

CORPORATION PROFILE



DAEHEUNG COOLER CO., LTD.

OIL COOLER, HEAT EXCHANGER & PRESSURE VESSEL

with ISO9001, CSEL, ASME 'U' & High Pressure Gas Special Equipment



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OIL COOLER, HEAT EXCHANGER & PRESSURE VESSEL
with ISO9001, CSEL, ASME 'U' & High Pressure Gas Special Equipment

Head Office : 467, Eumhyeon-ri, Naechon-myeon, Pocheon-si, Gyeonggi-do, Korea

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Busan Office : #1001, Hyunsung Nobless Officetel 1486-3, Geoje-dong, Yeonje-gu, Busan, Korea

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1. GENERAL PROFILE

* Company Name : **DAEHEUNG COOLER CO., LTD.**

* President Name : **JANG, Suk-Keun**

* Date of Established : **May. 01, 1978.**

* Registration Number of Company : **127 - 81 - 17936**

* Number of Employees : **60.**

* Company Area : **Ground Area : 9650m² , Building Area : 4550m²**

* Description of Business : **Oil Cooler, Gas Cooler, Heat Exchanger and Pressure Vessel.**

* Certificates

: Certificate of **ISO 9001**. (Jul. 14, 1999, Cert. No. : JK-13321)

: Letter of **Designation as a Quality Assuring Company.**

(May. 1, 2005, Designation No. : 91MPI-M-00047)

: Certificate of **ASME "U-Stamp"**. (Feb. 7, 2005, Cert. No. : 34,953)

: Certificate of **CSEL "A2"**. (Sep. 2, 2009, Cert. No. : TS2200844-2013)

: Certificate of **KGS "Manufacturer Approval of High Pressure Gas Special Equipment"**.

(Jun. 21, 2006, No. 2006-030403)

* etc : Joint Research for Development of Heat Exchange System,

Part Items & Heat Pipe with University Laboratory.

* **Head Office & Factory Address : 467, Eumhyeon-ri, Naechon-myeon, Pocheon-si,**

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Yeonje-gu, Busan, 611-070, KOREA

Tel.: **+82-51-507-8680 ~ 2**

Fax.: **+82-51-507-8684**

2. COMPANY HISTORY

- * 1978 : **DEAHEUNG COOLER CO., LTD.** was established.

- * 1983 : **Engine operated Heat Exchanger** was successfully developed by the company.

- * 1988 : **Low Fin Tube**, a newly developed and started to use it in commercial production.

- * 1991 : Acquired “**Q**” mark from Korea Machinery-Meter and Petrochemical Testing & Research Institute.

- * 1997 : Jointly research with University laboratory. (**Automatic Design of Heat Exchanger**)

- * 1998 : Jointly research with University laboratory. (**Energy Saving Heat Exchanger**)

- * 1999 : Certificate of **ISO 9001** issued by Korea International Management System.

Acquired certificate of ISO 9001 issued by BM TRADA.

- * 2005 : Acquired certificate of **ASME 'U-Stamp'**.

Acquired certificate of **CSEL 'D1, D2'**

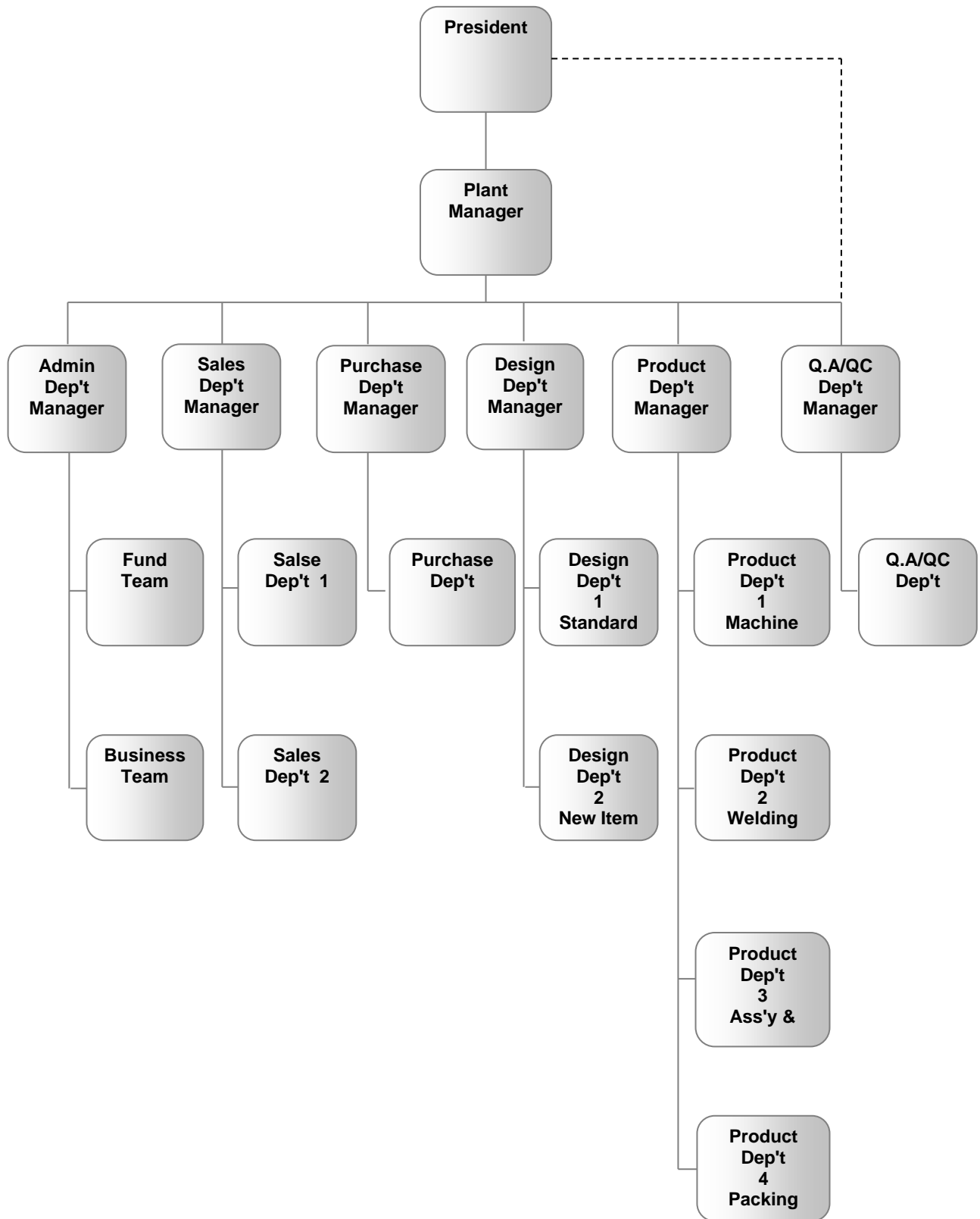
- * 2006 : Acquired certificate of **KGS “Manufacturer Approval of High Pressure Gas Special Equipment”**.

- * 2007 : **The second factory** was built at the adjacent area from the first factory to accommodate the increasing volume of required production.

