

Introduce company

inp 아이애펜



Contents

1. Company status

1.1 Company overview

1.2 History of company

2. Business overview

2.1 Main products

2.2 Production capability

3. Machines & testers

3.1 Main machines & facility

3.2 Testing equipments

4. Certificates

1. Company status

1.1 Company overview

Company name	INP(IDEA & PROCESS IND.)		
CEO	Han Gyun Yeum	Business Type	Film heaters manufacturer
Office address	Rm. 610 Dawoo Frontiervally I 16-25, 16Beongil, Dongbaekjungang-ro, Giheung-gu, Yongin-si, Gyeonggi-do, Korea 17015		Tel. 82-031-8021-0660 Fax. 82-031-8021-0663
Main products	PI film heater, etc	Business Registration No.	119-10-14239
Capital	1,500,000\$	Sales volume (2019)	2,750,000\$
Establishment Date	2009.11.10	Number of employees	13

1.2 History of company

2009. 11 I & P establishment
11 Supplied seat heater to Myungbo Co.& TATA DAEWOO
11 Samsung Heavy Industries HOT PAD heater supply
2010. 01 Hyundai Heavy Industries seat heater supply
04 Developed semiconductor PI, SILICONE heater and supplied
2011. 04 Supplied to Korea Army heating pad(35,000 set)
05 Developed high temperature film heater(for 220℃)
11 Transferred new factory to Yongin Gyeonggi-do
11 Certified TS16949
2012. 07 Supplied to HSHI(Hyundai samho heavy ind.)
HEATING PAD(Mass production)
2013. 05 2 patents registered in Korea
(No 10-1268862호, No 10-1286312호)
09 Certification of Venture Businesses
12 Establishment of Corporate Affiliated Research Institute
2015. 08 Export Japan Imabari heavy Ind.,
2016. 03 Mass production PI film heater for 260℃
2017. 04 2 patents registered in Korea
(No 10-1733449, No 10-1733451)
06 Development of beauty equipment heater and delivery
09 Development and delivery of LCD manufacturing Equipment heaters.
2018. 05 2 patents registered in Korea
(No 10-1815935, No 10-1815937)
07 Designation of a company specializing in root technology
2019. 06 Supply to BOE
08 Inno-Biz Certification
09 2 patents registered in Korea
(No 10-2025607, No 10-2025608)
11 Development and delivery of heaters for Display manufacturing equipment

2. Business overview

2.1 Main products

Pi Film Heater

- Applies to equipment requiring 260℃ and temperature uniformity

Specification : 1) Material : SUS/INCONEL, PI Film
2) Operating temperature : 260℃
(Instantaneous temperature 340℃)
3) Voltage range : 110V~330V (AC), 12V ~56V(DC)
4) Size : order spec
5) Usage : Semiconductor equipment, ship paint drying equipment, automobile parts, battery thermal heater, Household electrical appliances (curling iron, farmer, heating vest, hand stove, cooking utensil Iron, cold / hot water), medical equipment, steam generator



Silicon Rubber Heater(High temperature)

- Applied to equipment requiring MAX 200℃ and temperature uniformity

Specification : 1) Material : SUS/INCONEL, PI Film, Silicon Rubber
2) Operating temperature : 200℃
(Instantaneous temperature 220℃)
3) Voltage range : 110V~330V (AC), 12V ~56V(DC)
4) Size : order spec
5) Usage : Semiconductor production equipment.
High calorie heater
Universal use in other industrial equipment

E.S.C. (Electrostatic chuck ;Semiconductor Heater)

○ Heater for semiconductor equipment which can use 250℃

- Specification :
- 1) Material : PI Film, SUS / INCONEL etc.
 - 2) Operating temperature : Max 250℃
 - 3) Voltage range : 110V~330V (AC)
 - 4) Size : order spec
 - 5) Usage : semiconductor processing equipment, chemical manufacturing equipment, pharmaceutical manufacturing equipment, etc.



