

Case Study 01 Hydrothermal synthesis system utilizing supercritical water



- Year/Month : 2009/10
- Client/Owner : CHEMICAL COMPANY
- Engineer : ILSHINAUTOCLAVE
- Location : CHEONGJU, REPUBLIC OF KOREA

TITLE

Supercritical Hydrothermal Synthesis System CO₂ Extraction System – Nano Powder Production (Making Nano particle powder)

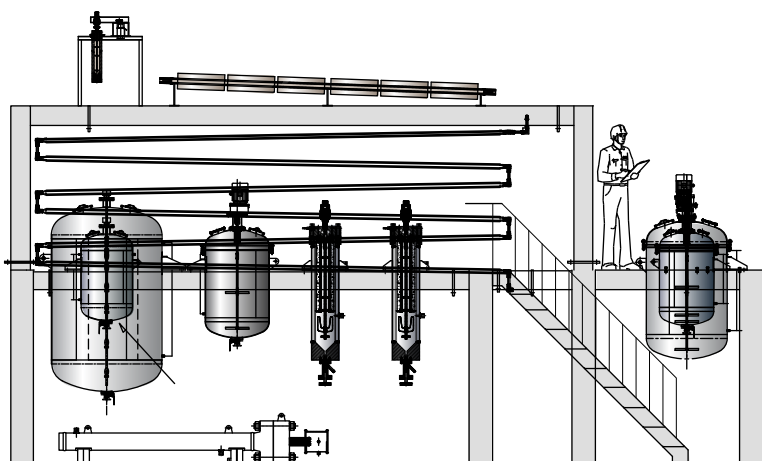
PROCESS

Removal Condition	400kg/cm ² at 450℃
Total Output	2 ton/month

MAJOR APPLIANCES

Reactor	2.8ℓ x 1 units
4 Bridges & Zone control	700kg/cm ²
Filtering Vessel	70ℓ x 2 units
DI Water Tank	2500ℓ x 1 units
Solution Tank	250ℓ x 2 units
Receiver Tank	2500ℓ x 1 units
HP Pump	Plunger x 2 unit
Max. Working Pressure	400kg/cm ²
Max Flow Rate	1.2ℓ/min
Pre-Heater	Double Pipe Type x 2 units
Condenser	Shell & Tube Type x 2 units

STRUCTURE



FEATURE

- Continuous hydrothermal synthesis powder production
- Many years experience
- Automatic system
- Conform with High-pressure Gas Safety Regulation
- Certificate of Korean Gas Safety inspection