

# What is air separation equipment used for

Air separation equipment is used to separate air to produce nitrogen and argon gas.

## Air separation equipment

Air separation equipment is the raw material of air, through the compression cycle deep freezing method of air into a liquid state, and then through the distillation and from the liquid air to gradually separate the production of oxygen, nitrogen and argon and other inert gases equipment, widely used in traditional metallurgy, new coal chemical industry, large nitrogen fertilizer, professional gas supply and other fields.

## Capacity of air separation equipment

The air separation plant is a large and complex system consisting of the following subsystems: power system, purification system, refrigeration system, heat exchange system, distillation system, product delivery system, liquid storage system and control system etc.

It consists of an air pre-cooling system (air-cooling system) and a molecular sieve purification system (purification system). The air pre-cooling system reduces the temperature of the compressed raw air by contact heat

exchange and at the same time scrubs the air of harmful impurities such as acids.

### The purification principle of air separation equipment

The temperature of the air compressed by the air turbine compressor rises above 80 degrees, resulting in the subsequent adsorption and heat exchange not being carried out properly. By setting up an air pre-cooling system the temperature of the air entering the air separation plant can be effectively reduced.

In equipment that applies the principle of low-temperature distillation for oxygen production, the air must be pre-treated with filtration, pre-cooling and purification in the room temperature zone in order to ensure that the distillation and separation of air in the low-temperature zone is carried out properly.

It is mainly used for the preparation and production of oxygen, nitrogen, hydrogen, helium, gas and other gas products required for medical treatment and industrial and agricultural production. As a typical complex product, the air separation equipment consists of purifiers, compressors, pre-cooling equipment, purification equipment, booster, heat exchangers, distillation towers, power equipment and other parts of the machine, which are cross-linked to work together.