Band Heater

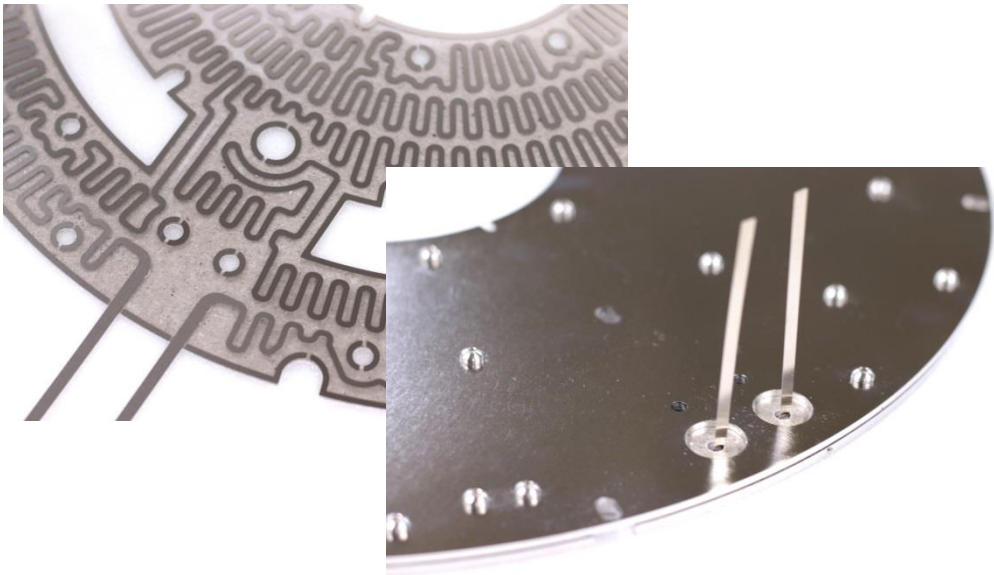
○ Heater can use Max 500℃

- Specification :
- 1) Material : SUS COVER, STEEL
 - 2) Operating temperature : MAX 500℃
 - 3) Voltage range: 110V~330V (AC)
 - 4) Size: order spec
 - 5) Usage : semiconductor processing equipment, chemical manufacturing equipment, pharmaceutical manufacturing equipment, etc.



Mica Heater

- Heater for semiconductor equipment which can use Max 600 °C
- Specification : 1) Material : Mica, Etched Metal Foil
- 2) Operating temperature : MAX 600 °C
- 3) Voltage range : 110V~360V (AC)
- 4) Size : Order specification
- 5) Usage : semiconductor processing equipment, chemical manufacturing equipment, pharmaceutical manufacturing equipment, etc.



Outdoor Jacket Heater

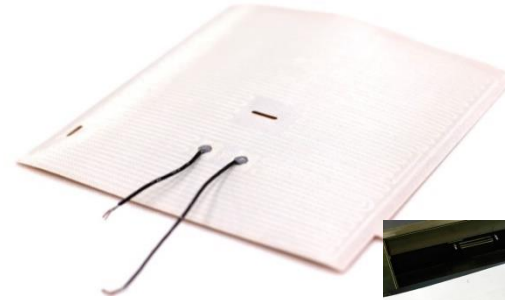
- 30 ~ 60°C available heater
- Specification : 1) Material : Carbon,SUS, NCH, FCH
- 2) Operating temperature : MAX60 °C
- 3) Voltage range : 3.7V~7.2V (DC)
- 4) Size : Order specification
- 5) Usage : Outdoor jacket



