



# P&ID

Company Limited

[www.21chem.com](http://www.21chem.com)



World-class technology makes life more plentiful and safe.

# 》》 MESSAGE



Dear Sirs,

It is an enormous honor for us to extend our best greetings to our esteemed customers and business friends by way of introducing the current activities and major services of P&ID Co., Ltd. P&ID Co., Ltd established in Jun. 2000 in order to contribute in the industrial growth in Korea and to become a special leading company for the Chemical engineering and Chemical manufacturing in the field of Specialty Chemicals and Petrochemical Plants.

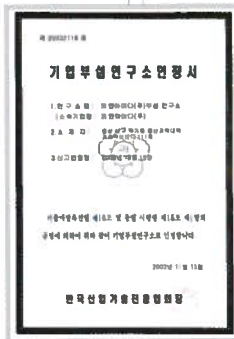
Major staffs of P&ID Co. have already successfully played its role as a pioneer of the Specialty Chemical Process in Korea before the company establishment based on their own technical experience and development in various chemical fields, and we have supplied Process technologies to several customers' Project with high efficiency.

We are also specialized to produce the Specialty chemical products since Jan. 2003 at our Chinese factory under control of P&ID's Technology and Management. Please be assured that we will continue our best effort to enhance the production efficiency and capabilities to the maximum extent in order to bring a full satisfaction to our present and future customers in terms of reasonable COST, the best QUALITY, great CREDIT and whatever.

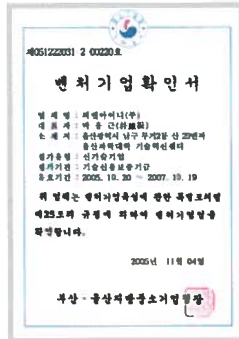
We are very much looking forward to an opportunity to serve you all the time and, in the meantime, your continuous guidance and patronage would be highly appreciated.

March 2006  
Park woong gun / CEO

# 》》 REGISTRATION CERTIFICATE



Admittance of Research Center



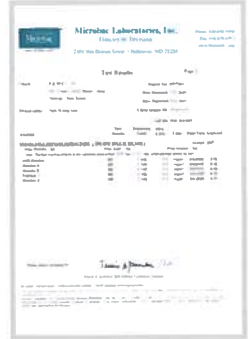
Admittance of High Tech Enterprise



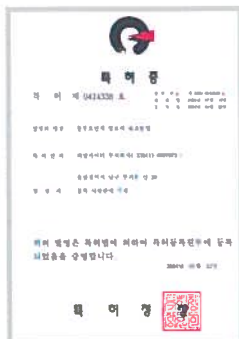
Certification of Superior Enterprise



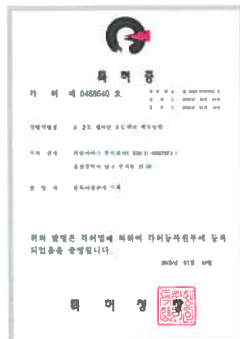
Certification of Kibo A+ Members



FDA Test Result (MELCROSS-25)



Charter of SENOR-2 Patent



Charter of MELCROSS Patent



Certification of ISO approval  
ISO 9001:2000

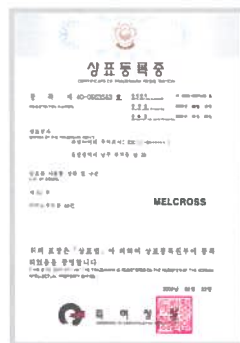


Certification of ISO approval  
ISO 14001:2004

## >>> BRIEF HISTORY



- July 2006 Awarded Kibo A+ Members
- Mar. 2006 Seoul office open
- Aug. 2005 Shanghai Branch Company Established
- Jan. 2005 Produce and sale the Amino resins for coating & paints, MELCROSS.
- July 2004 Take patent for Cross linking agent Amino resins, "MELCROSS".
- Mar. 2004 Take patent for Color former of Fluoran Series.
- Nov. 2003 Established and be admitted the Research Center.
- Oct. 2003 P&ID Co., Ltd was awarded Certification of Superior Enterprise.
- July 2003 P&ID Co., Ltd was awarded Admittance of High Tech. Enterprise by Korean Administration.
- Mar. 2003 Produce and sale the heat sensitive dyestuff for thermal paper "SENOR-2".
- Nov. 2002 Developed the Specialty Amino resins for Paint & Coatings.
- Mar. 2002 Developed the Superior process of heat sensitive dyestuff (Fluoran dye).
- Aug. 2001 Start business of chemical Engineering & Construction.
- Jun. 2000 P&ID Co., Ltd was established.



