Hanwha PTA Technology and Solutions
We provide over 40 years of our hands-on-experience with the proven method in the complete Licensing Package

HGC Licensing Characteristics

• Over 35 year PTA manufacturing know-how
  • Advanced technology
  • The greatest operability
  • World’s lowest variable cost
  • Plenty of engineering capability
  • The most compact plant design
  • Complete PTA services

Business Scope

HGC provides PTA technology and solutions based on its long experience in PTA manufacturing and expertise.

• Process Licensing
  - Process design
  - Advisory for Engineering Procurement and Construction
  - Commissioning and Start-up support

• New Process Development
  - Environmental friendly system
  - Remarkably low variable cost

• Technical Service
  - Operation & Maintenance support
  - Plant & Process rationalization
  - Plant optimization
  - Training for operability and productivity improvement

• Performance Project
  - Energy optimization system
  - Raw material minimization
  - Methyl acetate hydrolysis system
  - Advanced management technology
  - Design of operation monitoring system
  - Process control strategy
We license the most competitive PTA technology in the world today and for the years to come.

PTA Licensing Features

In order to maximize your return on investment, HGC Licensing Package features the state-of-the-art technologies which make it possible not only to reduce the variable cost by an unrivaled low acetic acid and energy consumption, but also to reduce the massive investment cost by adopting the most compact plant layout and fewer major equipments.

The top 3 major features include:

1. The Lowest Acetic Acid Consumption
   - Optimal reactor sizing
   - Improved agitator system
   - Implementation of methyl acetate hydrolysis system

2. Optimal Energy Consumption
   - Single train of compressor, turbine and expander
   - Azeotropic tower system
   - Optimal PTA pre-heater system design

3. Process Simplification
   - Less equipment and minimized TA vessels
   - Minimization of PTA pre-heaters and crystallizers
   - Single stage of PTA separation system

PTA Technology License

It will begin with analyzing the specific needs and the plan for the client. We will utilize our experience and know-how to design the most profitable plant that will suit each client. We can have the plant up-and-running in the shortest possible timeframe with absolutely no sacrifice in quality. With our hands-on experience of successfully running PTA plants for over 40 years, superb training, commissioning & start-up support and Operation & Maintenance support will be provided, which are also our biggest strength.

The following are the list of services available:

- Introduction of conceptual design
- Technical and commercial proposal
- Feasibility study
- Technology licensing
- Design basis meeting
- Front end engineering package
- Support during project execution
- Commissioning support
- Professional training
- Technical support

Our licensees benefit from a unique technical association with us by the means of upgraded technologies, improvements and professional assistance made available through our distinctive technical service program.
Key Performance Solutions

Through our many years of continuous research and pursuit of perfection, HGC has made remarkable discoveries that led to significant variable cost reduction and higher final product quality.

The most distinctive key performance solutions are as follows:

- **Oxidation Reactor System**
  - Optimal design & operation by oxidation reactor simulation
  - Acetic acid unit consumption improvement by 20% compared to the industry average

- **Methyl Acetate Hydrolysis System**
  - Conversion of methyl acetate from oxidation reactor into acetic acid
  - Acetic acid consumption reduction by 3-5 Kg per ton of PTA production from the current system

- **Pressurized Separation System**
  - Single stage separation instead of double stage separation
  - Improved separation efficiency with better quality product

- **Catalyst Recovery Unit**
  - Co/Mn catalyst recycling from the mother liquor purge
  - High recovery ratio of more than 95%

- **PTA Solid Recovery Unit**
  - Minimize para-xylene loss by recovering solid from the mother liquor
  - Micro porous metal filtering system
We provide the service most suited for your needs to fulfill your goal

For over 40 years, HGC has always been eagerly pursuing the lowest variable cost and the highest operability by adopting & challenging new technologies. ”Hanwha PTA Licensing Package” will result in excellence in PTA manufacturing.

Continuous Technical Service

Beyond the Licensing Package, Hanwha General Chemicals provides continuous technical services to the licensee. We provide the service most suited for your needs to fulfill your goal to operate the most profitable PTA plant.

Our service program will include:

- Access to help desk
- Regular customer service visits
- Training for operation improvement
- Operational troubleshooting
- Capacity increase
- Technical exchanges
- Performance project

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