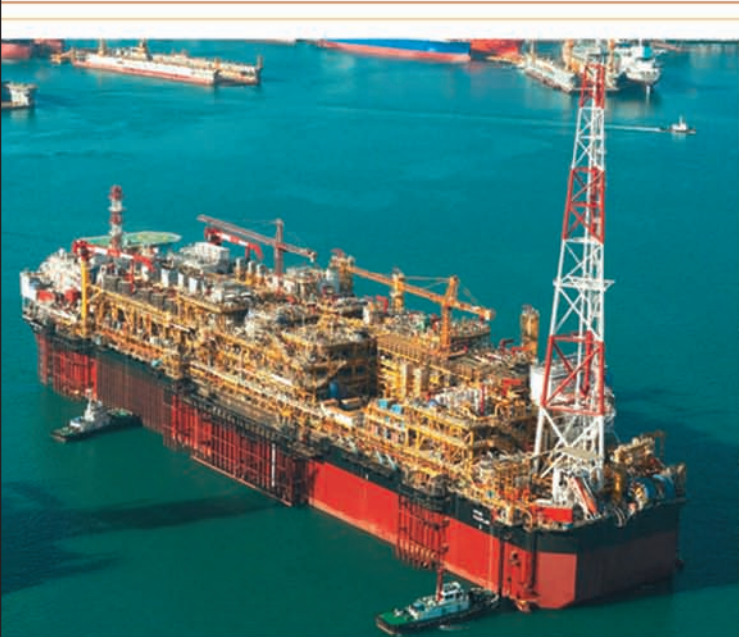


# SAMKUN CENTURY CO.,LTD.

- ★ WATER TREATMENT EQUIPMENT  
(BWTS, F.W. GENERATOR, F.W.SUPPLY UNIT, H.P. PUMP UNIT, etc.)
- ★ ON SHORE PLANT  
(WATER TREATMENT SYS, WASTE WATER TREATMENT SYS)
- ★ PIPE COATING (PE, PA, METALIZING, RUBBER LINING)





## CEO Message

First of all, we would like to cordially express our gratitude for your continuing interest and support.

Samkun Century was established in 1989, and has since advanced the innovation of new technology for more than 20 years. Our willingness and ability to take on new challenges have driven our corporate success while contributing to the development of the marine equipment industry.

We have persevered in our efforts to supply the best quality and service to our clients while always following the motto, "Always, like the beginning". We will strive to make positive changes in the environment and contribute to humanity and society for future generations.

Thank you.

President **JUNG IL KANG**

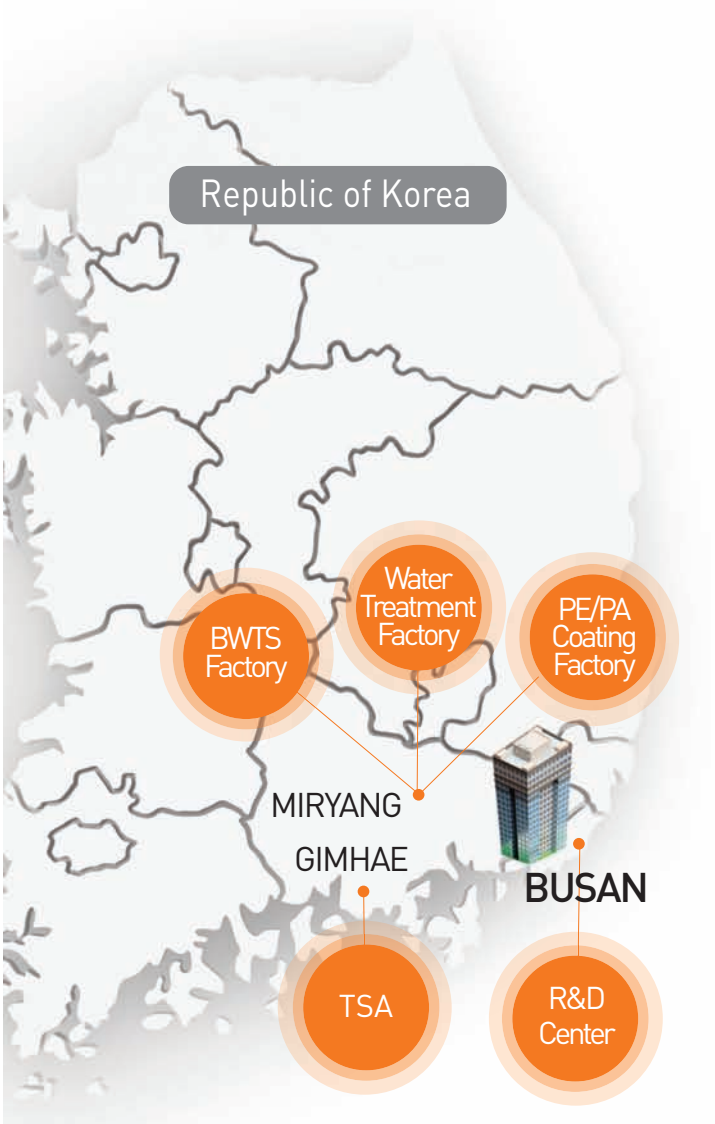


- 2017.07 Acquired RS type approval (BWTS)
- 2015.02 Acquired BV type approval (BWTS)
- 2014.10 Liberian Registry type approval (BWTS)
- 2014.01 UV sterilizer NIPH type approval (SK11-JSD)
- 2013.11 Acquired KR Type Approval (BWTS)
- 2013.10 AMS Acceptance by USCG (BWTS)
  