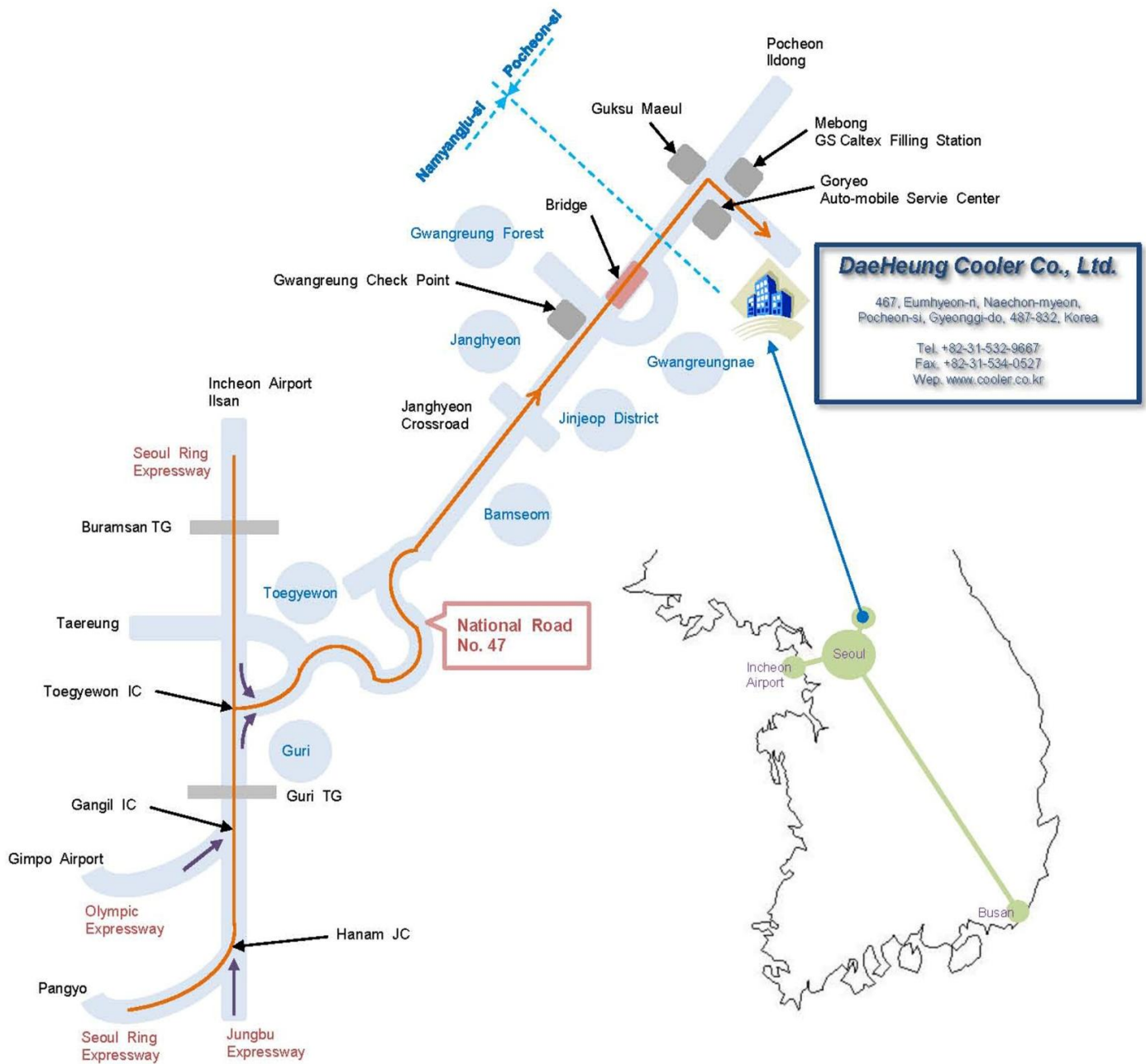
- * 2008 : Upgraded certificate of **CSEL 'A2'**

3. ORGANIZATION

* Number of Employees (60)

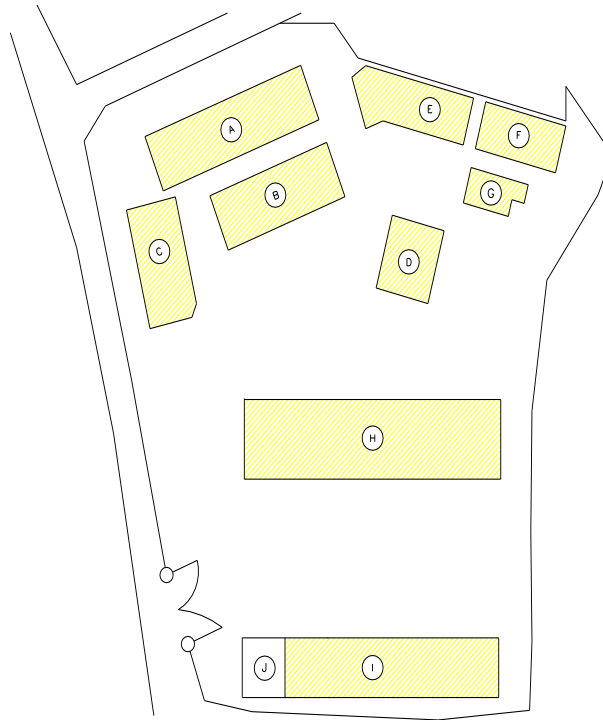


4. ROAD MAP



From	Distance	Time
* Incheon Int'l Airport	100 km	90 min.
* Gimpo Int'l Airport	60 km	56 min.
* Seoul Station	53 km	61 min.
* East Seoul Bus Terminal	36 km	40 min.

