	3,5
25A	65	40	30,3	46	12	30	4
30A	79	49	39	55	12	30	4
40A	85	55	45	61	14	30	4
50A	95	66,5	56,7	72	14	30	4

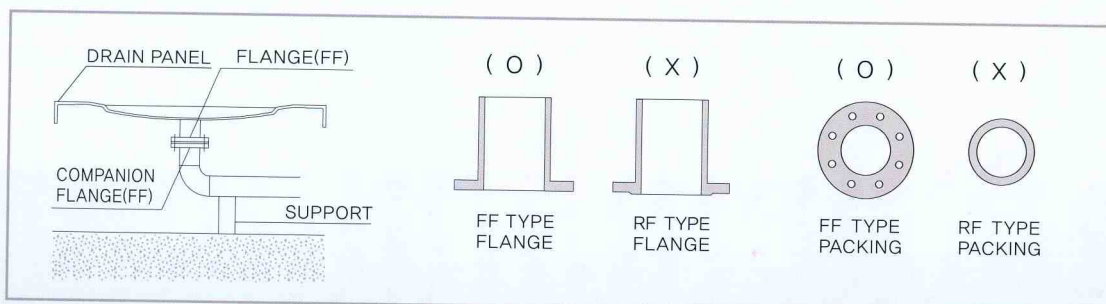
◆ FLANGE (SMC / FRP / SUS) 法蘭



nominal dia	D1	D3	T	L
65A	140	175	18	170
80A	150	185	18	170
100A	175	210	18	170
125A	210	250	18	170
150A	240	280	22	170
200A	290	330	22	170

※ CAUTIONS FOR CONNECTING PIPE TO FLANGE 外接管路注意事項

1. FF type flange and packing should be used.
2. Support should be installed under pipe and valve as below drawing.
1. 必需使用FF型法蘭。
2. 如下圖，外接管路及閥必需被支撐。



VII. Standard design condition 設計標準

STANDARD DESIGN OF SEJIN SMC TANK 先進儲水箱設計標準

1. Standard Design OF SEJIN SMC WATER TANK 設計標準

ITEM 項目	DESIGN STANDARD 設計標準
SEISMIC-RESISTANCE 耐震度	HORIZONTAL SEISMIC INTENSITY KH = 2/3 水平耐震KH=2/3
HYDROSTATIC PRESSURE-RESISTANCE 耐水壓力	STRENGTH OF PANEL'S HYDROSTATIC SHOULD BE 4 TIMES OR GREATER THAN THE STANDARD SAFETY LEVEL, DEFORMATION RATE AT FULL TANK SHOULD BE LESS THAN 1 PERCENT OF TANK HEIGHT. 模板耐水壓力必需大於安全標準的水準。 在滿水位時變形率應小於百分之1。
WIND PRESSURE-RESISTANCE 耐風壓	≤60m/sec(MAX) AT EMPTY TANK 空桶下耐風速≤60m/sec
SNOW LOAD-RESISTANCE 耐雪壓	SNOW LOAD 60kg/m ² (SNOWFALL 30cm) 雪壓60kg/m ²
LIGHT PENETRATION RATE 透光率	≤0.1% ≤0.1%

2. Physical Properties OF SEJIN SMC PANEL 先進板模物理特性

QUALITY ITEM 項目			UNIT	VALUE	KS STANDARD
PHYSICAL TEST PARAMETERS 物理特性	TENSILE STRENGTH 抗張強度		MPa	99	≥ 60
	FLEXURAL STRENGTH 撓曲強度		MPa	176	≥ 80
	FLEXURAL MODULUS 撓曲模系數		MPa	9591	≥ 6000
	FIBERGLASS CONTENT 玻纖含量		%	33	≥ 25
	BARCOL HARDNESS 巴而可硬度		-	55	≥ 30
MELTING TEST PARAMETERS 溶出特性	ODOR AND FLAVOR 臭味			NONE	NONE
	DEGREE OF TURBIDITY 混濁		DEGREE	≤ 0.5	≤ 2
	DEGREE OF COLOR 色度		DEGREE	≤ 1	≤ 5
	PB PB值		ppm	NOT DETECTED	≤ 0.1ppm
	KMNO4 CONSUMPTION 消耗量		ppm	1	≤ 10ppm
	PH PH值			6.2	5.8~8.6
	PHENOL PHENOL值		ppm	NOT DETECTED	≤ 0.005ppm
	EVAPORATION RESIDUE 蒸發殘渣		ppm	3	≤ 30ppm
	RESIDUAL CHLORINE REDUCTION 餘氯		ppm	0.1	≤ 0.2ppm