- 2012.07 Type Approval by Korean Government (BWTS)
- 2011.01 Acquired KUN MARK from KCL
  
- 2010.12 Selected as a membership of exemplary medium enterpriser
- 2010.10 Awarding a presidential citation
- 2010.10 Acquired FINAL Approval by IMO (BWTS)
- 2010.03 Acquired BASIC Approval by IMO (BWTS)
- 2010.03 Awarding an honor by the administer of NTS
- 2010.01 Selected as an excellent cooperative company gained Suckryu medal by DSME
  
- 2009.10 Acquired AA Class of HMD
- 2009.10 Registered as a Qualified Supplier in KOSPO
- 2009.10 Acquired K MARK from KTL
- 2009.09 UV sterilizer NIPH type approval (JSC40)
- 2009.07 Selected as clean work place by KOSHA
- 2009.07 Obtained a qualification of competitive bid Joining in the office of supply Administration
- 2009.01 Acquired ASME STAMP
  
- 2008.03 Approved of GL classification
- 2008.03 Acquired ISO9001 & ISO14001
  
- 2007.12 Awarding a first prize of venture enterprise by DSME
- 2007.08 Dolomite NIPY type approval
- 2007.08 Moved Head Office with enlargement
- 2007.06 Dolomite NSF type approval
- 2007.05 Acquired authentication of NSF
  
- 2006.07 Selected as technical innovation Enterprise
- 2006.01 UV sterilizer NIPH (JSB-1,3,5,10,20,30)
- 2006.01 Established R&D Institute
  
- 2004.09 Technical cooperation with German specialized PA coating company
- 2004.03 Registered as a cooperator along STX, SHI, DSME, HMD & HHI
  
- 2003.04 Acquired ISO 9001:2000
- 2003.04 Technical cooperation with Japanese specialized coating Company
- 2002.07 Acquired "Water"Mark which means water purifier manufacturing approved
- 2002.06 Acquired DNV Classification
- 2002.04 Acquired KSA 9001:2001
  
- 2001.10 UV sterilizer NIPH type approval (JSA-5000)
- 2001.09 Established Samkun PNC
- 2000.12 Acquired Europe Safety Standard CE Mark
- 1998.06 Moved factory with its enlargement
- 1998.04 Joined in Korea Shipbuilding Material Industry Cooperative association
- 1998.02 Converted to Corporative Institution named Sam-kun century
- 1989.11 Established Su-Hyang Industry  
(Producing Shipbuilding material & Water purifying system)

HISTORY



# Local Factory Network



R&D Center

- ▶ Technical Design
- ▶ Research & Development

8F, Sporex BD, 13, Geumgok-daero 285beon-gil,  
Buk-gu, Busan  
Tel : 82-55-338-3030 Fax : 82-55-332-7123  
E-Mail : sk@samkunok.com



BWTS/Water Treatment  
Factory/PE/PA/Rubber  
Coating Factory

- ▶ BWTS
- ▶ Pipe Spool
- ▶ Sterilizer (UV,Ozone,Silver Ion, Auto Chlorinator)
- ▶ Fresh Water Supply
- ▶ PE/PA Coating
- ▶ Rubber Coating

405, Miyul-ro, Samnangjin-eup, Miryang-si,  
Gyeongsangnam-do  
Tel : 82-55-338-3030 Fax : 82-55-325-0808  
E-Mail : sk@samkunok.com



TSA Coating  
Factory

- ▶ Metalizing (TSA)

228, Yeocha-ro, Sangdong-myeon,  
Gimhae-si, Gyeongsangnam-do  
Tel : 82-55-335-3030 Fax : 82-55-312-0685  
E-Mail : pnc@samkunok.com



Samkun Century has been a professional company based on steady growth and solid profit structure.



We have advanced the development of new technologies and have established a solid foothold in the marine equipment industry based on a solid profit structure. We started in water treatment equipment specializing by including many kinds of sterilizer for 30 years. Since then, to strengthen our competitiveness in the global market, our company has diversified into offshore plants, ballast water treatment systems, coating, painting and pipe spools.