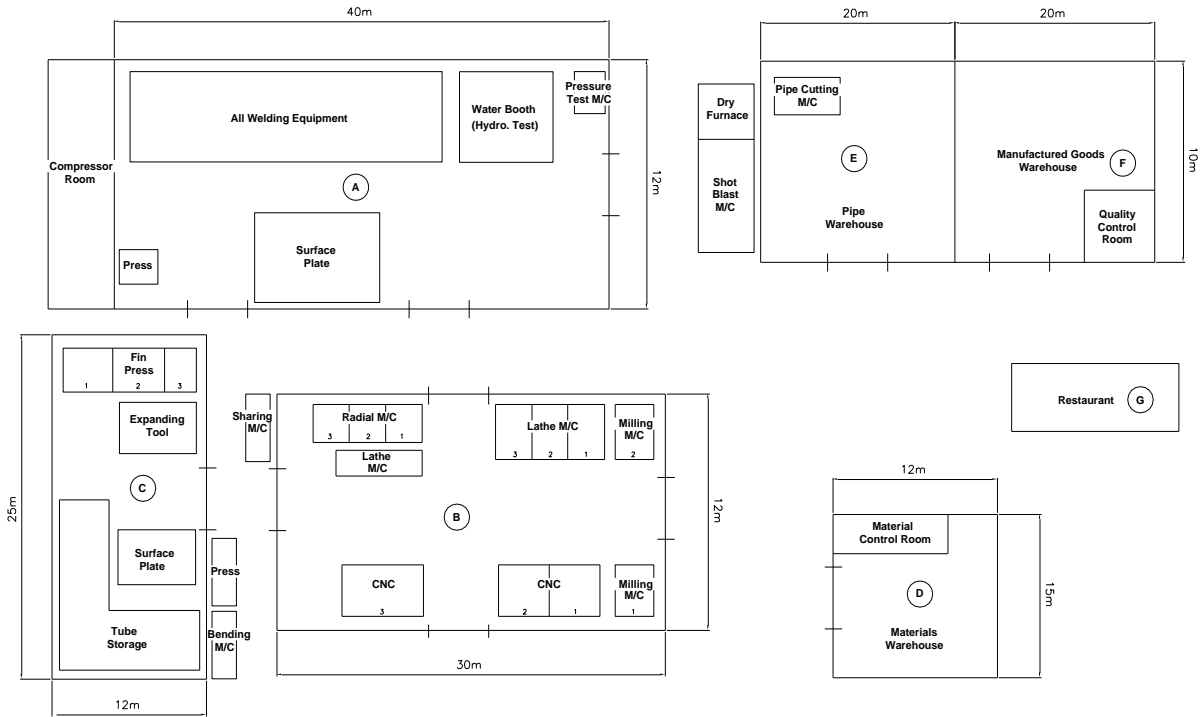
5. COMPANY LAYOUT



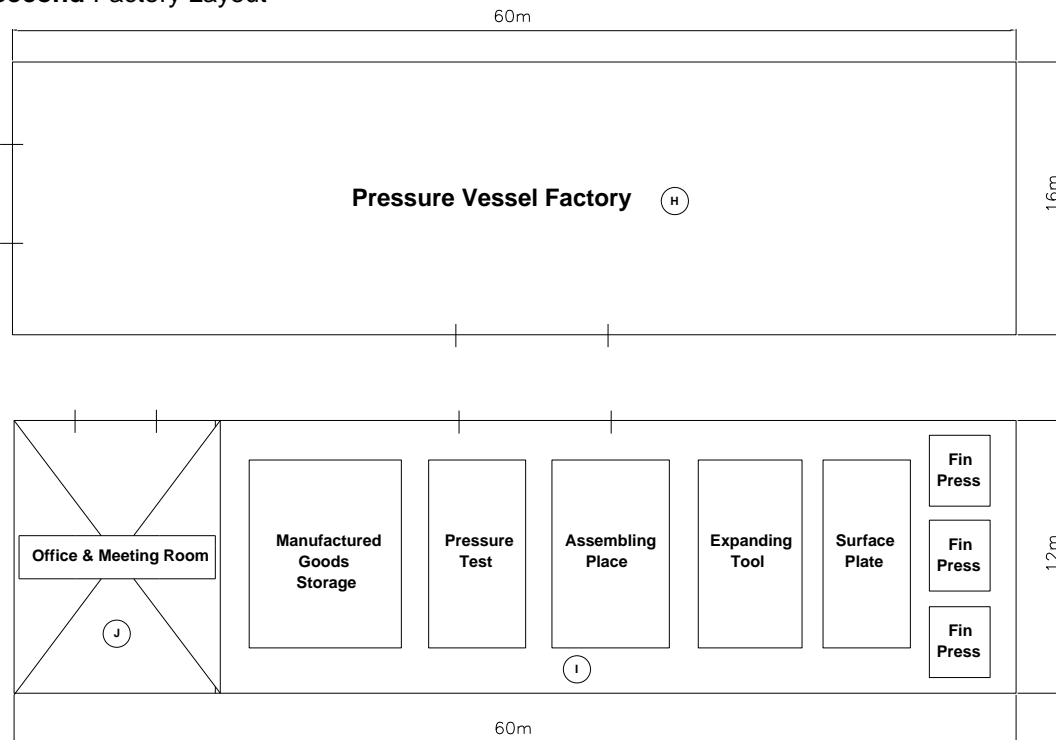
A	Welding and Assembling Area
B	Machining Room
	Main Office
C	Fin Press Room
D	Material Warehouse
E	Pipe and Low Meterials Storage
F	Packing and Manufactured Goods Storage
G	Restaurant
	Dormitory
H	Pressure Vessel Factroy
I	Fin Press, Assembling, Pressure Test Area
	Manufactured Goods Storage
J	Office and Meeting Rooms

5. COMPANY LAYOUT

* First Factory Layout



* Second Factory Layout



6. LIST OF FACILITIES

Facility	Description	Capacity	Maker	Q'ty
Machine	CNC	AJV-25/405	Hyundai	3
		ACE-AV35	DHC Made	
		SMDP-3500G	Shin	
	Lathe	NL 480x1000	Namsun	5
		HL580X2000	Hwachun	
		900*4000	DHC Made	
		580*1000	-	
		460*1000	-	
	Milling	VH1500 No.2	Hanil	3
		DMB-U5 No.5	Doosan	
		DMB-U5 No.5	Doosan	
	Radial Drill	DRD-960	Doosan	3
		NSR-1500	Namsun	
		1500R	DHI	
	Table Drill	KDS-390	Chilchil	9
		DBU 420	Woochang	
		STD-410	Samchunri	
	Drill/Tap	TG-420	Nambuck	
	Tapping	CT-12	-	
	Benchless	-	Bookuk	1
	Power Press	DSP-45	Dongshin	8
DSP-105		-		
1.5 ton		Kukjae		
Press	2kW	DHC Made	8	
	1.5 ton	Dongsan		
Oil Pressure Cap Press	-	DHC Made		
Oil Pressure Press	WCP-60	Woori		

6. LIST OF FACILITIES

Facility	Description	Capacity	Maker	Q'ty
1E+22	Tube Cut	10 ~ 50	Hanhyun	4
	Round Cutter	IK-70	Koike Sanyo	
	Nonferrous Pipe Cutter	-	DHC Made	
	Pipe Cutter	HC-275SA	Hanhyun	
	Conta	DV-450	Daese	1
	Sharing	8'	Dongbang	1
	Inner Fin Tube Made	-	DHC Made	2
	Rolling Fin Tube Made	-	-	
	Band Sawing	HA-500	Shinki	3
	Bender	6'	Dongil Ind.	
	Pipe Bend	135kW	CE	
	Low Fin Tube Maker	12.7	DHC Made	1
	DHI Expander	-	Alps	4
	Tube Expander	135kG	Maus Italy	
	I/C Tube Expander	-	DHC Made	
	2 Lines Expanding	OIL PRESS.	Samil	
	Shot Blast	HC-15	Doosung	1
	Leak Test	-	DHC Made	1
	H/E Test	360ℓ/min	Hanil	1
	Water Booth	-	DHC Made	1
	Dry Furnace	-	DHC Made	1
	Fusing Heating Furnace	1 m ²	DHC Made	1
	Hacksawing	-	-	1
Welding Machine	TIG / Argon Weld	350A	Sewoo	3
		500A	Sewoo	5
			Seobang	
			Hankook	

6. LIST OF FACILITIES

Facility	Description	Capacity	Maker	Q'ty
Welding Machine	CO2 Weld	350A	Seowoo	3
		500A	Hankuk	5
	A/C Arc Weld	10kW	Keukdong	2
		20kW	Daeyoung	1
	Spot Weld	100A	Seowoo	5
	Inverter Plasma	AIR -CUT61A	Seobang	2
		HPL-120P	Hankuk	3
	Dry Oven	-	-	1
	Dry Portable Oven	-	-	5
Heavy Equipment	Compressor	3 HP	Hyupjin	1
		10 HP	Chunil Comp.	1
		10 HP	Myungsuri	2
	Screw Compressor	50 HP	Yoochang	1
	Gantry Crane	20 ton	-	1
	Over Head Crane	10 ton	Keukdong	1
		5 ton	Haeduck	5
		2.9 ton	Keukdong	1
		2.8 ton	Keukdong	2
		2.8 ton	Namsung	
		1ton	Keukdong	4
		1 ton	Panda Mac	
Oil Pressure Jockey	-	DHC Made	2	
Rotray Phase Changer	10 KUA	Dongkang	1	

7. MEASURING & TEST EQUIPMENT LIST

	Equipment Name	Specification	Maker	Q'ty
Measuring & Test	Pressure Gauge	0 ~ 20 kgf/cm ²	Wise	3
		0 ~ 35 kgf/cm ²	Wise	3
		0 ~ 50 kgf/cm ²	Wise	2
		0 ~ 100 kgf/cm ²	Wise	2
	Dial Height Gauge	0 ~ 600 mm	Mitutoyo	1
	Vernier Calipers	0 ~ 300 mm	Mitutoyo	5
		0 ~ 600 mm	Mitutoyo	1
	Digital Vernier Calipers	0 ~ 200 mm	Mitutoyo	2
	Outside Micrometer	0 ~ 25 mm	Mitutoyo	1
		25 ~ 50 mm	Mitutoyo	1
	Digital Outside Micrometer	0 ~ 25 mm	Mitutoyo	1
	Ultrasonic Thickness Gauge	0 ~ 200 mm	Time / TT100	1
	Temperature Controller	400 °C	Hanyoung / HY-5000	1
	AC/DC Clamp Meter	600V / 400A / 300Ω	Center / 201	1
		600V / 2000A / 40MΩ	Center / 201	1
	Digital Thermometer	-200 ~ 1370 °C	Center / 300	1
		-50 ~ 400 °C	Center / 300	1
	Coating Thickness Gauge	0 ~ 1500 μm	Elcometer	1
	Dial Gauge	0 ~ 10 mm	Mitutoyo	2
	Cylinder Gauge	0 ~ 10 mm	Mitutoyo	2
	Welding Thickness Gauge	0 ~ 40 mm	Sangbo Corp.	1
	Tubular Inside Micrometer	50 ~ 1000 mm	Mitutoyo	1
	Hydro. Pump	100 kg/cm ²	Chilsung / T-300N	1
350 kg/cm ²		Chilsung	1	
Black Light	-	-	1	