VII. Standard design condition 設計標準

HYDROSTATIC PRESSURE TEST OF SEJIN SMC PANEL (KS F 4811) 先進模板水壓測試

1. Hydrostatic pressure test (KS F 4811)

A unit panel type – hydrostatic pressure tester should be able to measure the minimum pressure of 0.2Mpa(2.04kgf/cm²). The pressure gauge has the scale by 0.01Mpa(0.10kgf/cm²) and the accuracy of +/-1% tolerance in the total test range.

2. Test pressure

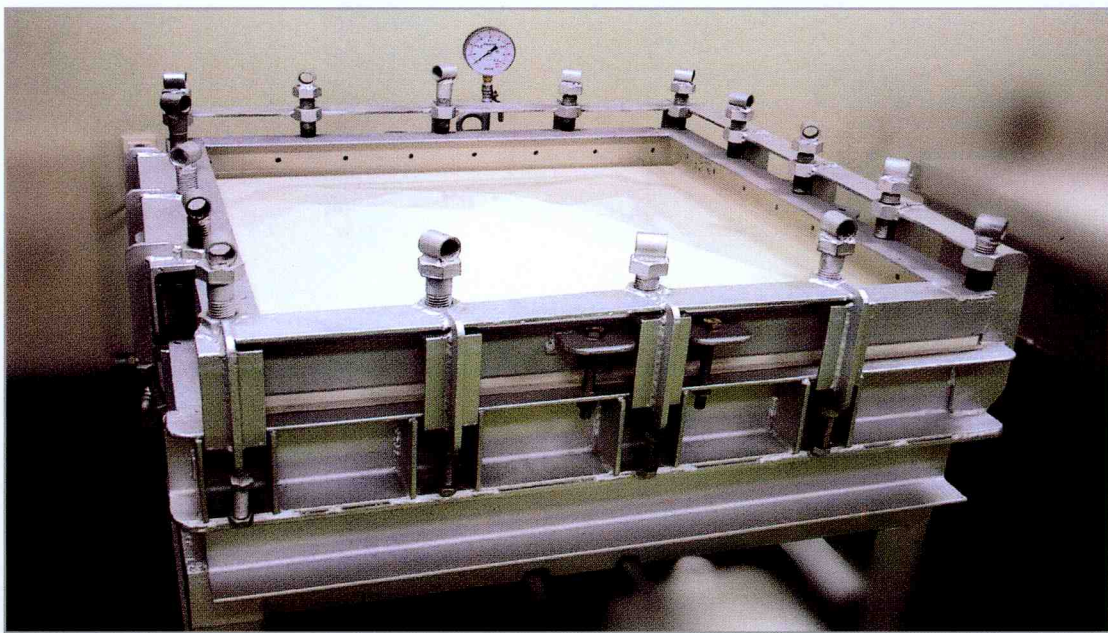
The pressure should be increased by 0.005Mpa(0.05kgf/cm²) per minute until it reaches to the crack point of the panel.