PTFE Woven Fabric Heater

Flexible heater made PTFE fabric

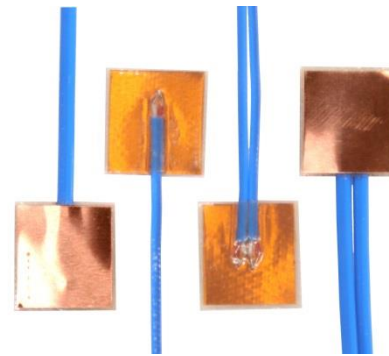
- Specification :
- 1) Material : PTFE, SUS/ Inconel
 - 2) Operating temperature : MAX 300℃
 - 3) Voltage range : 110V~360V (AC), 12V~56V(DC용)
 - 4) Size : Order specification
 - 5) Usage : beauty parts and manufacturing equipment



Temperature Sensor

K-Type, J-Type, PT100Ω

- Specification :
- 1) Temperature range : 220℃ ~ 400 ℃
 - 2) Size : Order specification
 - 3) Usage : Equipment/Facilities requiring accurate temperature detection and measurement



High temperature Jacket Heater

○ Heater for semiconductor equipment which can use Max 300 °C

Specification : 1) Material : PTFE, silica, etc
2) Operating temperature range : MAX 300 °C
3) Voltage range : 110V~330V (AC),
4) Size : Order specification
5) Usage : semiconductor equipment, chemical manufacturing equipment, pharmaceutical manufacturing equipment, etc.



Jacket Heater

○ Heating Jacket 200 °C gas pipes

Specification : 1) Material : Silicon rubber, Pi Film Heater, Heating wire
2) Operating temperature range : MAX 200 °C
(Instantaneous temperature 220 °C)
3) Voltage range : 110V~330V (AC), 12V~ 56V(DC)
4) Size : Order specification ; 3/8 ", 3/4", 1/2 ", 1", 2 "
and other special specifications
5) Usage : Semiconductor equipment, chemical manufacturing equipment, pharmaceutical manufacturing equipment, etc.



Carbon rear view mirror Heater

○ Carbon rear view mirror Heater

- Specification : 1) Material : Silver, Carbon , PET Film
2) Temperature range : 60℃
3) Voltage range : 12V/24V (DC)
4) Size : Order specification
5) Usage : rear view mirror Heater



Metal side miller Heater

○ Metal rear view mirror Heater

- Specification : 1) Material : Al/SUS, PET Film
2) Temperature range : 60℃
3) Voltage range : 12V/24V (DC)
4) Size : Order specification
5) Usage : rear view mirror Heater



Seat Heater

○ Vehicle seat Heater

Specification : 1) Material : FELT, NCH/FCH
2) Operating temperature : as to SPEC
3) Voltage range : 12~28V (DC),
4) Size : Order specification
5) Usage : Car heated seat



Berth Heater

○ Commercial Vehicles Berth Heater

Specification : 1) Material : FELT, NCH/FCH
2) Operating temperature : as to SPEC
3) Voltage range : 12~28V (DC),
4) Size : Order specification
5) Usage : Vehicle cabin heated bed



TRAFFIC LENS Heater

○ Max 120 °C LENS Heater for Snow Removal

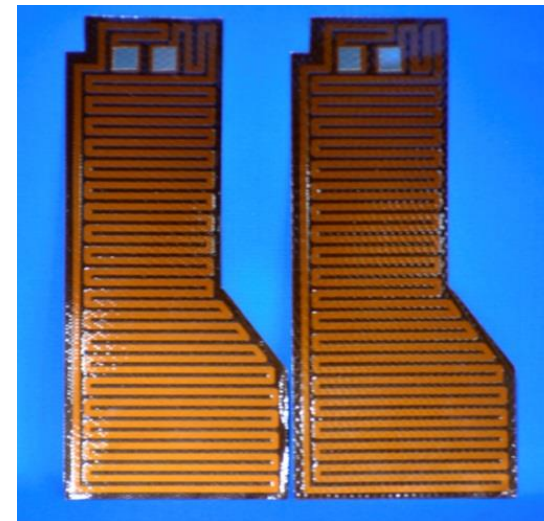
- Specification :
- 1) Material : NCH etc.
 - 2) Operating temperature : 120°C
 - 3) Voltage range : 110V~220V (AC)
 - 4) Size : Order specification
 - 5) Usage : traffic light snow removal in winter