8-1. DOMESTIC

Customer	Commodity	Use
DOOSAN Infracore (Incheon / Ansan Plant)	Water Cooled Water, Air, Oil Cooler	Marine Engine / Generator Engine / Hydraulic Power Unit / Air Compressor (Turbo & Screw Comp)
	Air Cooled Oil, Water Cooler	Hydraulic Power Unit / Plant
	Water Chiller / Oil Conditioner	Hydraulic Power Unit / Plant
HYUNDAI Heavy Industries (Ulsan Plant)	Water Cooled Water, Air, Oil Cooler	Marine Engine / Generator Engine
	Air Cooled Oil, Water Cooler	Hydraulic Power Unit / Plant
	Water Chiller / Oil Conditioner	Hydraulic Power Unit / Plant
POSCO (Pohang / Gwangyang Plant)	Water Cooled Water, Air, Oil Cooler	Pneumatic System / Hydraulic Power Unit
	Air Cooled Oil, Water Cooler	Hydraulic Power Unit / Plant
	Water Chiller / Oil Conditioner	Hydraulic Power Unit / Plant
L.G Machinery (Anyang / Incheon Plant)	Water Cooled Air, Oil Cooler	Air Compressor / Injection Mold Machine / Plant
	Air Cooled Oil, Water Cooler	Plant
	Hydraulic Oil Cooling Unit	Hydraulic Unit for Elevator
SSANGYONG Heavy Industries (Changwon Plant)	Water Cooled Water, Air, Oil Cooler	Marine Engine / Generator Engine / Hydraulic Power Unit
YOOCHANG Machinery (Incheon Plant)	Water Cooled Air, Oil Cooler	Air Compressor
HYUNDAI Motors (Ulsan Plant)	Water Cooled Air, Oil, Gas Cooler	Hydraulic Power Unit / Plant / Furnace Plant
	Air Cooled Oil Cooler	Hydraulic Power Unit
	Heat Exchanger	Plant
GM DAEWOO Auto & Technology Company (Incheon Plant)	Water Cooled Air, Oil, Gas Cooler	Hydraulic Power Unit / Plant / Furnace Plant
	Air Cooled Oil Cooler	Hydraulic Power Unit
	Heat Exchanger	Plant
SAMSUNG Heavy Industries (CHANGWON Plant)	Water Cooled Oli Cooler	Hydraulic Power Unit
	Air Cooled Oil Cooler	Hydraulic Power Unit
	Heat Exchanger	Plant
SAMSUNG Electric Industries (Suwon Plant)	Water Cooled Oil Cooler	Hydraulic Power Unit
	Air Cooled Oil Cooler	Hydraulic Power Unit
	Heat Exchanger	Plant
DAEDONG Heavy Industries (Jinju Plant)	Water Cooled Water, Air, Oil Cooler	Marine Engine / Generator Engine / Hydraulic Power Unit

8-1. DOMESTIC

Customer	Commodity	Use
DAEDONG Machinery (Jinjoo Plant)	Water Cooled Water, Air, Oil Cooler	Marine Engine / Generator Engine / Hydraulic Power Unit / Turbo Charger
SUEWONPOONGRYUK Machinery (Anyang Plant)	Water Cooled Air, Oil Cooler	Blower Machine / Hydraulic Power Unit
DONGBOO Steel (Incheon Plant)	Water Cooled Air, Oil Cooler	Air Compressor / Hydraulic Power Unit
	Air Cooled Oil Cooler	Hydraulic Power Unit
	Steam to Air Heater	Plant
	Heat Exchanger	Plant
DONGKUK Steel (Incheon Plant)	Water Cooled Air, Oil Cooler	Air Compressor / Hydraulic Power Unit
	Air Cooled Oil Cooler	Hydraulic Power Unit
	Steam to Air Heater	Plant
	Heat Exchanger	Plant
DAEHAN Electric Wire (Anyang / Yongjoo Plant)	Water Cooled Oil Cooler	Hydraulic Power Unit
	Air Cooled Oil Cooler	Hydraulic Power Unit
	Heat Exchanger	Plant
SEAH Turbo Compressor (Daejeon Plant)	Water Cooled Water, Air, Oil Cooler	Air Compressor
SUDO CAC (Seoul Office)	Water Cooled Water, Air, Oil Cooler	Air Compressor
KWANGSHIN Air Tec (Ulsan Plant)	Water Cooled Air, Oil Cooler	Air Compressor
	Air Cooled Oil Cooler	Hydraulic Power Unit
KUMHO Tire (Gwnagjoo Plant)	Water Cooled Air, Oil Cooler	Air Compressor
	Air Cooled Oil Cooler	Hydraulic Power Unit
	Steam to Air Heater / Condenser	Plant
	Heat Exchanger	Plant
HANSOL Paper (Jeonjoo / Daejeon / Janghang Plant)	Water Cooled Air, Oil Cooler	Air Compressor / Hydraulic Power Unit
	Air Cooled Oil Cooler	Hydraulic Power Unit
	Steam to Air Heater / Condenser	Plant
	Heat Exchanger	Plant
COSTAL Power (Incheon Plant)	Water Cooled Air, Water Cooler	Generator Engine / Engine
	Heat Exchanger	Plant

8-1. DOMESTIC

Customer	Commodity	Use
SAMYANG Electric (Incheon Plant)	Water Cooled Air, Water Cooler	Generator Engine / Engine
	Heat Exchanger	Plant
HANJIN Heavy Industries (Busan Plant)	Water Cooled Water, Air, Oil Cooler	Marine Engine / Generator Engine / Hydraulic Power Unit / Turbo Charger
WOOLIM Industries (Busan Plant)	Water Cooled Water, Air, Oil Cooler	Marine Engine / Generator Engine / Hydraulic Power Unit / Turbo Charger
HANYANG Chemical (Yeosu Plant)	Water Cooled Air, Oil Cooler	Electric Motor / Hydraulic Power Unit
	Heat Exchanger	Plant
HYUNDAI Steel (Incheon / Pohang Plant)	Water Cooled Air, Oil Cooler	Air Compressor / Hydraulic Power Unit
	Air Cooled Oil Cooler	Hydraulic Power Unit
	Steam to Air Heater / Condenser	Plant
	Heat Exchanger	Plant
KOREA Electric Power	Water Cooled Air, Oil Cooler	Air Compressor / Hydraulic Power Unit
	Air Cooled Oil Cooler	Hydraulic Power Unit
	Steam to Air Heater	Plant
	Heat Exchanger	Plant
SOOSAN Special Purpose Vehicle (Anyang Plant)	Water Cooled Air, Oil Cooler	Hydraulic Power Unit
	Heat Exchanger	Plant
SOOSAN Heavy Industries (Incheon Plant)	Water Cooled Air, Oil Cooler	Hydraulic Power Unit
	Heat Exchanger	Plant
KWANGSHIN Machinery (Haman Plant)	Water Cooled Air, Oil Cooler	Air Compressor
	Heat Exchanger	Hydraulic Power Unit
SAMSUNG Tech-Win (Changwon Plant)	Water Cooled Air, Oil Cooler	Air Compressor / Hydraulic Power Unit
KOREA Electric Power (Samcheonpo/Yeongdong/Te- an/Gori/Yeongwol/Wolseon- g Plant)	Water Cooled Air, Oil Cooler	Electric Power Plant / Hydraulic Power Unit
	Heat Exchanger	Electric Power Plant
SKC (Cheonan Plant)	Steam to Water Heater	Chemical Plant
	Water Cooled Gas Cooler	Chemical Plant
	Heat Exchanger	Chemical Plant