Registration of Trade Mark



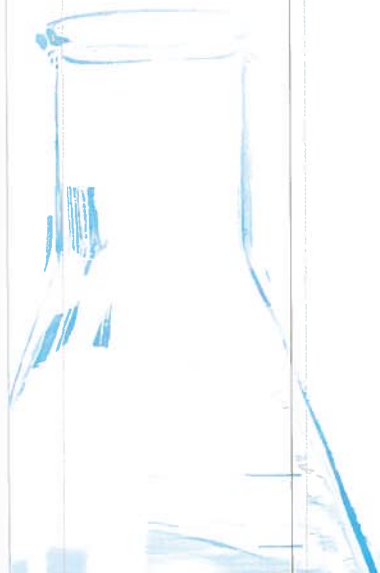


## >>> CHEMICAL DIVISION



### ▶ FINE CHEMICAL MANUFACTURING

- Color former for Thermal paper "SENOR-2"
- Crosslinking Agent of melamine derivative, Amino Resin "MELCROSS"





▶ SENOR-2 [COLOR FORMER]

SENON-2 can be used in most grades of heat-sensitive paper.  
 Produces intense black image with excellent image stability.  
 Exhibits high thermal sensitivity.



▶ MELCROSS™ [Amino Resins]

MELCROSS™ resins are the heat-convertible type and are used in baking coatings and occasionally in some air-drying coatings. They produce very hard, almost colorless films, but are quite brittle and have poor adhesion to metal surfaces.

It is fortunate that amino resins are compatible with a wide range of alkyd or acrylic resins because the combination produces films having excellent properties.

The MELCROSS™ resins also have better heat stability and alkali resistance, and they are preferred for applications requiring exterior exposure, such as automotive primers and topcoats, coil coating, appliance, container, general metal and wood coatings.





## >>> PRODUCTS

P&ID Co., Ltd.



**MELCROSS™ 03**  
Hexamethoxymethyl melamine type resin

**MELCROSS™ 11**  
Mixed ether type resin

**MELCROSS™ 16**  
Mixed ether type resin

**MELCROSS™ 21**  
High methylol type resin

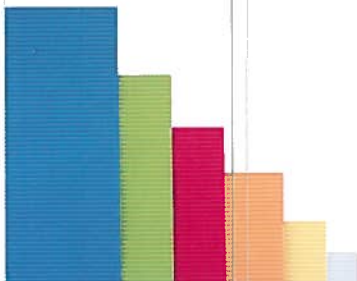


**MELCROSS™ 22**  
Normal butylated melamine resin

**MELCROSS™ 23**  
Isobutylated melamine resin

**MELCROSS™ 25**  
High imino type resin

**MELCROSS™ 27**  
High imino type resin





**MELCROSS™ 26**

Normal butylated melamine resin

**MELCROSS™ 62**

Isobutylated urea resin

**MELCROSS™ 75**

Isobutylated urea melamine resin



**MELCROSS™ 83**

Mixed ether type benzoguanamine resin

**MELCROSS™ 85**

High imino type benzoguanamine resin

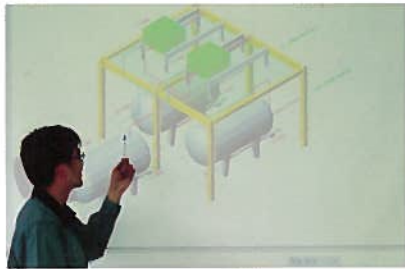




## >>> PLANT ENGINEERING DIVISION



P&ID Co., Ltd.

