

Facility has been working on PCB business since 1980. In 1999, we became an exclusive agency in Japan for Schmid, Germany. Having PCB machine as main business, late years we sell PV machines, install them, build software and provide after service.

In our subsidiary company "Facility DG" in China, We manufacture and sell plating equipments such as Vertical Continuous Plating Line.

Also using our know-how to cleaning equipments for PV, we design and manufacture equipments which meet customers demand.

< Company Outline >

- Corporate name Facility Co., Ltd.
- Capital 203,860,000 yen
- Foundation March 1980
- Representative Kazuyuki Kishi
- Bank of account Bank of Tokyo-Mitsubishi UFJ, Mizuho Bank, Sumitomo Mitsui Banking Corporation
- Subsidiary HK: Facility HK, China: Facility DG
- Agent for SCHMID in Germany



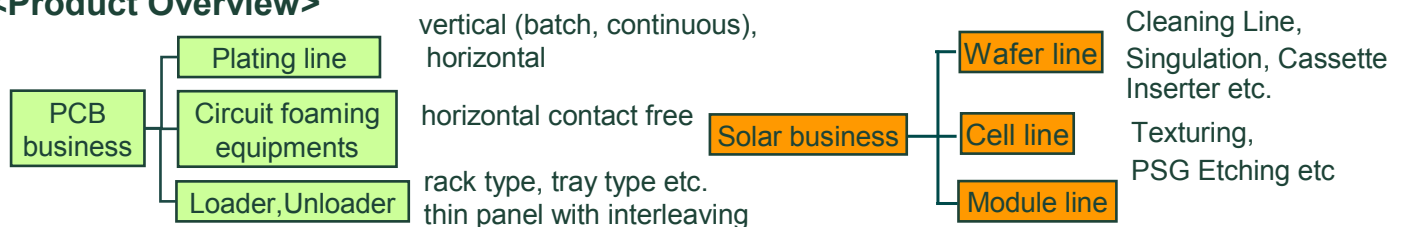
<Management Principles>

- Satisfying customer is our first priority, and we try to offer prompt & professional services.
- In PCB, PV, or related equipment business, we always try to innovate technologies and suggest best solution to our customers.
- We always consider people's ease, try to build up comfortable working circumstance and bring out excellent teamwork.

<Corporate History>

- 1980 Enter PCB business
- 1999 Start handling Schmid (Germany) equipments, become exclusive agency in Japan
- 2003 Enter Solar business
- 2008 Acquire Protek (now Facility HK) as subsidiary (manufacture and sell plating machines)
- 2009 Oct. Obtain ISO9001: 2008 certification

<Product Overview>



< Schmid Overview Gebr. Schmid GmbH + Co. (GSF) >

- Head office address Robert-Bosch-Str. 32-34 D-72250 Freudenstadt
- Sales 50 Bil yen (2008)
- Employee 1,600 (for entire group)
- Representative Christian Schmid (PRESIDENT & CEO)



< Business Outline >

One of the best manufacturers in the world for PCB and PV production equipment.

Schmid supplies to most of major European PV manufacturers.

Established reputation for its machines with advanced technology and fine processing technique.

Recently, it is rapidly extending its market share by positively entering Asia, China, and Indian market.



URL : <http://www.schmid-group.com/>



Printed Circuit Board Business Outline

Plating Line

- Vertical Continuous Plating Line
- Vertical Batch type Plating Line
- Vertical Batch type Horizontal Desmear Line
- Horizontal Plating Line



Vertical Continuous Plating Line



Horizontal Desmear Line



Horizontal Chemical Copper Line

<Desmear Line>

- Equipped with ultrasonic rinse, auto self cleaning function, permanganate regeneration tank.
- Possible to clean blind via and small-diameter through hole by special nozzle system, and process time can be shortened.
- Troublesome cleaning inside chamber is automated to provide highly confidential working circumstance.

<Chemical Copper Line>

- Perfectly suits for installing in clean room as it requires only small space.
 - Our own flood box nozzle structure makes it possible to have high accuracy plating to through hole with high aspect ratio.
 - As it uses smaller amount of chemical, it has better confidentiality compared with vertical transportation. Tamper from outside air will be less, and precise plating layer can be obtained effectively.
 - Deposition speed is normally 1 μ m/5min.
- Besides Sn-Pd Catalytic method, plating methods such as direct plating are available.

Circuit Foaming Equipment

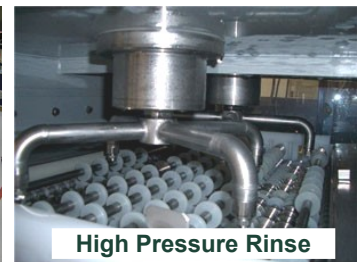
- Developer Etcher Stripper
- Contact Free Transportation
- High Pressure Rinse



Developer Etcher Stripper



Contact Free Transportation



High Pressure Rinse

<Pre-Treatment·Developer·Etcher·Stripper>

- From ultra thin panel to thick panel, stable transportation is available by Schmid unique transportation roller.
 - For etching module, high-accurate etching with less unevenness is available by intermitting system.
 - For stripper module, dry film resist can be collected effectively by its unique cyclone filter.
- Besides above, it requires minimum installation space due to Schmid unique module design.
- All daily maintenance parts including spray nozzle, pipe, filter housing etc. can be set / taken off at one-touch operation.
 - Required utility space is small due to Schmid unique module design.