Water purifier Heater

○ Water heater for Max 260 °C

- Specification :
- 1) Material : PI/PTFE WOVEN, SUS/ Inconel etc
 - 2) Operating temperature : 260°C
 - 3) Voltage range : 110V~220V (AC)
 - 4) Size : Order specification
 - 5) Usage : Water purifier



LNG Ship Epoxy Curing Heater

Specification : 1) Material : SUS, PET Film
2) Operating temperature : MAX100℃
3) Voltage range : 110V~360V (AC)
4) Size: Order specification
5) Usage : LNG Ship Epoxy resin curing



2. 2 Main product production capacity

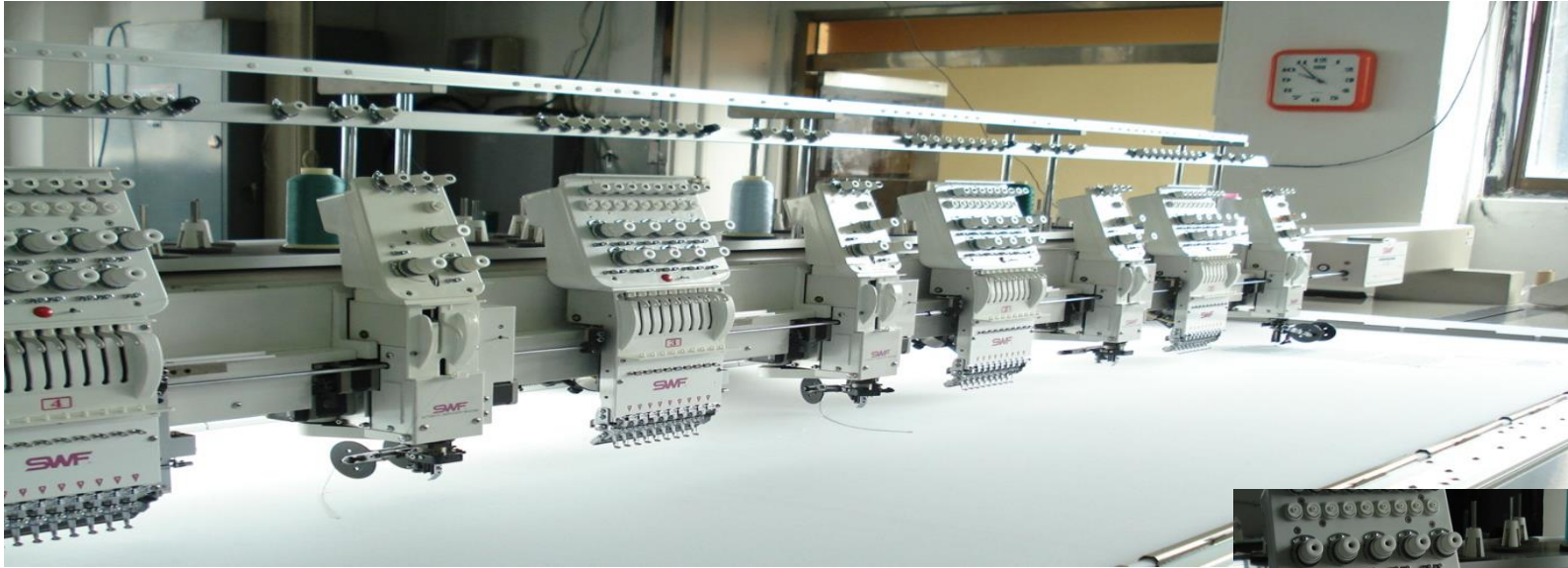
Product	Unit	Monthly production capacity	Remark
Seat Heater	Set	25,000	Plan to enlarge of 30,000 Set
Bed Heater	EA	1,200	Plan to enlarge 2,000 EA
Heated Pad	EA	85,000	
Hot Pad (PI, Silicon)	EA	70,000	Plan to enlarge 100,000 EA