## IMO Regulation

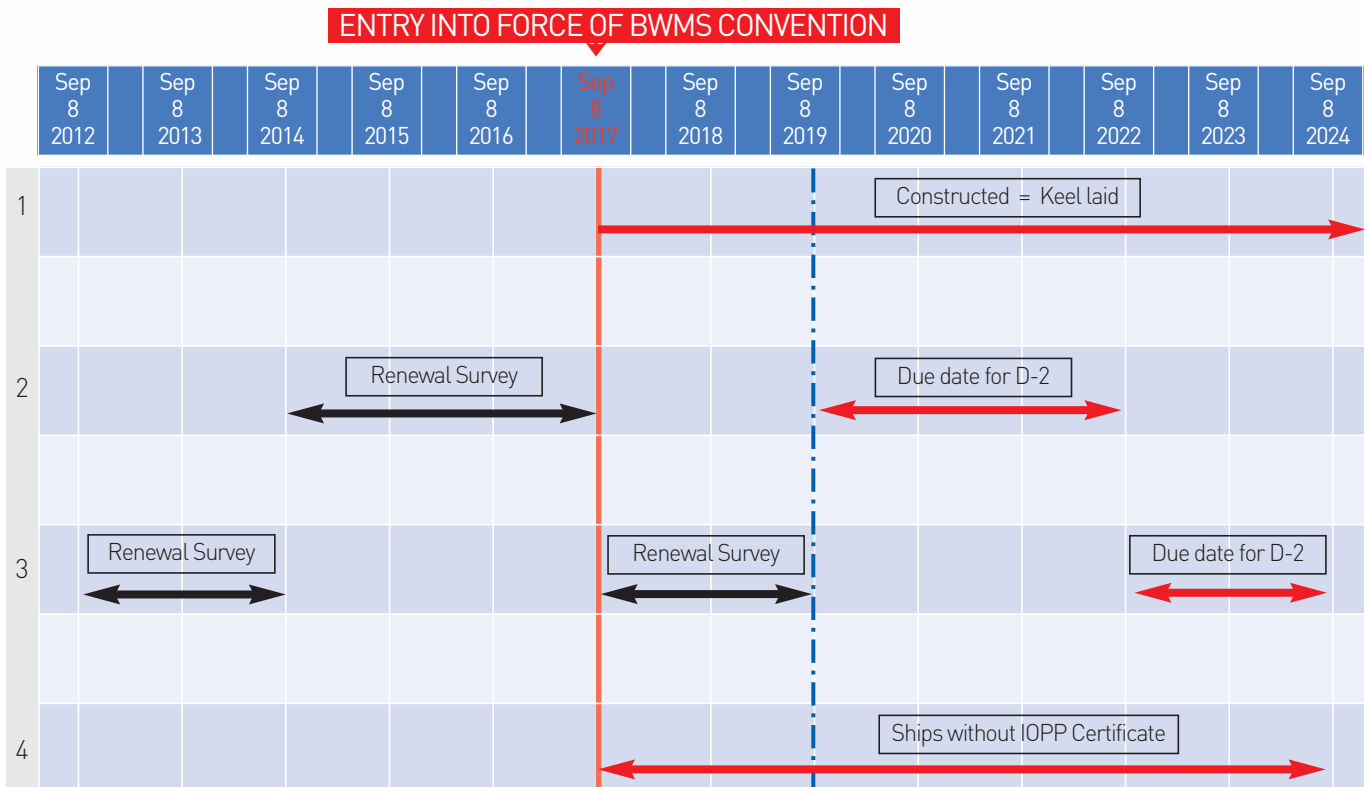
### D-2 Ballast Water Performance Standard

- ▷ Over 50 $\mu$ m : Less than 10inds/m<sup>3</sup>      ▷ 10-50 $\mu$ m : Less than 10inds/ml
- ▷ Bacteria
  - Escherichia Coli : Less than 250cfu/100ml
  - Intestinal Enterococci : Less than 100cfu/100ml
  - Vibrio Cholerea : Less than 1cfu/100ml

### Ballast Water Treatment Implementation Schedule

New Ships should have BWTS or BWMS installed starting from 2017. 09. 08

## Existing Ships (2017. 09. 08) D-2 Implementation Schedules



1. Ships constructed on or after 8 September 2017 shall comply with the D-2 standard for ships delivery (Constructed = Keel Laid).
2. In the case where a previous IOPP renewal survey had been completed between 8 September 2014 and 7 September 2017, the ships shall comply with the D-2 standard by the first IOPP renewal survey after entry into the force of the Convention.
3. In the case where a previous IOPP renewal survey had been completed between 8 September 2012 and 7 September 2014, the ships shall comply with the D-2 standard by the second IOPP renewal survey after entry into the force of the Convention.
4. Ships not subject to the IOPP renewal survey (normally less than 400GT) shall comply with the D-2 standard by 8 September 2024.



ARA PLASMA BWTS, which was developed by the SAMKUN CENTURY Company, acquired Basic approval for the ballast water treatment system during the MEPC 60 (MEPC 60/2/15) in March 2010 and Final approval during the MEPC 61 (MEPC 61/2/5) in September 2010.