1. 水壓力測試 (KSF4811)

單獨模板耐水壓力大於0.2Mpa(2.04kgf/cm²)，水壓錶分格在0.01Mpa精確度±1%。

2. 壓力測試

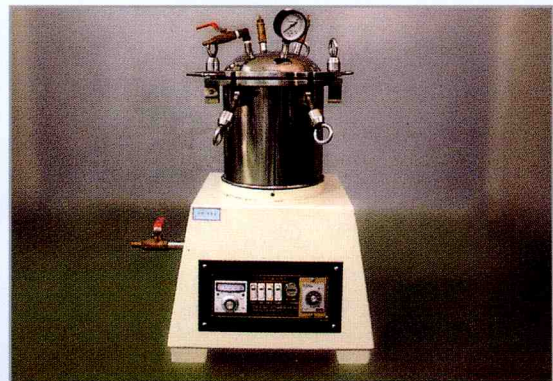
每分鐘增加0.005Mpa，一直到模板破裂。



HYDROSTATIC PRESSURE TESTER 水壓測試機



TAINT TESTER 污點測試機



CRACK(ON THE SURFACE LAYER) TESTER 破壞測試機

VIII. Manufacturing process of SMC panels 模板製造程序

Creativity, Accuracy, High Quality
SEJIN SMC Water Tank

創造力，精準度，高品質
先進SMC水箱



VIII. Manufacturing process of SMC panels 模板製造程序

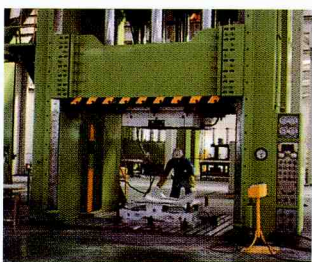
MANUFACTURING PROCESS OF SMC PANELS SMC模板製造程序