3. Machines & testers

3.1 Main production equipment

No	Instrument	Type(Standard)	Manufacturing Type		Manufacturer	Quantity	Remark
			Domestic	Overseas			
1	Auto Sewing M/C	4 Head	○		SWF	1	
2	Silk Printer	Semi-Auto	○		Line Industry	1	
3	I.R. Heater	50 Kw	○		Ajin Mechanic	1	
4	Hot Press	4Steps, 10 TON	○		Hanil co.	1	
5	Laminater	Roll Type	○		By Ouerself	2	
6	Hot Press & Cool Press	5Steps, 30 TON	○		자체제작	1	
7	Terminal Caulking M/C	Auto	○		Daehyun Terminal	1	
8	Terminal Caulking M/C	Manual	○		By Ouerself	1	
9	Hand Press	40 Kg	○		Dongil Press	1	
10	Auto tester for products	220V, 150℃	○		By Ouerself	1	
11	Spot Welding M/C	5V DC, 980KPa	○		Hanil Welding System	1	
12	Thomson Press	2 Kw	○		Geumyoung machine Co.	1	
13	Cutting Machine	2 Kw	○		Self -production	1	
14	Automatic Crimping Machine	2 TON	○		JiYoung Precision Co.	2	
15	Coating Machine	Semi-Auto	○		Daeyoung System	1	

Heated wire automatic Forming & Fixing Machine



Silk printer & IR dryer



4 Steps Hot Press



Laminating machine



5 Steps Hot Press & Cool Press



Terminal Caulking M/C



Spot Welding M/C



Thomson Press



Cutting Machine



Automatic Climping Machine



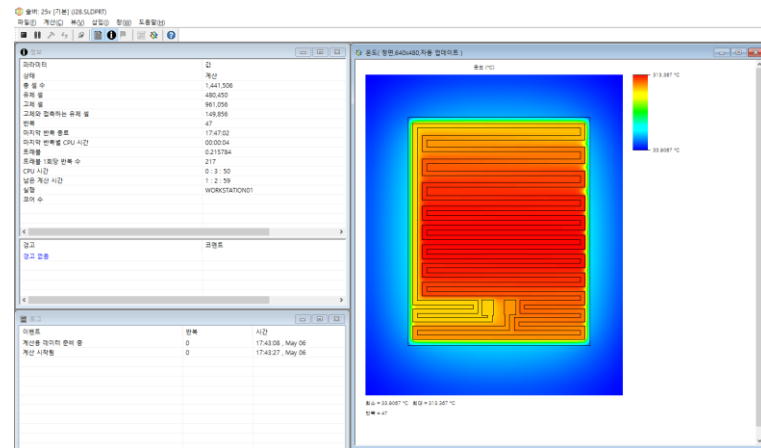
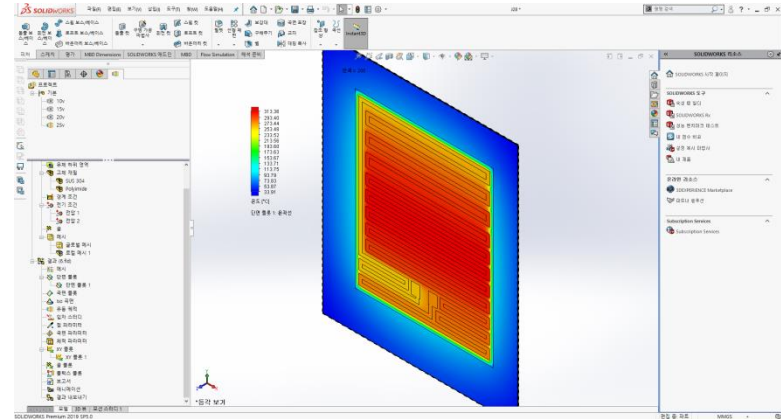
Coating Machine