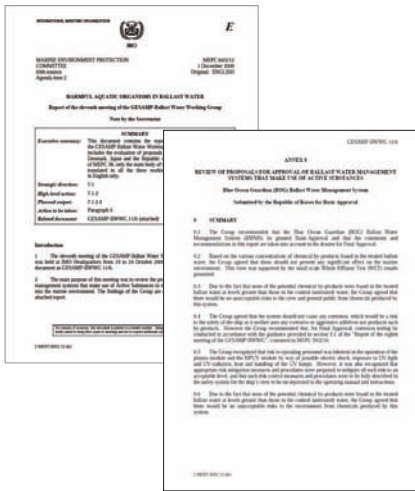
**Basic Approval (Mar. 2010)**



**Final Approval (Oct. 2010)**



**Korean Government (Jul.2012)**



**KR Class (Dec.2013)**



**BV Class (Feb.2015)**



**RS Class (July.2017)**



**USCG AMS & USCG T/A LOI**





## Filtration



- ▶ It removes large particles and organisms larger than 50  $\mu\text{m}$  in ballast water.
- ▶ It automatically removes any substances in filter cartridges by housing an internal pressure increase.
- ▶ It is highly accurate and reliable.
- ▶ Specification (for 250m<sup>3</sup>/hr)
  - Mesh size : 50  $\mu\text{m}$
  - Design pressure : 6.6 bar
  - Max. working temp : 50 °C
  - Power Source : 3 Phase, AC380/440V 50/60Hz

## Low Voltage Plasma



- ▶ It generates plasma underwater by using a low-voltage generator.
- ▶ A pressure shock wave is produced by a high-energy plasma arc.
- ▶ Shockwave destroys targeted micro-organisms by causing physical damage to their cell membranes underwater.
- ▶ Specification (for 250m<sup>3</sup>/hr)
  - Power Source Input : 3Phase, AC380/440V 50/60Hz
  - Output : 2kW
  - Plasma chamber : Carbon steel & PE coating

## MPUV



- ▶ It has a high performance in disinfecting bacteria and viruses.
- ▶ There are no formations of residual toxins or harmful substances.
- ▶ Uses a wavelength of UV-C(200~280nm) to sterilize microorganisms.
- ▶ Specification (for 250m<sup>3</sup>/hr)
  - UV sensor : 0~500mW/cm<sup>2</sup>
  - Temperature sensor : PT-100
  - Wiper Seal : EPDM
  - UV chamber : STS 316L



## Control Panel



- ▶ Users conveniently operate “ARA PLASMA BWTS” by touchscreen.
- ▶ The status of each module and any alarm messages are easily monitored in realtime.
- ▶ The Control panel consists of four parts; monitoring & operating, main switch, emergency stop switch and cabinet ventilators.
- ▶ Specification (for 250m<sup>3</sup>/hr)
  - Control panel type : PLC type (Auto)
  - Power Source : AC 230V, 1Phase & DC 24V
  - Frequency : 50/60Hz
  - Color : Munsell no. 7.5BG 7/2

## SHOP TEST



## MODEL

No	Model	Capacity
1	ARA-011	100m <sup>3</sup> /hr
2	ARA-017	150m <sup>3</sup> /hr
3	ARA-028	250m <sup>3</sup> /hr
4	ARA-039	350m <sup>3</sup> /hr
5	ARA-063	550m <sup>3</sup> /hr
6	ARA-092	800m <sup>3</sup> /hr
7	ARA-126	1,100m <sup>3</sup> /hr
8	ARA-150	1,300m <sup>3</sup> /hr

## Advantages

### Eco-Friendly

- No chemical substances used
- No by-products generated
- No neutralizing agents used, therefore no secondary pollutants

### Convenience

- Simple maintenance
- Easy installation to newly constructed and existing vessels
- Easy operation by an automatic control system

### Cost-Effective

- Competitive Price
- Compact size with minimal foot print
- Low Power Consumption

### Advantage

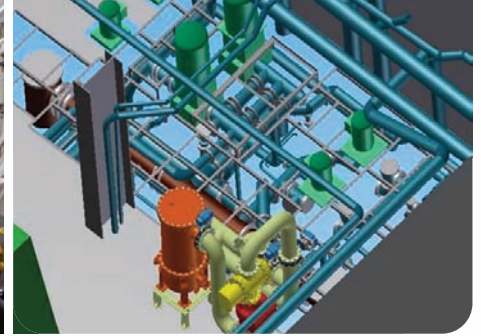
- Exceptional performance of the ARA PLASMA BWTS in high levels of turbidity
- Differentiation of leakage sensor in MPUV chamber
- Use of inner polyethylene coating pipes

### Safety

- Safety for the marine environment
- Safety for your assets and people



## 1. Pre-survey & Design



## 2. Installation on-board



## 3. Commissioning & Training





# Offshore Plant Division



Since 1989, Samkun Century has manufactured and supplied Fresh water & Portable water treatment systems to our clients. We have always strived to be innovative by developing new products; products like our UV sterilizer, Re-hardening Filter, and Silver Ion sterilizer. And because of our drive for excellence, we now supply technology-intensive Fresh Water Supply Units.