8-1. DOMESTIC

Customer	Commodity	Use
SEIMENS (Seoul Office)	Water Cooled Oil Cooler	Hydraulic Power Unit
	Heat Exchanger	Plant
CUMMINS Korea (Seoul Office)	Jacket Water Cooler	Engine
	Water Cooled Air Cooler	Engine
AIR TES (Kwangjoo Office)	Water Cooled Air, Oil Cooler	Turbo Compressor
	Air Cooled Oil Cooler	Hydraulic Power Unit
DONGHAE Pulp (Ulsan Plant)	Steam to Water Heater	Plant
	Water Cooled Oil Cooler	Hydraulic Power Unit
KWANGSHIN Tech (Suwon Office)	Water Cooled Air, Oil Cooler	Air Compressor / Hydraulic Power Unit
	Heat Exchanger	Plant
L.G Chemical (Yeocheon Plant)	Water Cooled Air, Oil Cooler	Turbo Compressor
	Heat Exchanger	Plant
HYOSUNG (Ulsan Plant)	Water Cooled Air, Oil Cooler	Air Compressor / Hydraulic Power Unit
	Heat Exchanger	Plant
KUMSUNG Machinery (Ulsan Office)	Water Cooled Air, Oil Cooler	Air Compressor / Hydraulic Power Unit
	Heat Exchanger	Plant
SAEHAN JOHNSON (Seoul Office)	Jacket Water Cooler	Marine Engine
	Water Cooled Air Cooler	Marine Engine
PRAXAIR Korea (Hwasung Plant)	Water Cooled Air Cooler	Plant
	Heat Exchanger	Plant
KOINTECH (Suwon Office)	Water Cooled Air, Oil Cooler	Air Compressor
	Heat Exchanger	Plant
DAEHAN Paper (Cheongjoo Plant)	Water Cooled Oil Cooler	Plant
	Heat Exchanger	Plant
DAEHAN Aluminum (Cheonan Plant)	Water Cooled Oil Cooler	Hydraulic Power Unit
K.S Lubetech (Eumsung Factory)	Lube Oil Cooler	Lubrication System

8-1. DOMESTIC

Customer	Commodity	Use
LG Petrochemical Co.,Ltd. (Yeochun Factory)	Lube Oil Cooler	Lubrication System
	Water Cooled Air Cooler	Air Compressor
LG Petrochemical Co.,Ltd. (Daesan Factory)	Lube Oil Cooler	Lubrication System
	Water Cooled Air Cooler	Air Compressor
SK Corporation (Ulsan Factory)	Lube Oil Cooler	Lubrication System
	Water Cooled Air Cooler	Air Compressor
BOC Korea (Daesan FactoryY)	Lube Oil Cooler	Lubrication System
	Water Cooled Air Cooler	Air Compressor
DAESUNG Industrial Gases (Cheongju Factory)	Water Cooled Air Cooler	Air Compressor
HYUNDAI Oilbank Korea (Daesan Factory)	Water Cooled Air Cooler	Air Compressor
GS Caltex Corporation (Yeosoo Factory)	Water Cooled Air Cooler	Air Compressor
AIR Products Asia	Water Cooled Air Cooler	Air Compressor
KUMHO Polychemical (Yeosoo Factory)	Lube Oil Cooler	Lubrication System
YEOCHEON NCC (Yeocheon Factory)	Lube Oil Cooler	Lubrication System
	Water Cooled Air Cooler	Air Compressor

8-2. EXPORT

Customer	Commodity	Use
SAMSUNG Coning(M) SDN BHD (Malaysia)	Heat Exchanger	Plant
	Water Cooled Oil Cooler	Hydraulic Power Unit
IHI Corporation (Japan)	Water Cooled Air Cooler	Turbo Compressor
STEPHENSON Brother Limited (Nigeria)	Water Cooled Air Cooler	Electric Power Plant / Generator
	Oil Cooler & Filter	Electric Power Plant
KOBE Steel (Takasago, Japan)	Oil Cooler	Hydraulic Power Unit / Plant
	Gas Cooler, Air Cooler	Air Compressor
KOBE Steel (Harima, Japan)	Oil Cooler	Hydraulic Power Unit / Plant
	Gas Cooler, Air Cooler	Air Compressor
SHIN NIPPON Machinery Co.,Ltd. (Japan)	Gland Condenser	Plant
	Lube Oil Cooler	Lubrication System
HITACHI (Japan)	Water Cooled Air Cooler	Air Compressor
EBARA Corporation (Japan)	Lube Oil Cooler	Lubrication System
AIR Products Asia (Japan)	Water Cooled Air Cooler	Air Compressor
KW Corporation (Japan)	Lube Oil Cooler	Lubrication System
TAKEMOTODENKI Corp.(Japan)	Pressure Vessel	Generator
U-TEC Co., Ltd. (Japan)	Lube Oil Cooler	Lubrication System
CAMERON International Corporation (USA)	Oil Cooler, Inter Cooler, After Cooler	Air Compressor
Toshiba Mitsubishi-Electric Industrial systems Corporation (Japan)	Water Cooled Air Cooler	Generator, Motor

9-1. CSEL

Customer	End User	Item Name	Issue Date
I.H.I	China Shenhua	Inter Cooler	Aug. 16, 2005
I.H.I	China Shenhua	Inter Cooler	Aug. 16, 2005
SHIN NIPPON Machinery	Lidong	Gland Condenser	Aug. 27, 2005
SHIN NIPPON Machinery	Lidong	Oil Cooler	Aug. 27, 2005
JEIL E&S	Hynix	Supply Tank	Aug. 30, 2005
JEIL E&S	Beijing Dongjin	Mixing Tank	Nov. 4, 2005
DAEMEK C&M	Harbin Zhoucheng	Steam Tank	Nov. 25, 2005
GS E&C	LG Bohai Chemical	After Cooler	Feb. 28, 2006
GS E&C	LG Bohai Chemical	Discharge Snubber	Feb. 28, 2006
GS E&C	LG Bohai Chemical	Separator	Feb. 28, 2006
GS E&C	LG Bohai Chemical	Discharge Snubber	Feb. 28, 2006
GS E&C	LG Bohai Chemical	Suction Snubber	Feb. 28, 2006
GS E&C	LG Bohai Chemical	Discharge Snubber	Feb. 28, 2006
GS E&C	LG Bohai Chemical	Separator	Feb. 28, 2006
GS E&C	LG Bohai Chemical	Discharge / Suction/Snubber	Feb. 28, 2006
GS E&C	LG Bohai Chemical	Discharge Snubber	Feb. 28, 2006
GS E&C	LG Bohai Chemical	Suction Snubber	Feb. 28, 2006
SeAH TEC	Jiaxing Hyosung	Inter Cooler	May. 15, 2006
SeAH TEC	Jiaxing Hyosung	Inter Cooler	May. 15, 2006
SeAH TEC	Jiaxing Hyosung	After Cooler	May. 15, 2006
SeAH TEC	Jiaxing Hyosung	Oil Cooler	May. 15, 2006
SeAH TEC	Qinghai Solt Lake	Inter / After / Oil Cooler	Aug. 24, 2006
SeAH TEC	Qinghai Solt Lake	Inter / After / Oil Cooler	Sep. 25, 2006
KOBE Steel	Huabei OCTG	Air Tank	Oct. 20, 2006
HITACHI P.T	Yokohama Tire	Inter / After Cooler	Dec. 4, 2006
STI	Hynix	Supply / Storage Tank	Jan. 29, 2007
TOP Eng.	Shanghai Tianma	PTFE Lining Tank	Mar. 30, 2007