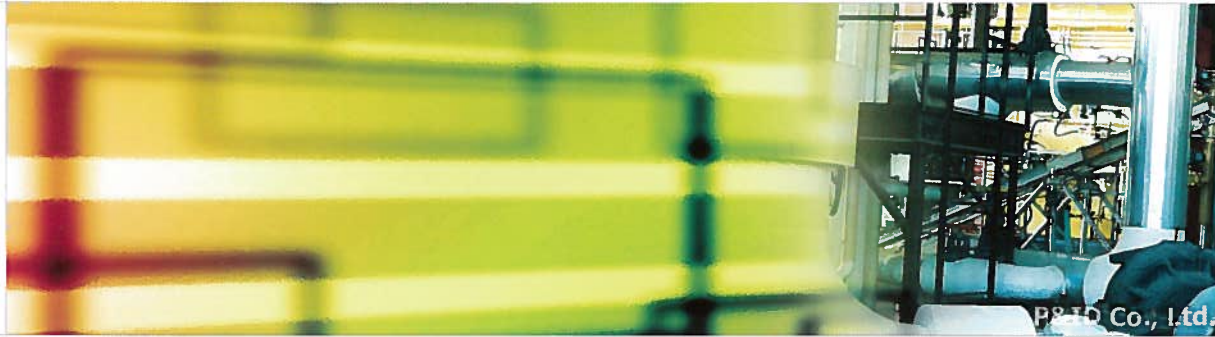


### ▶ CHEMICAL ENGINEERING, PROCUREMENT & CONSTRUCTION

- A Consulting and Engineering Company specialized in Petrochemical field and Specialty Chemicals.
- A Team consists of about a dozen engineers and researchers who profess in the state-of-the-art specialty chemical process technology.





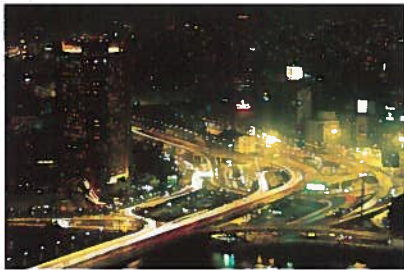
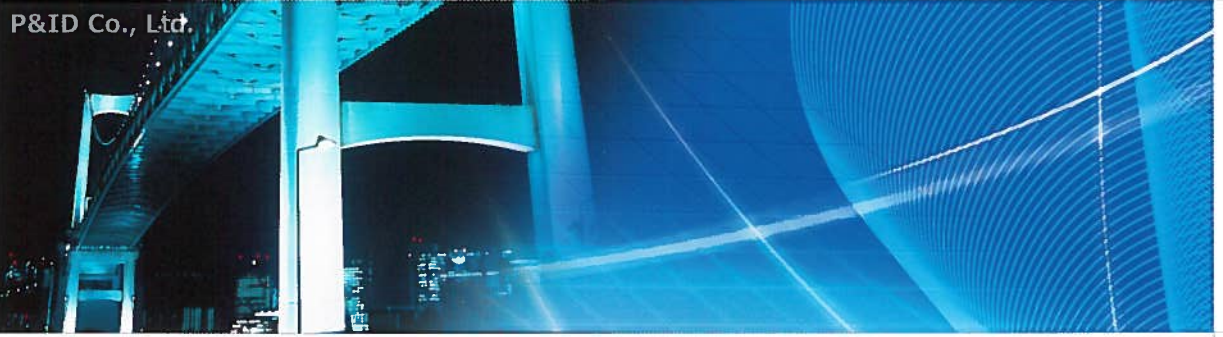


- Consulting and Engineering
- Process Engineering Design
- Unit Optimization and Unit Improvement
- Solvent Recovery Plant
- Distillation System for Petrochemical Process
- Specialty Chemical Process Design