UV STERILIZER  
(TOTAL PAZFOR FPSO)



CALORIFIER  
(TOTAL PAZFOR FPSO)



HIGH PRESSURE  
WASHING PUMP UNIT



HYDROPHORE TANK  
(TOTAL PAZFOR FPSO)



SEA WATER AUTO FILTER



INVERTER TYPE  
HYDROPHORE SYSTEM



PRESSURE VESSEL



P. P COVER



GREASE TRAP



SEA WATER SUPPLY PLANT  
(SEA WATER AUTO FILTER)



	OWNER	PROJECT	SHIPYARD		OWNER	PROJECT	SHIPYARD
1	BP	Atlantis Rig	DSME	41	TANK PACIFIC	Drillship	SHI
2	CHEVRON	Agbami FPSO	DSME	42	STENA	Drillship	SHI
3	SEA DRILL	Drill Rig	DSME	43	MOSVOLD	Drillship	SHI
4	ODFJELL	Semi-sub Rig	DSME	44	TANK PACIFIC	Drillship	SHI
5	PETROSERV	Drill Rig	DSME	45	NEXUS	FPSO	SHI
6	ODFJELL	semi-sub Rig	DSME	46	PETROBASS	Drillship	SHI
7	TRANSOCEAN	Drillship	DSME	47	STENA	Drillship	SHI
8	GRUPO R	Drill Rig	DSME	48	PRIDE	Drillship	SHI
9	ODFJELL	DP Moored Rig	DSME	49	STENA	Drillship	SHI
10	TMT	Drillship	DSME	50	TANK PACIFIC	Drillship	SHI
11	ODBRECHT	Drillship	DSME	51	SAIPEM	Drillship	SHI
12	PETROSERV	Drill Rig	DSME	52	SCHAHIN	Drillship	SHI
13	TOTAL	Pazflor FPSO	DSME	53	BP	SKARV FPSO	SHI
14	TOTAL	CLOV FPSO	DSME	54	VASHI	ONGC	SHI
15	RWEI	Wind Turbine Installation Vessel	DSME	55	QGOG	Drillship	SHI
16	STATOIL	Semi-rig	DSME	56	SEA DRILL	Drillship	SHI
17	EXXONMOBIL	ARKUTUN-DAGI Fixed Platform	DSME	57	TEEKAY	Petrojarl Knarr FPSO	SHI
18	TRANSOCEAN	Drillship	DSME	58	OCEAN RIG	Drillship	SHI
19	ATWOOD	Drillship	DSME	59	MAERSKDRILLING	Drillship	SHI
20	VANTAGE	Drillship	DSME	60	SEA DRILL	Drillship	SHI
21	ODBRECHT	Offshore Pipe Laying Support Vessel	DSME	61	ENSCO	Drillship	SHI
22	SEA DRILL	Rig	DSME	62	OCEAN RIG	Drillship	SHI
23	PETRONAS	LNG FPSO	DSME	63	STATOIL	FSU	SHI
24	TRANSOCEAN	Drillship	DSME	64	QGOG	Drillship	SHI
25	TRANSOCEAN	Drillship	HHI	65	SEA JACKS	WTIV	SHI
26	GLOBAL SANTA FE	Drillship	HHI	66	ENSCO	Drillship	SHI
27	DOCKWISE, NETHERLAND	Semi sub heavy transport vessel	HHI	67	STATOIL MARINER	FSU	SHI
28	DEAWOO ENGINEERING	SHWE Field	HHI	68	PDC	Drillship	SHI
29	WOODSIDE ENERGY LTD.	NRB PLATFORM	HHI	69	STATOIL	Drilling Jack-up	SHI
30	NOBLE	Drillship	HHI	70	SHELL	Prelude LNG FPSO	SHI
31	DIAMOND	Drillship	HHI	71	TOTAL	Egina FPSO	SHI
32	SEA DRILL	Semi sub drilling rig	HHI	72	TECHNIP	Pipe Layer	SHI
33	DOLPHIN	Drillship	HHI	73	I00C	FSU	STX
34	ROWAN	Drillship	HHI	74	NOBLE	Drillship	STX
35	SEA LION	Multi Purpose Offshore Construction Vessel	HHI	75	PETROSERV	FDPSO Dynamic Producer	STX
36	EDDA	Offshore accommodation Vessel	HHI	76	CHEVRON MODEC	FPSO	SINGAPORE
37	DIAMOND	Drillship	HHI	77	OCEAN APEX	Semi sub mersible drillship	SINGAPORE
38	TOTAL	Moho Nord FPU	HHI	78	SEADRILL	Drillship	SINGAPORE
39	COROCORO	FPSO	SHI	79	PETROBRASS / TANKPACIFIC	FSO	CHINA
40	ENFIELD	FPSO	SHI				



## FRESH WATER SUPPLY PLANT

- ▶ Simple Construction
- ▶ Easy Installation
- ▶ Easy Maintenance
- ▶ Easy Operation

The fresh water supply unit supplies fresh, warm and cold drinking water to the crew and consists of a technical system of a water tank, sterilizer, re-hardening filter(mineralizer), calorifier and pumps.