9-1. CSEL

Customer	End User	Item Name	Issue Date
HANMO Co.	Chanshu Taekwang	Feed Preheater/Column Reboiler/Pan Dryer	Apr. 25, 2007
SHINIL GTC	Air Liquid	Suction / Discharge Snubber/After Cooler	May. 28, 2007
HANYANG Eng.	Hynix	Supply / Storage Tank	Jun. 7, 2007
EUNHA Air Tech	Tianjin Samsung	Air Dryer	Aug. 6, 2007
KOBE Steel	Xijiang Weimei	Lube Oil Cooler	Sep. 3, 2007
SMART Application	LG Innotek Yantai	Storage Tank	Aug. 31, 2007
SHIN NIPPON Machinery	Lidong Chemical	Oil Cooler / Gland Condenser	Nov. 8, 2007
HITACHI P.T	San Miguel	Inter / After Cooler	Oct. 17, 2007
SeAH TEC	China Petrochemical	Inter / After / Oil Cooler	Nov. 2, 2007
SeAH TEC	Xinyu Iron & Steel	Inter / After / Oil Cooler	Nov. 2, 2007
HITACHI P.T	Wuxi Murata	Inter / After Cooler	Oct. 17, 2007
SHIN NIPPON Machinery	Fujian Petrochemical	Oil Cooler	Feb. 21, 2008
SHIN NIPPON Machinery	Fujian Petrochemical	Gland Condenser	Feb. 21, 2008
SHIN NIPPON Machinery	Fujian Petrochemical	Oil Cooler	Mar. 13, 2008
SHIN NIPPON Machinery	Fujian Petrochemical	Gland Condenser	Mar. 13, 2008
SMART Application	Sichuan COC	Supply / Storage Tank	Dec. 10, 2007
EUNHA Air Tech	Samsung Suzhou	Air Dryer	Jan. 7, 2008
SeAH TEC	Xingcheng Steel	Inter / After / Oil Cooler	Apr. 23, 2008
SeAH TEC	Xingcheng Steel	Inter / After / Oil Cooler	Apr. 23, 2008
HITACHI P.T	Canon Dalian	Inter / After Cooler	May. 20, 2008
EUNHA Air Tech	Samsung Suzhou	Air Dryer	May. 31, 2008
KW Corporation	Liaoning Huajin	Hot Oil Tank / Heater Shell	May. 15, 2008
HITACHI P.T	Hitachi Display	Inter / After Cooler	May. 20, 2008
HITACHI P.T	Canon Dalian	Inter / After Cooler	May. 15, 2008
SHIN NIPPON Machinery	Sinopec Zhenhai	Oil Cooler	Nov. 10, 2008
SHIN NIPPON Machinery	Liaoning Huajin	Gland Condenser	May. 15, 2008

9-1. CSEL

Customer	End User	Item Name	Issue Date
EUNHA Air Tech	Samsung Suzhou	Air Dryer / Air Filter Housing	Sep. 9, 2008
SeAH E&T	Shenhua Baotou	Inter / After / Oil Cooler	Oct. 9, 2008
KW Corporation	Lianyuan Iron & Steel	Cleaning Device	Jan. 9, 2009
KW Corporation	Heibei Shougang	Cleaning Water Tank / Cleaning Device	Jan. 9, 2009
SeAH E&T	Xingcheng Steel	Inter / After / Oil Cooler	May. 21, 2009
EUNHA Air Tech	Samsung Suzhou	Air Dryer / Air Filter Housing	Oct. 12, 2009
KW Corporation	Sanfeng Energy	Cleaning Device	Nov. 9, 2009
EUNHA Air Tech	Tianjin Samsung	Air Dryer / Air Filter Housing	Nov. 9, 2009
HANMO Co.	Hyosung Spandex	Reboiler	Jan. 22, 2010
Jungwon CMC	Sumika Hefei	Reflux Tank / Reactor	Feb. 17, 2010
SeAH E&T	Tongshan Hongchen	After Cooler	Apr. 7, 2010
EUNHA Air Tech	Samsung Suzhou	Air Dryer	Apr. 22, 2010
KW Corporation	Tianjin Dagu Chemical Industry	Drain Recovery Tank	May. 3, 2010
HANMO Co.	Tackwang Synothetic Fiber	Column Reboiler / Preheater / Pan dryer	Aug. 3, 2010
GTC Co.	HNT	Inter / After Cooler / Separator	Aug. 17, 2010
KW Corporation	Sinopec Mitsubishi Chemical Polycarbonate	Pressure Tank	Jul. 24, 2010
GTC Co.	Kolon Nanjing	Inter / After Cooler / Discharge Subber/ Separator	Oct. 31, 2010
SeAH E&T	Zhejiang Flrtex	Pan Dryer	Jan. 28, 2011
HANMO Co.	Yunnan Tie	Inter / After / Oil Cooler	Feb. 17, 2011
SeAH E&T	Xingcheng Steel	Inter / After / Oil Cooler	Mar. 17, 2011
KW Corporation	Sinopec Wuhan	Hot Oil Tank / Heater Shell	May. 19, 2011
SeAH E&T	Zhongguo Shiyou	After Cooler	May. 20, 2011
HANMO Co.	Hyosung Spandex	Feed Preheater / Reboiler / Pan Dryer	Jun. 9, 2011
EUNHA Air Tech	Tianjin Samsung	External Heater & Blower Type Air Dry	Jul. 8, 2011

9-1. CSEL

Customer	End User	Item Name	Issue Date
EagleBurgmann	Maoming Petrochem	Hydrocracking Unit	Jul. 14, 2011
SeAH E&T	Yunna Luxi	After Cooler / Oil Cooler	Jul. 20, 2011

9-2. ASME "U"

Customer	End User	Item Name	Issue Date
SHIN NIPPON Machinery	Lidong Chemical	Oil Cooler	Aug. 24, 2005
SHIN NIPPON Machinery	Lidong Chemical	Gland Condenser	Aug. 24, 2005
TFS Global	Omaha Public Power District USA	Lube Oil Cooler	Mar. 5, 2007
SHIN NIPPON Machinery	Lidong Chemical	Oil Cooler	Nov. 8, 2007
SHIN NIPPON Machinery	Lidong Chemical	Gland Condenser	Nov. 8, 2007
HOSAN	Hyundai H.I.	Oil Cooler	Dec. 14, 2007
HOSAN	Hyundai H.I.	Oil Cooler	Dec. 14, 2007
SUNGWOON Hyd. Tech.	Omaha Public Power District USA	Lube Oil Cooler	Dec. 31, 2007
DOOSAN H. I. & C.	Dubai, UAE	Final Filter	Apr. 11, 2008
SHIN NIPPON Machinery	Egyptian Propylene & Polypropylene Company	Gland Condenser	May. 28, 2008
SHIN NIPPON Machinery	Western Australia Biomass Pty Limited	Gland Condenser	Jan. 19, 2009
SHIN NIPPON Machinery	Sino Iron Pty, Limited	Lube Oil Cooler	Mar. 17, 2009
SHIN NIPPON Machinery	Sino Iron Pty, Limited	Gland Condenser	Mar. 17, 2009
SHIN NIPPON Machinery	Zellstoff Celger Limited Partnership	Lube Oil Cooler	Jun. 1, 2009
TAKEMOTODENKI Corp.	Toyo North America	Pressure Tank	Aug. 3, 2009
KOBE Steel	Abu Dhabi Oil Refining Company (Takreer)	Lube Oil Cooler	Aug. 11, 2009
KW Corporation	POSCO	Cleaning Water Tank	Aug. 25, 2009
KOBE Steel	CPC Corporation	Lube Oil Cooler	Sep. 1, 2009
KOBE Steel	Abu Dhabi Oil Refining Company (Takreer)	Cooling Medim Cooler	Sep. 25, 2009
SHIN NIPPON Machinery	Hyundai Oilbank	Lube Oil Cooler	Oct. 26, 2009
KW Corporation	Pemex Petroquimica Mexico	Hot Oil Cooler	Nov. 10, 2009
KW Corporation	Pemex Petroquimica Mexico	Hot Oil Tank	Nov. 10, 2009
KW Corporation	Pemex Petroquimica Mexico	Heater Shell	Nov. 10, 2009
U-TEC Co., Ltd.	Pemex Petroquimica Mexico	Lube Oil Cooler	Jan. 26, 2010