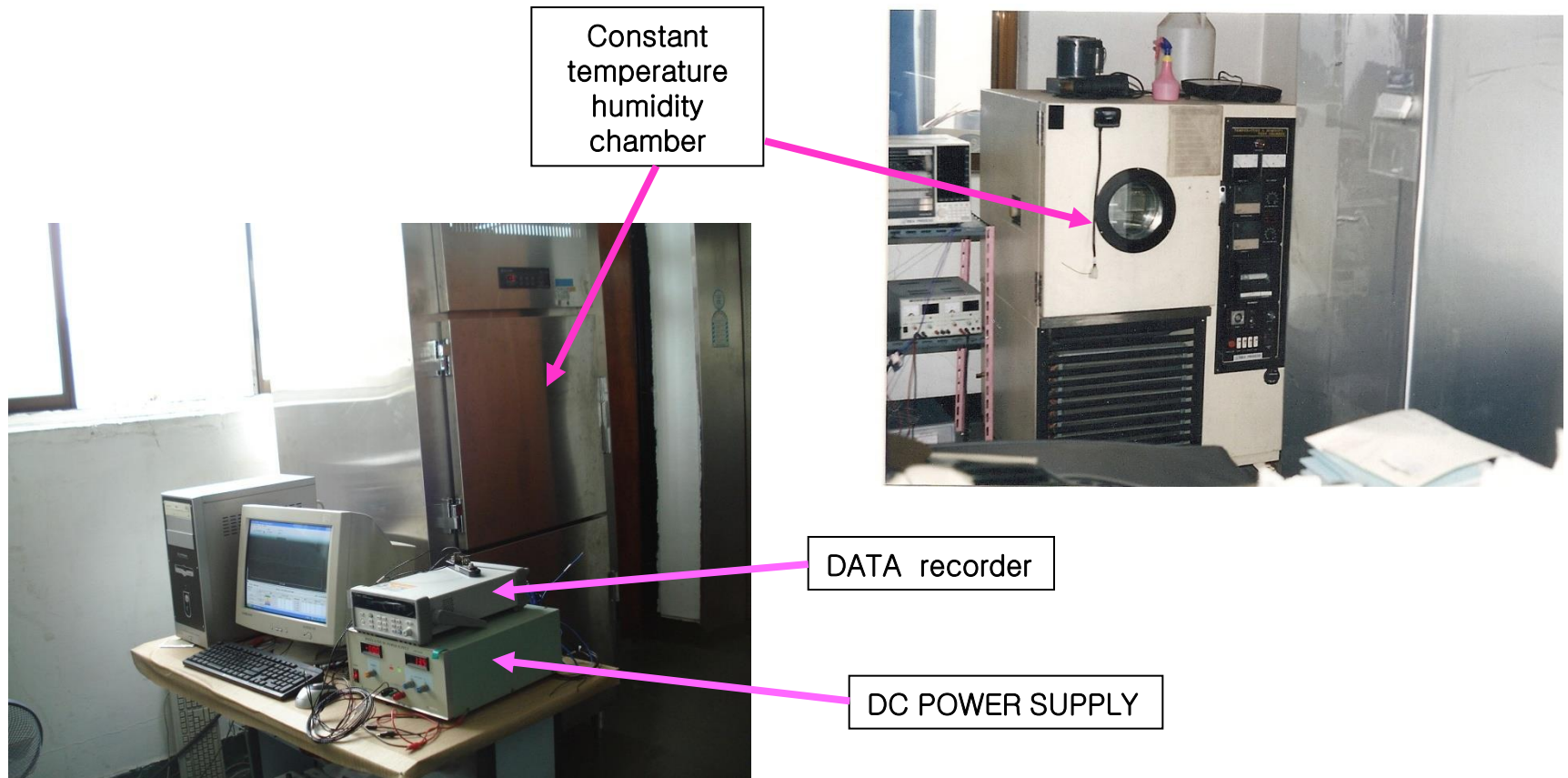
3.2 Main test facility

No	Tester	Type(Standard)	Manufacturing Type		Manufacturer	Quantity	Remark
			Domestic	Overseas			
1	Thermogram Camera	Measure temperature : 0℃ ~ 600℃		○	FLIR(T335)	1	USA
2	Thermal Analysis	Solidworks 2019		○	Dassault Systemes	2	France
3	Environmental Chamber	Set temperature : -40℃ ~ 120℃ Set humidity : 35% ~ 95%	○		Hongik ENG	2	
4	Recorder(LR 8100)	Temperature, current, Voltage, resistance Simultaneous measurement		○	Yokogawa	1	Japan
5	Data Acquisition	Thermocouples, RTDs and Thermistors, AC/DC Voltage and Current, Resistance, Frequency and Main Measurements		○	Agilent (34970A)	1	USA
6	Power Supply	30V, 50A	○		Dongyun Compressor	2	
7	Mega Tester	500V, 100M	○		Data Electric	1	
8	Digital Resistance Measurer	0 ~ 10,000M		○	Hioki	2	Japan
9	On/Off & Bath Tester	on/off , Salt deposition	○		Hongik	1	
10	Durability Tester	9,999 Times	○		Hongik ENG	1	