① High Pressure Hydraulic press
高壓成型機



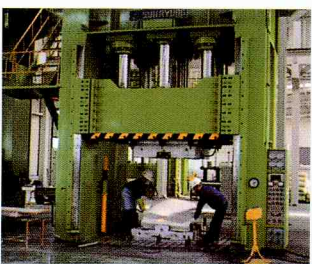
② Raw material sheet cutting
原料切割



③ Raw material filling
加料



④ Pressurization
壓製



⑤ De - molding
出模



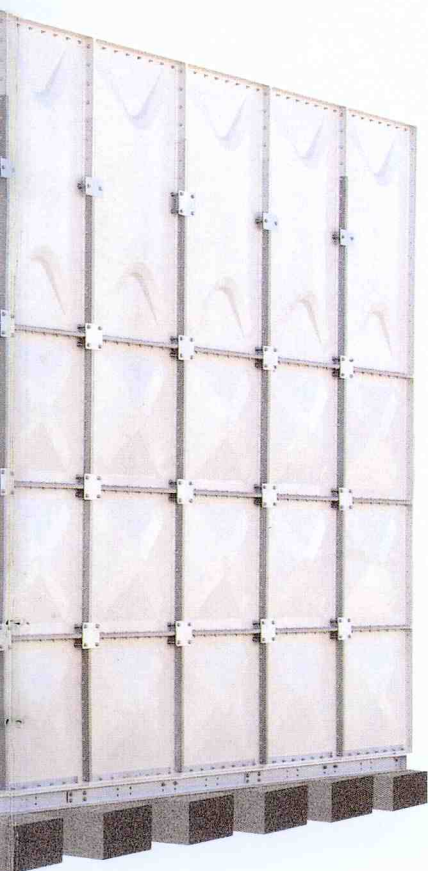
⑥ Trimming and making hole
鑽孔及修邊



⑦ Panel packaging and storage
倉儲



⑧ Completed water tank
水箱完成

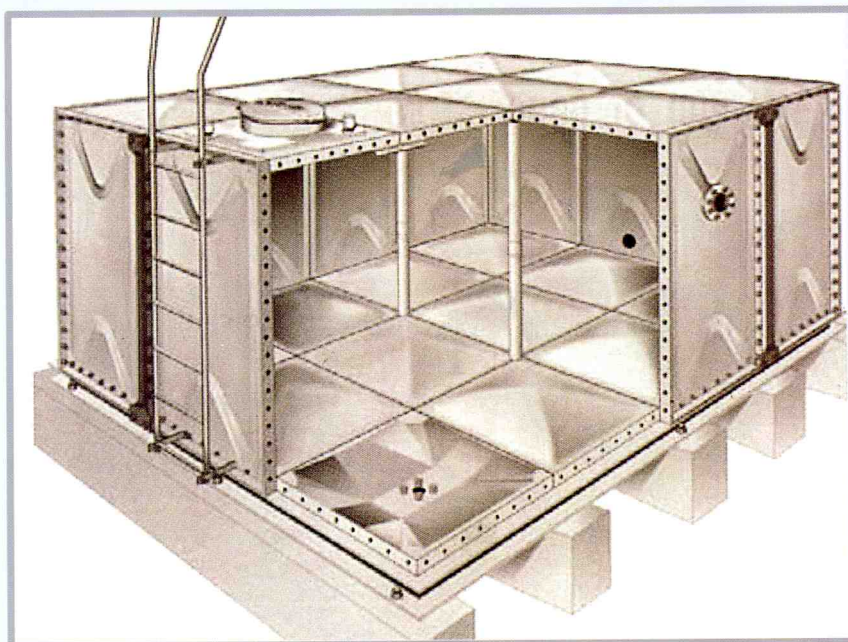


IX. Multiple compartments 中隔板

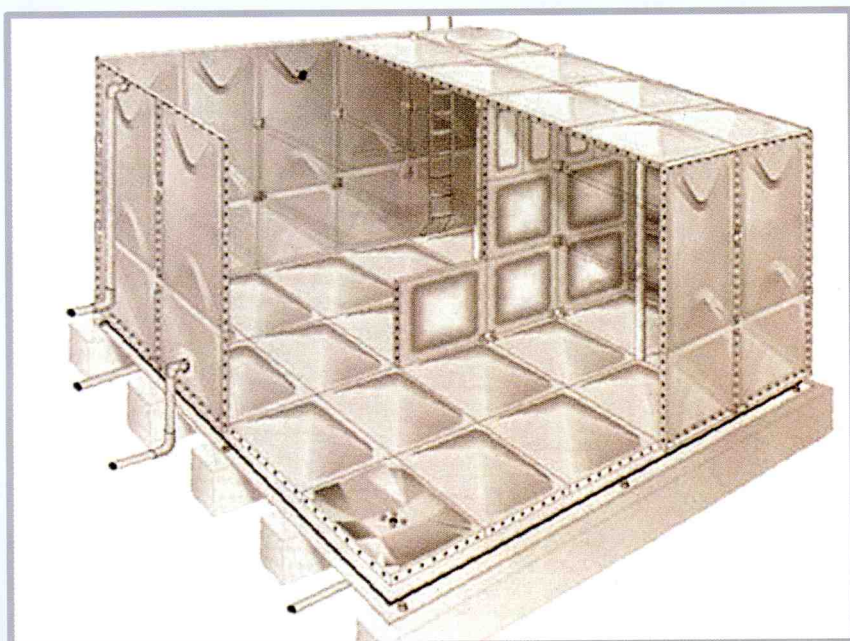
MULTIPLE COMPARTMENTS 中隔板

A tank can be partitioned into multiple compartments for respective use. Therefore, for example, water supply can be maintained even during cleaning or maintenance work. This system is recommended in a narrow space where multiple tanks are required.

水箱可被中隔板隔成數個部份，可在洗水箱或維護水箱時不斷水。



One compartment without partition 無中隔板及外部加強鐵件



Two compartments with a partition 具中隔板及內部加強鐵件

X. Foundation and maintenance space

按裝及維護空間

CONCRETE FOUNDATION (BY CUSTOMER) 水泥基座 (由客戶提供)

1. Installation of concrete plinth

Width : 400mm (min, 300mm)

