

## Petroleum Coke / Coal Gasification Plant

Capacity: 1.5 billion cubic meters  
per year of synthetic gas

Year Start: 1999

Shut Down: 2009

Technology: GE Gasification

Feedstock: Petroleum coke or  
coal

Products: Syngas

### Major Equipment

- Gasifiers
- Ball mills
- Feedstock mixer
- Slag filter
- Grinder
- Vacuum flash drum
- Slurry feed tank
- Slag crusher
- Sour gas scrubber
- Coke / coal handling system
- Black water treatment system



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### BRIEF PROCESS DESCRIPTION

Coke or coal fine is mixed with water and fluxant to form slurry. The slurry is reacted with oxygen from air separation unit at high temperature and pressure in the reactor to subsequently generate synthetic gas. The fluxant combines with unreacted coke and residual catalyst to form slag in the reactor.

The slag is crushed and flushed out batchwise. The syngas is scrubbed to remove particulates, used to generate medium and low-pressure steam, cooled and scrubbed again to remove acid gases. The hydrogen sulfide removed in the acid scrubber is collected and returned to the process.

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