- ▶ Capacity : 1,000 ~ 10,000 L/hr

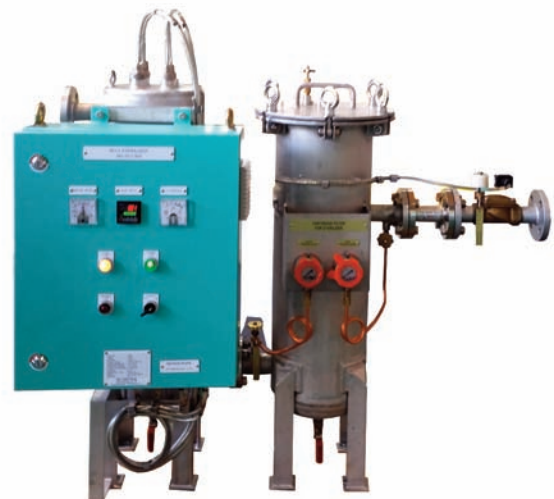
## AUTO CHLORINATOR (STERILIZER)



The function of the Auto Chlorinator is to provide chlorine to water in order to sterilize water which contains a variety of bacteria, bacillus, etc. HOCL & OH Radicals are formed when chlorine dissolves in water. And they have a strong oxidizing power to destroy microorganisms during disinfection. This method can disinfect water with ease and over long periods of time.

- ▶ Capacity : 1,000 ~ 50,000L/hr

## UV STERILIZER



The UV sterilizer of Samkun Century has a superior operating system. It protects mineral components, but disinfects typical viruses, colitis germs, and bacteria in water. Emission of ultra violet rays : 253.7nm (Most effective wavelength for removing bacteria)

- ▶ Capacity : 1,000 ~ 30,000L/Hr





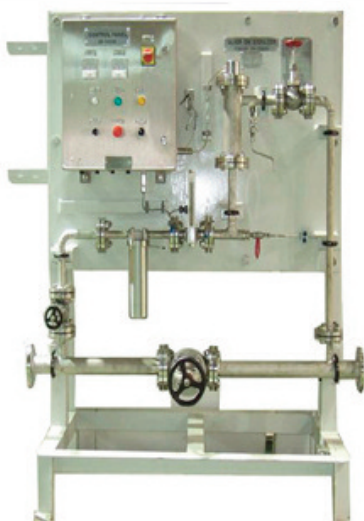
### F.W GENERATOR (RO Type)

Reverse Osmosis is most commonly known for its use in drinking water purification from seawater, removing salt and other substances.

Reverse Osmosis is the process of forcing a solvent through a membrane from a region of high solute concentration to a region of low solute concentration by applying a pressure in excess of the osmotic pressure.

▶ Capacity : 5 Ton/day ~ 200 Ton/day

### SILVER ION STERILIZER



The bactericidal effect of silver has been useful knowledge since ancient times. Silver foils were used for treating wounds and silver vessels made it possible to store water. We supply a silver ion sterilizer which removes microorganisms by a catalytic

▶ Capacity : 1,000 ~ 30,000L/Hr

### OZONE GENERATOR (STERILIZER)



Ozone has been used for disinfection of drinking water in the municipal water industry for over 100 years. Ozone can be used for water and air treatment. When ozone disinfects or breaks down harmful bacteria or pollutants, there are generally no by-products. In a short period of time, all odors are simply removed.



## MINERALIZER (RE-HARDENING FILTER)

The water which is generated by a freshwater generator, can not be used as drinking water directly, because of its pH value, hardness, and insufficient mineral components.

Therefore using a mineralizer, increases hardness, pH-value, and mineral components.

### - Maintenance -

- ▶ Dolomite & re-hardening materials are usually changed 3 times per month.  
(If the pH-value is lower than 6.5, a recharging activity must be performed)
- ▶ Capacity : 1,000 ~ 30,000 L/hr

## Hydrophore system of VFD (Variable Frequency drive)



A specific type of hydrophore system is needed for the efficiency of maintenance and saving energy. Most conventional hydrophore tanks is too heavy and occupies too much space.

A VFD system is used to control process flow without the use of a separate controller. Suitable sensors and electronics are used to interface the driven equipment with the VFD.

## HYDROPHORE TANK



The Hydrophore tank is a pressurized vessel that is used for drinking or the technical water supply.

The hydrophore tank is a welded steel interior which is specially coated with epoxy (PE coating or Rubber coating), a manhole is provided on the tank for inspection or the cleaning of the interior.

All products test the welding point by penetration inspection.

The Hydrophore unit is available in sizes from 100L to 5000L.





## HOT WATER CALORIFIER

In the galley, every time hot water is needed, our Hot Water calorifier is the perfect solution. It is used for showers, cooking, feeding etc.

Calorifiers supplied for ships are specially designed to be durable from corrosion and vibration, with a long life span, and easy maintenance.