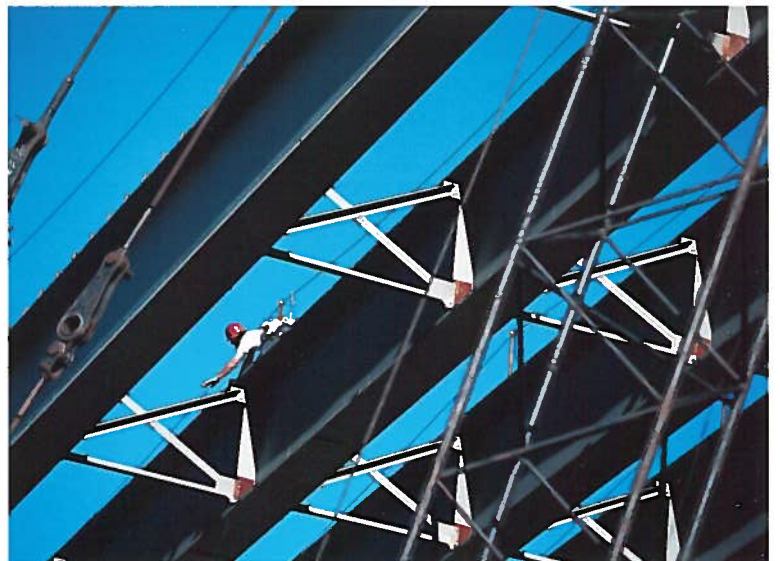
## >>> PLANT ENGINEERING DIVISION

P&ID Co., Ltd.



### ► OUR STRENGTH

- Extensive experiences and expert knowledge in the process designing and plant operations.
- Client focused on each specific project to custom-tailor our engineering work to a specific task.
- Cost competitive in the highly technical services.







## ▶ REPRESENTATIVE ACCOMPLISHMENT

- Acrylic Resin / Alkyd Resin plant
- Epoxy Resin plant
- Polyester Resin plant [Saturated / Unsaturated]
- Amino Resin plant [Methylated / Butylated / Mixed ether / Urea / Benzoguanamine]
- Hydrogen Peroxide plant [PCN & HPP]
- TMP [Trimethylolpropane] plant
- Di-TMP [Di-trimethylolpropane] plant
- NPG [Neopentyl Glycol] plant
- MIBK [Methyl Isobutyl Ketone] plant
- Pentaerythritol plant
- Formaline plant
- Formic Acid plant
- Sodium Formate plant
- Phthalic Anhydride [PA] plant
- Cumene plant
- Phenol / Acetone plant
- BPA [Bisphenol A] plant
- CO<sub>2</sub> Liquefaction & Dry Ice Production
- EO [Ethylene Oxide] plant
- EG [Ethylene Glycol] plant



 **P&ID Company Limited**  
www.21chem.com / www.pnid.co.kr

**R&D center** : TIC, Ulsan College, Muger-Dong,  
Nam-Gu, Ulsan, Korea  
TEL : +82-52-223-2102 / FAX : +82-52-277-2102

**Factory** : #916-5, Wonsan-Ri, Onsan-Eup, Uiju-  
Gun, Ulsan, Korea  
TEL : +82-52-238-2714 / FAX : +82-52-238-3323

**- Trading Department**

TEL : +82-52-223-2104 / FAX : +82-52-277-2102  
E-mail : oksan02@yahoo.co.kr

**- Chemical Department**

TEL : +82-52-223-2177 / FAX : +82-52-277-2102  
E-mail : yg\_kwon@hanmail.net

**- Plant Department**

TEL : +82-52-223-2102 / FAX : +82-52-277-2102  
E-mail : kykim9674@hanmail.net

**- Research Center**

TEL : +82-52-223-2177 / FAX : +82-52-277-2102  
E-mail : yg\_kwon@hanmail.net

**Seoul Office**

#1803, Daerung Post Tower I, 212-8, Guro-dong,  
Guro-gu, Seoul, Korea  
TEL : +82-2-2082-2950~3 / FAX : +82-2-2082-2954  
E-mail : kwansykpark@yahoo.co.kr

**China Office**

Shanghai P&ID Trading Co.,Ltd.  
RM.624 Hengshan B/D, No38 Yinglun Rd,  
Waigaoqiao Free Trade Zone, Shanghai, China  
TEL : +86-21-50480608 FAX : +86-21-50481456  
E-mail : wgpark02@hotmail.com