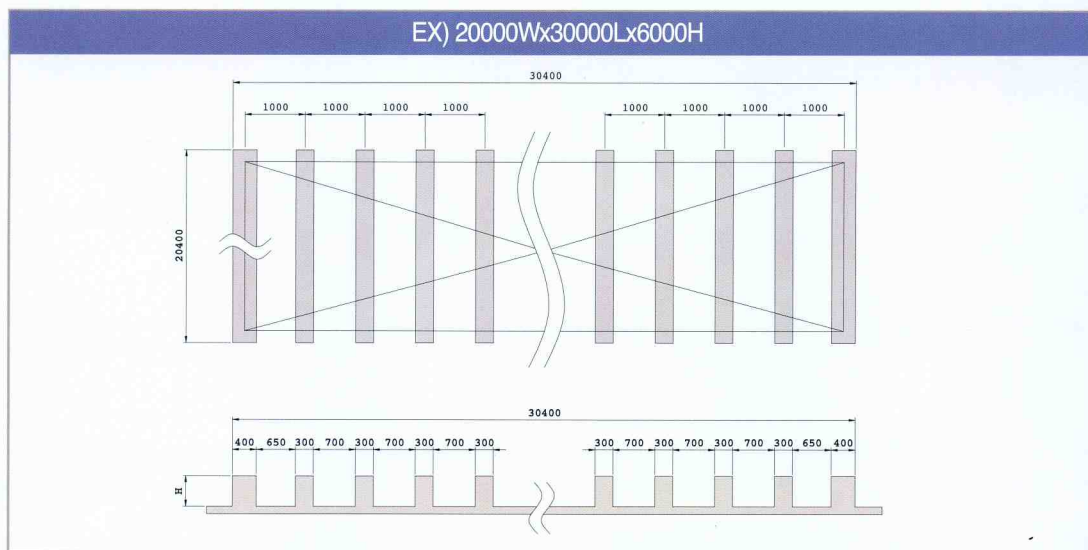
Height(H) : Min, 600mm including the steel base frame

Distance : Min, 1,000mm between one plinth to another (center to center)

(In case of using 500mm unit, the maximum distance is 1,250mm)

Evenness : The top of each plinth should be levelled. (less than 1/500)

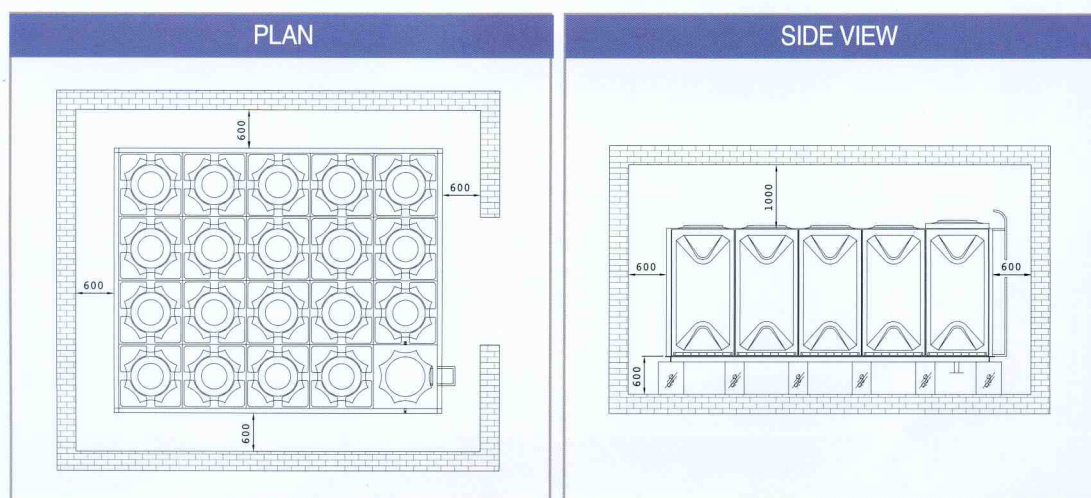
Strength of concrete : Min, 180kgf/cm²



2. Maintenance space

It is required to have minimum 600mm space between tank and wall in all directions for proper installation and maintenance.

(The distance from the ceiling to the top of the tank should be minimum 1,000mm.)