<Contact Free Transportation>

- By the unique panel holding method, now it's free from contact damage caused by transportation roller.
- It can be applied to each processing machine.

Handling Machines

- Rack type·Palette type Loader Unloader (thin panel·interleaving)
- Basket Loader Unloader
- Special Handling Equipments



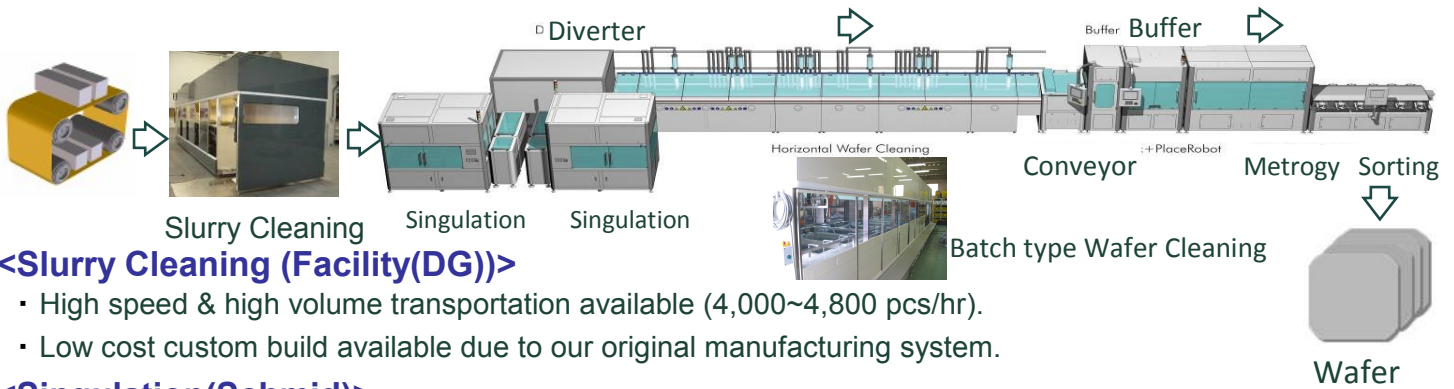
Handling Equipments

<Handling Equipments, Loader Unloader>

- Thin panel and interleaving for stack, palette, V rack etc.
- Suggest machines which can apply to variable panels and transportation methods.

Solar Business Outline

Wafer Line



<Slurry Cleaning (Facility(DG))>

- High speed & high volume transportation available (4,000~4,800 pcs/hr).
- Low cost custom build available due to our original manufacturing system.

<Singulation(Schmid)>

- Almost no stress to wafers as it has separation action in water tank.
- As 2 lanes are independent, stop time for preparation can be shortened.
- Possible to detect broken wafers.

<Wafer Cleaning (Facility(DG))>

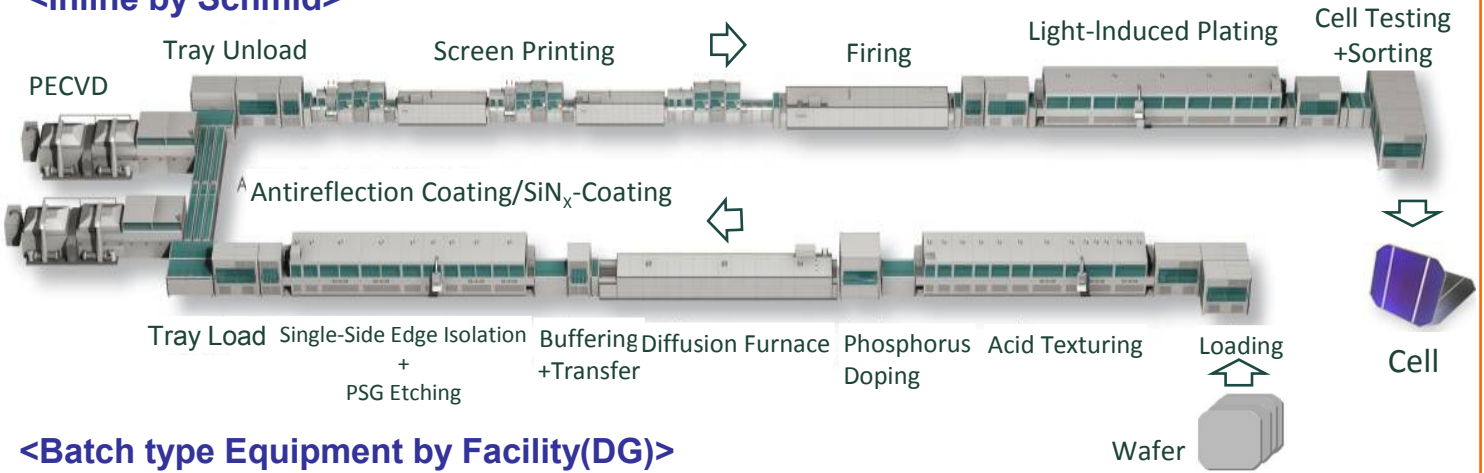
- Shows excellent cleaning effect by ultrasonic + exclusive chemical solution.
- Low cost custom build available due to our original manufacturing system.