11	Vibration Durability Tester	100,000 Cycle	○		By ourselves	1	
12	Hand Hot Press	400℃	○		Wooju	1	
13	Withstanding Voltage Tester	5Kw/0.2A~0.02A	○		YINCALI	1	
14	Automatic Control Coater	300x490mm, 10~100mm/sec	○		SB Science	1	
15	High Temperature Oven	Set temperature : 0℃ ~ 300℃	○		ChangShin	1	

Thermal imaging camera and thermal analysis simulation

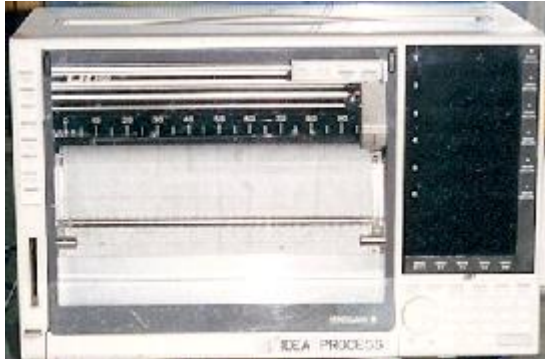


Constant temperature and humidity recorder

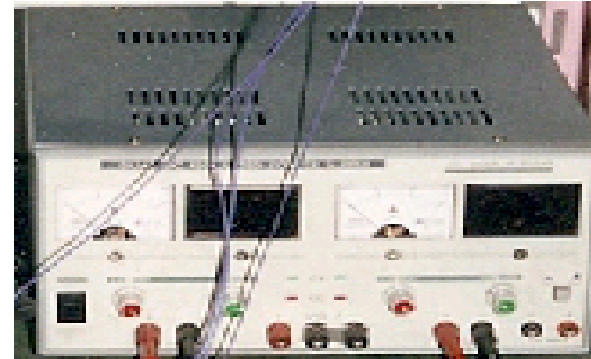


Thermometers and Test Instruments

Temperature recorder (YOKOGAWA LR-8100)



POWER SUPPLY



Digital Resistance Measurer



Resistances measurer (MEGA TESTER)



Endurance testing equipment

Hand Hot Press



Vibration Durability Tester



Tensile testing machine



ON/OFF & BATH TESTER



Withstanding Voltage Tester



High Temperature Oven



Automatic Control Coater



4. Various certificates