9-2. ASME "U"

Customer	End User	Item Name	Issue Date
CAMERON	Hyundai Oilbank	After Cooler	Mar. 16, 2010
SHIN NIPPON Machinery	Hyundai Oilbank	Lube Oil Cooler	Mar. 31, 2010
TAKEMOTODENKI	Toyo North America USA	Pressure Tank	May. 28, 2010
SHIN NIPPON Machinery	Limited, Victoria Australia	Lube Oil Cooler	Aug. 23, 2010
SHIN NIPPON Machinery	Limited, Victoria Australia	Gland Condenser	Aug. 23, 2010
SHIN NIPPON Machinery	Fort Nelson Generating Statio / Canada	Lube Oil Cooler	Sep. 29, 2010
GTC Korea	Gachsaraw Oil & Gas Production Unit / Iran	Pre Filter	Nov. 5, 2010
GTC Korea	Gachsaraw Oil & Gas Production Unit / Iran	After Filter	Nov. 5, 2010
GTC Korea	Gachsaraw Oil & Gas Production Unit / Iran	Suction Snubber	Nov. 5, 2010
GTC Korea	Gachsaraw Oil & Gas Production Unit / Iran	Discharge Snubber	Nov. 5, 2010
SHIN NIPPON Machinery	Racecourse Australia	Gland Condenser	Apr. 26, 2011
SHIN NIPPON Machinery	Fort Canada	Lube Oil Cooler	Apr. 26, 2011
HOSAN KOREA	Hyosung Korea	Oil Cooler	Apr. 26, 2011
SHIN NIPPON Machinery	Ineos USA	Gland Condenser	Jun. 2, 2011

9-3. JAPAN MOL PVCC2

Customer	Model	Item Name	Issue Date
KOBE Steel	VGP75	2nd Inter Cooler	Dec. 30, 2004
KOBE Steel	VGP75	2nd Inter Cooler	Jan. 7, 2005
KOBE Steel	VGP75	3rd Inter Cooler	Dec. 30, 2004
KOBE Steel	VGP75	3rd Inter Cooler	Jan. 7, 2005
KOBE Steel	VGP120	2nd Inter Cooler	Jan. 7, 2005
KOBE Steel	VGP120	3rd Inter Cooler	Jan. 7, 2005
KOBE Steel	VGP460	2nd Inter Cooler	Jan. 7, 2005
KOBE Steel	VGP460	3rd Inter Cooler	Jan. 7, 2005
KOBE Steel	VGP100R	2nd Inter Cooler	Feb. 22, 2005
KOBE Steel	VGP300	2nd Inter Cooler	Mar. 24, 2005
KOBE Steel	VGP300	After Cooler	Mar. 24, 2005
KOBE Steel	VGP300	2nd Inter Cooler	Jun. 21, 2005
KOBE Steel	VGP300	After Cooler	Jun. 21, 2005
KOBE Steel	VGP370	2nd Inter Cooler	Aug. 24, 2005
KOBE Steel	VGP370	After Cooler	Aug. 24, 2005
KOBE Steel	VG594	2nd Inter Cooler	Oct. 18, 2005
KOBE Steel	VG594	3rd Inter Cooler	Oct. 18, 2005
KOBE Steel	VGP400	2nd Inter Cooler	Nov. 11, 2005
KOBE Steel	VGP400	After Cooler	Nov. 11, 2005
KOBE Steel	VGP120	2nd Inter Cooler	Dec. 28, 2005
KOBE Steel	VGP120	3rd Inter Cooler	Dec. 28, 2005
KOBE Steel	VG594	2nd Inter Cooler	Jan. 13, 2006
KOBE Steel	VG594	3rd Inter Cooler	Jan. 13, 2006
KOBE Steel	VGP150	2nd Inter Cooler	Jan. 23, 2006
KOBE Steel	VGP150	After Cooler	Jan. 23, 2006
KOBE Steel	VG594	2nd Inter Cooler	Feb. 13, 2006
KOBE Steel	VG594	3rd Inter Cooler	Feb. 13, 2006

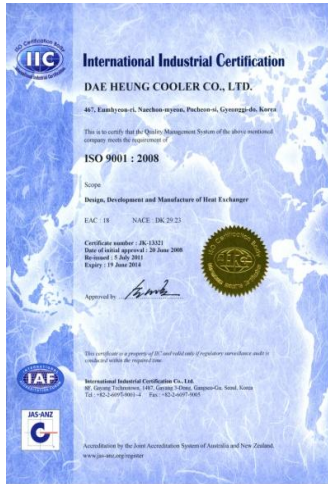
9-3. JAPAN MOL PVCC2

Customer	End User	Item Name	Issue Date
KOBE Steel	VGP300	2nd Inter Cooler	Feb. 21, 2006
KOBE Steel	VGP300	After Cooler	Feb. 21, 2006
KOBE Steel	VG594	2nd Inter Cooler	Dec. 1, 2006
KOBE Steel	VG594	3rd Inter Cooler	Dec. 1, 2006
KOBE Steel	VGP240+GRT400	2nd Inter Cooler	Dec. 18, 2006
KOBE Steel	VGP240+GRT400	After Cooler	Dec. 18, 2006
KOBE Steel	VG594	2nd Inter Cooler	Jan. 4, 2007
KOBE Steel	VG594	3rd Inter Cooler	Jan. 4, 2007
KOBE Steel	VG594	2nd Inter Cooler	Nov. 27, 2007
KOBE Steel	VG594	3rd Inter Cooler	Nov. 27, 2007
KOBE Steel	VG594	2nd Inter Cooler	Apr. 24, 2008
KOBE Steel	VG594	3rd Inter Cooler	Apr. 24, 2008
KOBE Steel	VG594	2nd Inter Cooler	May. 29, 2008
KOBE Steel	VG594	3rd Inter Cooler	May. 29, 2008
KOBE Steel	VG594	2nd Inter Cooler	Jun. 11, 2008
KOBE Steel	VG594	3rd Inter Cooler	Jun. 11, 2008
KOBE Steel	VG594	After Cooler	Jun. 11, 2008
KOBE Steel	VG594	2nd Inter Cooler	Jul. 28, 2008
KOBE Steel	VG594	3rd Inter Cooler	Jul. 28, 2008
KOBE Steel	VG594	After Cooler	Jul. 28, 2008
KOBE Steel	VG594	2nd Inter Cooler	Sep. 23, 2008
KOBE Steel	VG594	3rd Inter Cooler	Sep. 23, 2008
KOBE Steel	VGP460	2nd Inter Cooler	Jun. 30 2009
KOBE Steel	VGP460	After Cooler	Jun. 30, 2009
KOBE Steel	VGP460	2nd Inter Cooler	Jul. 29, 2009
KOBE Steel	VGP460	After Cooler	Jul. 29, 2009
KOBE Steel	VGP300	2nd Inter Cooler	Sep. 30, 2009