<Handling Equipments such as Diverter, Cassette Inserter, Buffer etc. (Facility)>

- Manufacture Handling Equipments based on customers' request including line structure, position, installation space etc.

Cell Line

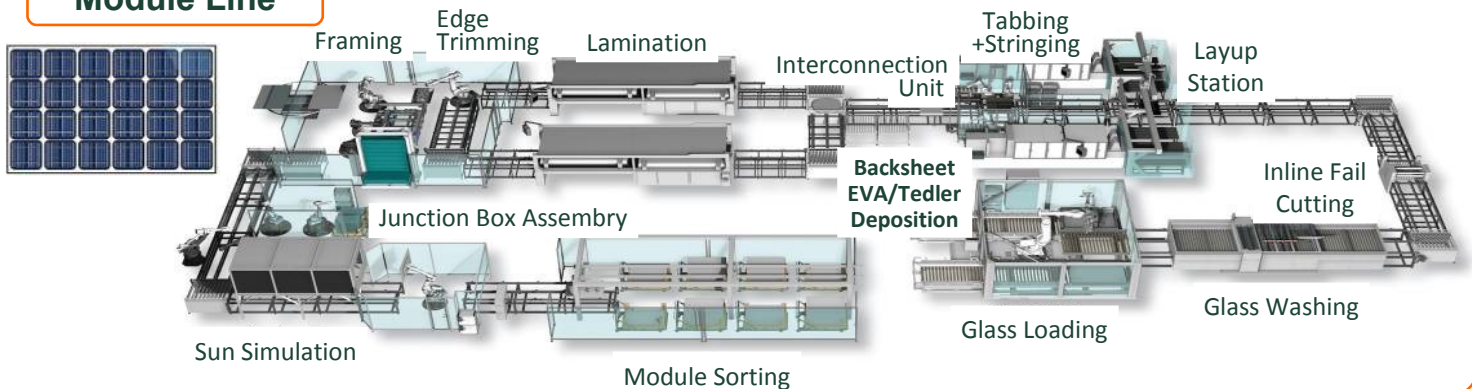
<Inline by Schmid>



<Batch type Equipment by Facility(DG)>

- **Saw-damage Etching, Texturing, PSG Etching**
- High speed & high volume transportation available (transfer cell 200 pcs in cassette, concurrent processing).
- Low cost custom build available due to our original manufacturing system.
- Wafer auto cassette input / output in Loader & Unloader (option).

Module Line



<Facility (DG) Outline>

- Corporate name Facility Technology (Dongguan) Co.,Ltd.
- Capital HKD 20,000,000
- Representative Makoto Honda
- Foundation 2007

<Business Outline>

- Manufacturing PCB production machines and maintenance.
- Manufacturing equipments based on Facility's concept and design.
- Machines are precisely manufactured by professional engineers and the quality is one of the best in Asia. With the strength of having the same design concept as Japanese equipments, we began to manufacture machines for PV in recent years.
- Same concept with Japanese machines is one of the strength.
- It began to manufacture machines for PV in recent years.



Dongguan new plant

Vertical Batch type Plating Line



Vertical Continuous Plating Line



Solar Wafer Cleaning Line



Facility Co., Ltd.

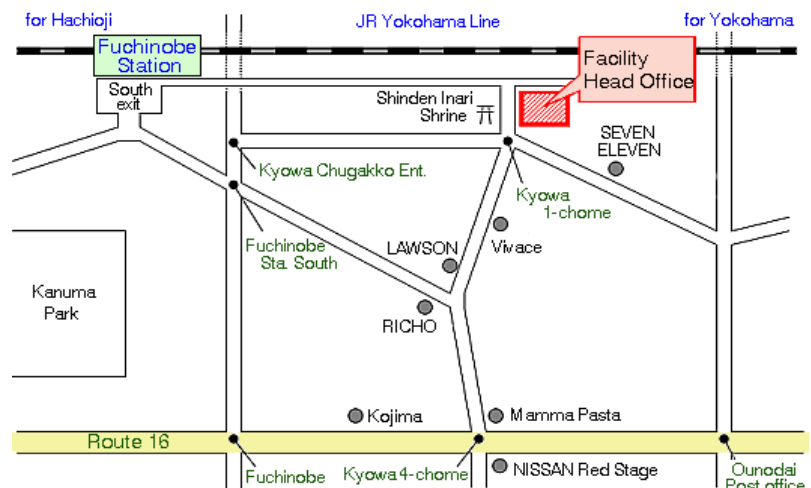
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※ 10 min walk from south exit of Fuchinobe station in JR Yokohama line