- ▶ Capacity : 50 ~ 30,000 L/hr
- ▶ Temperature : 30~ 97 °C

## AIR DRYER



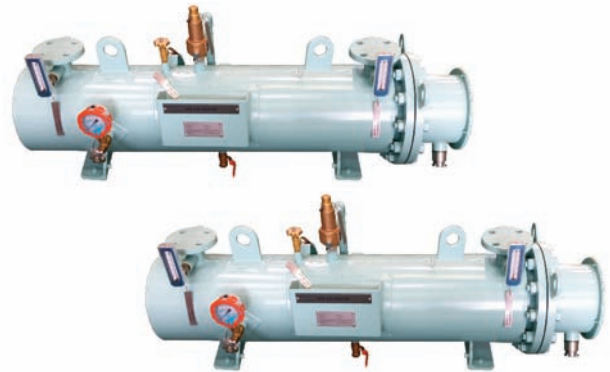
**AIR DRYER (HEATLESS TYPE)**

**REFRIGERATED AIR DRYER**

Excessive water, and atmospheric contaminants in compressed air can cause a variety of operational problems for users of compressed air. These include freezing of outdoor airlines, corrosion in piping and equipment, malfunctioning of pneumatic process control instruments, fouling of processes and products, and more.

To prevent these problems, an air dryer is used for removing water vapor from compressed air.

## HEATER



### LO PRE-HEATER

It makes proper viscosity of lubricating oil for the purifier and ME/GE by heating lubricating oil at a constant temperature.

### FO PRE- HEATER

Pre-heating lowers the viscosity of heavy fuel so that it can be properly atomized by the burner.

### M/E JACKET PRE-HEATER

It keeps cooling water at a constant temperature, when the engine is stopped due to repairs. This is the way to prevent problems which can occur by lowered temperature.



## DRINKING WATER FOUNTAIN

The Drinking water fountain is composed of a compressor, condenser, evaporator, silver ion filter, etc. The drinking water provided from the drinking water fountain is directly connected to the fresh water line. Also, the drinking water fountain is able to provide healthy and fine tasting water due to a Silver Carbon Filter which consistently sterilizes its contents. Silver carbon is added to improve the continuity of sterilization.

- ▶ Floor stand type
- ▶ Wall mount type
- ▶ Cold water fountain
- ▶ Hot & Cold water fountain

## HOT WATER BOILER



The Hot Water boiler is a small electronic appliance used for boiling water and maintaining it at a constant temperature in the galley.

- ▶ Capacity : 10L
- ▶ Wall mount type

## GREASE TRAP



The Grease Trap separates the grease and solids from waste water in the galley.

It is typically small enough to be installed beneath or adjacent to a sewer line.

- ▶ Capacity : 20GPM





## FAN HEATER

The Fan heater works by using a fan to pass air over a heat element.

The Portable type is for ease in moving with a stainless steel heating element and all devices provide a dual protection against overheating.

It has a built-in thermostat and regular power, and a powered whole metal casing cover to resist rust.

- ▶ Heating element : Stainless Steel
- ▶ Adjustable thermostat control Overheat protection
- ▶ With Fan & Cooling
- ▶ Free standing & Portable type

## EMERGENCY EYE WASH & SHOWER

The Emergency eye wash & shower is essential equipment when using chemicals and hazardous substances.

Its purpose is to reduce workplace injury and keep workers away from various dangers.

- ▶ Durable - Excellent raw material / Anti corrosion
- ▶ Reliable - High quality
- ▶ Easy Installation



## Water Treatment System for Onshore Plant

INSTALLATION VIEW



- ▶ Main product : CPP SYSTEM
- ▶ Project : S-Oil Residue Upgrading Complex Project
- ▶ Client : S-OIL





**INSTALLATION VIEW**

- ▶ Main product : Water Maker  
(1,000m<sup>3</sup>/day \*6 train, BWRO)  
Pe coating pipe etc.
- ▶ Project : Karbala Refinery Project
- ▶ Client : KOLON e Engineering



**INSTALLATION VIEW**



- ▶ Main product : Demineralized Water Package
- ▶ Project : NSRP Complex Project
- ▶ Client : KOLON e Engineering



## Water Treatment System for Onshore Plant

### INSTALLATION VIEW



- ▶ Main product : Side Steam Filter & Portable Water System
- ▶ Project : S-Oil Residue Upgrading Complex Project
- ▶ Client : S-OIL





INSTALLATION VIEW



- ▶ Main product : Demi Water Treatment System
- ▶ Project : S-Oil Residue Upgrading Complex Project
- ▶ Client : S-OIL

## Waste Water Treatment System for Onshore Plant

INSTALLATION VIEW



- ▶ Main product : Biological treatment  
(3,000m<sup>3</sup>/day \*2 train)
- ▶ Project : Karbala Refinery Project
- ▶ Client : KOLON e Engineering





# UNIT MODULE (SKID)

F.O. SUPPLY UNIT (FOR M/E)



F.O. SUPPLY UNIT (FOR G/E)