9-3. JAPAN MOL PVCC2

Customer	End User	Item Name	Issue Date
KOBE Steel	VGP300	After Cooler	Sep. 30, 2009
KOBE Steel	VGP300	2nd Inter Cooler	Sep. 30, 2009
KOBE Steel	VGP300	After Cooler	Sep. 30, 2009

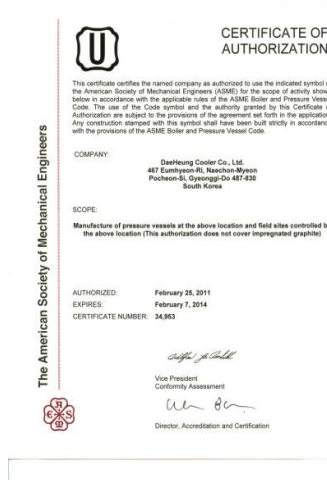
10. COPY OF CERTIFICATES



ISO9001



CSEL A2



ASME 'U'



National Board



KGS

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ISO9001

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CSEL A2

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The American Society of Mechanical Engineers



CERTIFICATE OF AUTHORIZATION

This certificate certifies the named company as authorized to use the indicated symbol of the American Society of Mechanical Engineers (ASME) for the scope of activity shown below in accordance with the applicable rules of the ASME Boiler and Pressure Vessel Code. The use of the Code symbol and the authority granted by this Certificate of Authorization are subject to the provisions of the agreement set forth in the application. Any construction stamped with this symbol shall have been built strictly in accordance with the provisions of the ASME Boiler and Pressure Vessel Code.

COMPANY:

**DaeHeung Cooler Co., Ltd.
467 Eumhyeon-Ri, Naechon-Myeon
Pocheon-Si, Gyeonggi-Do 487-830
South Korea**

SCOPE:

Manufacture of pressure vessels at the above location and field sites controlled by the above location (This authorization does not cover impregnated graphite)

AUTHORIZED: **February 25, 2011**

EXPIRES: **February 7, 2014**

CERTIFICATE NUMBER: **34,953**

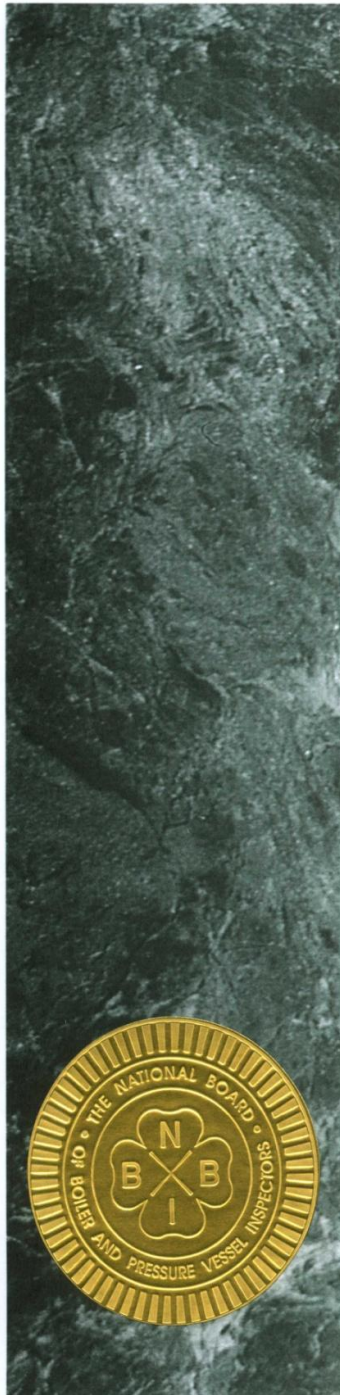
Vice President
Conformity Assessment

Director, Accreditation and Certification



ASME "U"

10. COPY OF CERTIFICATES



**THE NATIONAL BOARD
OF
BOILER & PRESSURE VESSEL INSPECTORS**

Certificate of Authorization



This is to certify that

**DAEHEUNG COOLER CO., LTD.
467, EUMHYEON-RI
NAECHON-MYEON
POCHEON-SI, GYEONGGI-DO, 487-830
KOREA, SOUTH**

is authorized to apply the "NB" mark and register boilers, pressure vessels, or other pressure retaining items with the National Board in accordance with its provisions.

The scope of Authorization is limited to items manufactured in accordance with:

ASME Stamp(s): U

ISSUE DATE: March 7, 2011

EXPIRATION DATE: February 7, 2014

Executive Director

NB 137 Rev. 8

National Board

10. COPY OF CERTIFICATES



제 2005-1 호

특정설비 제조 등록필증

① 사업의 종류	특정설비 제조등록		
② 상 호	(주)대흥쿨러		
③ 사업소소재지	경기도 포천시 내촌면 음현리 467		
④ 성명(대표자)	장 석 근	⑤ 주민등록번호	461102-1011010
⑥ 용기(냉동기)특정설비	종 류		규 격
	압력용기, 저장탱크		

고압가스안전관리법 제5조제1항 규정에 의하여
 용기(냉동기·특정설비)제조등록을 필하였으므로 이에
 용기(냉동기·특정설비)제조등록필증을 교부합니다.

2005년 11 월 18 일

포 천 시



KGS

11. PHOTO OF PRODUCTS



Gas Cooler (Kobe Steel) Japan MOL



Gas Cooler (Kobe Steel) Japan MOL



Gas Cooler (I.H.I) CSEL



Gas Cooler (LG Philips) KOSHA



Gas Cooler (POSCO) KGS



Gland Condenser (Shin Nippon Mach.) U-Stamp

11. PHOTO OF PRODUCTS



Inter Cooler (Doosan Infracore) for Marine



Air Cooler (H.H.I) for Marine



Tube Nest (Kobe Steel)



Tube Bundle (I.H.I & Atlas Corp.)



Oil Cooler (DHC's Standard)



Fan Cooler (Oesse)

11. PHOTO OF PRODUCTS



Heat Exchanger (Posco)



Water Cooler (Daeheung Mechatronics)



Cooling Tower (POSCO)



Inter Cooler (Ingersoll Rand)



Air Cooler (Sewoong Plant)



Oil Cooler (Ice Tech.)

11. PHOTO OF PRODUCTS



Gas Cooler (Hyundai Steel)



Water Cooler (POSCO)



Water Cooler (POSCO)



Oil Cooler (LG Petrochem.)



Air Cooler (Hitachi Plant Tech.)



Oil Cooler (Samsung Fine Chem.)

11. PHOTO OF PRODUCTS



Pressure Tank (Takemotodenki)



Hot Oil Tank (KW Corporation)



Humifier (Poscon)



Reflux Tank (Jungwon CMC)



Reactor (Jungwon CMC)



After Cooler (Cameron)

11. PHOTO OF PRODUCTS



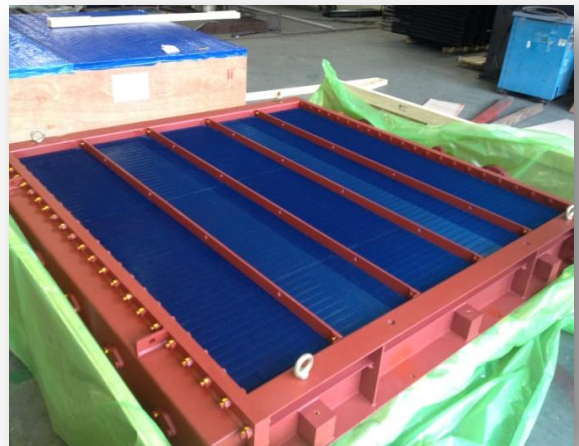
After Cooler (Camermon)



Lube Oil Cooler (Camermon)



Motor Cooling Unit (TMEIC)



Air Cooler (TMEIC)



Air Cooler (H.H.I) for Marine



Air Cooler (H.H.I) for Marine