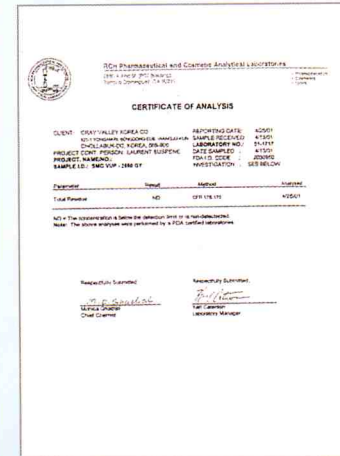
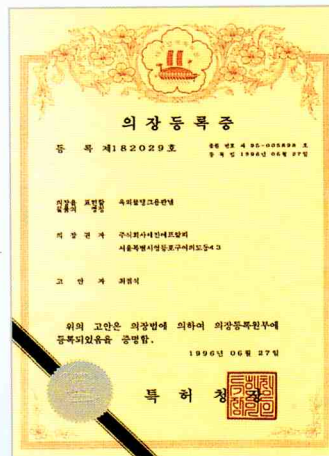
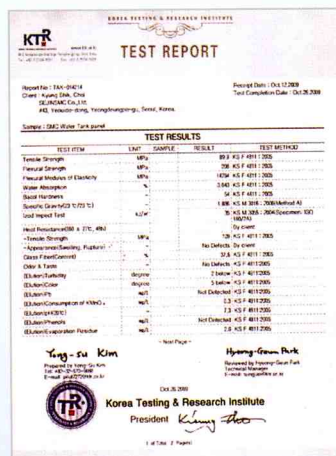
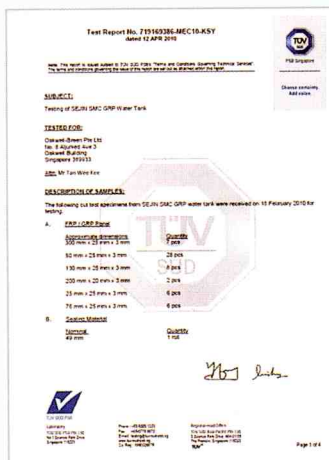
XI. Precautions in handling & Certificates

操作注意事項及證明文件

PRECAUTIONS IN HANDLING 操作注意事項

1. Transportation : Do not place any heavy load or impact on SMC panels and other parts during handling. Place buffers on the parts where come in contact with vehicle or ropes.
 2. Piping : Install proper supports under pipes and do not place any over load on the tank outlet.
 3. Maintenance : Drain water from the tank when it is not used for a prolonged time.
Inspection and cleaning should be done at least twice a year to assure the water quality and safety.
- 1.勿將重物放在SMC模板上或撞擊SMC板片。
 - 2.在外接管路必需加支撐，在外接法蘭上勿加過重的負荷。
 - 3.一年內清洗及檢查水箱兩次以確保水質及安全。

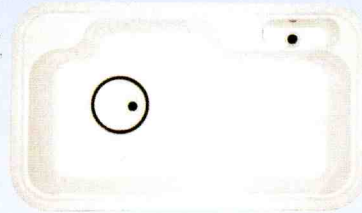
CERTIFICATES 證明文件



XI. TMC sink-bowl & Hanstone

TMC廚具

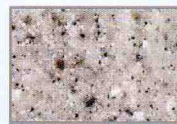
TMC SINK-BOWL



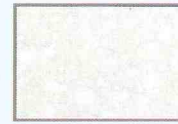
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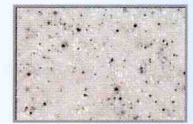
Washing-bowl



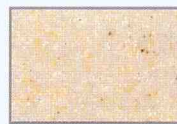
grey culch



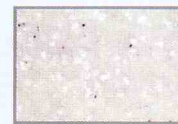
milky white



sanded grey



sanded sahara



snow culch



stone power

QUARTZ INTERIOR STONE (HanStone)



– Commercial application



– Kitchen countertops & tabletops