FRESH WATER SUPPLY PLANT



FRONT PIPE SKID



F.O. SUPPLY UNIT (FOR M/E)



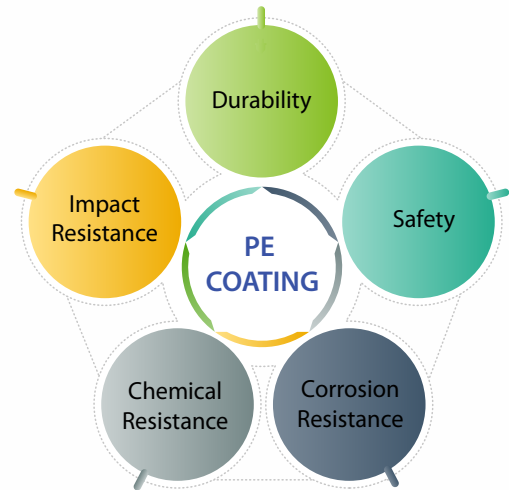
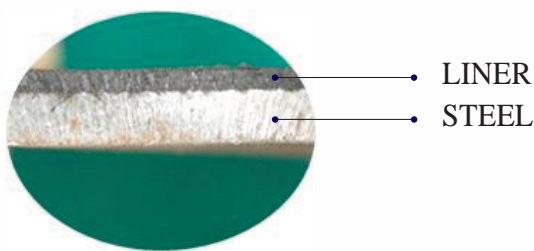
F.O. SUPPLY UNIT (FOR G/E)



The Coating division supplies outstanding products which have both excellent mechanical properties from steel pipes and rust prevention properties from plastic. The Coating is resistant to seawater and organic solvents, and also doesn't contain dioxins and VOCs (Volatile organic compounds).

We maximize technical efficiency to expand usage of PE/PA coating from sea to land based on our core PE, PA Coating Technology.

## PE COATING (POLYETHYLENE)



PE Coating has been applied to Ships, Off shore plants , Power Plants, Water-Supply pipes, and Steel tube plants. Main products especially have coated steel pipes for Vessels, Offshore plants and covered-steel pipes.

### Applications

- ▶ Sea water line for Ship
- ▶ Offshore Plant
- ▶ Power Plant
- ▶ Cable Tray
- ▶ Water Pipe for Industrial
- ▶ Water Supply & Sewage Pipe
- ▶ Chemical Plant





Samkun Century has a steel fabrication shop, Shot shop, Painting shop, and coating shop, and perform from various designs to construction based on accumulated technological Know-how and experience.

## RUBBER COATING

This material has a large number of excellent characteristics. Our Rubber is flexible and resilient, strong, and easy to manufacture. Our rubber coated products have many advantages such as excellent anti-chemical properties, anti-corrosion properties and outstanding adhesion.

RUBBER PRODUCTS





## METALIZING COATING



A Metalizing coating is an excellent way to protect iron and steel from corrosion. It is done at a reasonable cost, like painting, but with a long life span. Based on accumulated technological know-how and experience, we offer wind power parts to clients famous for wind power generation; businesses like Gamesa, Vestas Hyosung and Dongyang e&c.

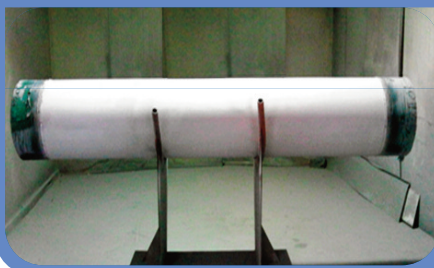
### CS PIPE

Shipbuilding & Offshore project



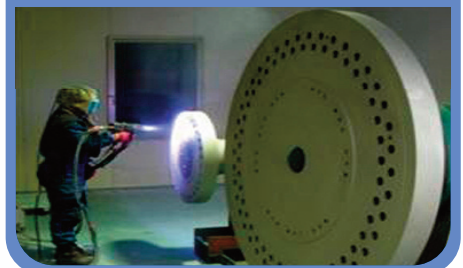
### SUS PIPE

Shipbuilding & Offshore project



### METALIZING PROCESS

Use : Wind power Size : 2MW



## PA COATING (POLYAMIDE)

The best merits of PA Coating are its high physical intensity and low gas permeability. Therefore, PA coating is suitable for high-quality products and is also capable of working on complicated compositions. At the same time, it is harmless to humans.



## TEFLON COATING

Teflon has unlimited application range from the general manufacturing industry, to high-tech semiconductors, to even the aerospace industry.



# Worldwide Network



## EUROPE

**Greece**  
Sea Power Hellas  
Tel : 30-2104284170

**Netherlands**  
Hyundai Engine Service  
Tel : 31-10-447-3457

**Norway**  
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**Brazil**  
Metalock  
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## ASIA

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Richtop Enterprise  
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**Japan**  
Ushio Reinetso Co., ltd.  
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## AFRICA

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## MIDDLE EAST

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**Oman**  
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