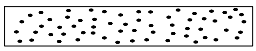
## 气力输送系统 Pneumatic Conveying System

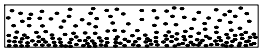
- 高压连续式密相输送
- 高压 BATCH 式密相输送
- High pressure continuous dense phase conveying
- High pressure BATCH type dense phase conveying
- 正压连续式稀相输送
- 负压连续式稀相输送
- Positive pressure continuous dilute phase conveying
- Negative pressure continuous dilute phase conveying

### 气力输送状态

**1 浮游流：(稀相)**
输送空气速度大时，粒子以大致均匀分布的状态浮游于气流而输送。
**Floating Flow： (Dilute phase)**
When the air velocity is high, the particles evenly distributed are floating in airflow and being conveyed.



**2 底密流：**
粒子愈接近管底愈致密分布，但不停滞，伴有不规则的旋转、冲撞而输送。
**Bottom Dense Flow：**
When more close to the bottom of tube, the particles are distribute more densely and being conveying unceasingly with irregular rotation and collision.



**3 粗密流：**
在粒子浮游而输送的界限状态，成为有粗密的不均匀流体，部份粒子在管底滑动但不停滞，而进行输送。
**Thick Dense Flow：**
At the floating and conveying boundary condition, the particles become uneven fluid and a parts of particles is coasting at the bottom of pipe and being conveying unceasingly.

**4 停滞流（不安定輸送）**
大部份的粒子失去浮游力，停滞管底，管的断面积局部减小，所以该处的空气速度增大而吹流停滞的粒子群，粒子交互停滞集积与吹流，为不安定的输送状态。
**Stagnant Flow：(Unstable Condition)**
Most of the particles lose their ability to float and bogged down at the bottom of pipe. The basal area of pipe is reduced partly, so the air velocity increases and winds drift the stagnant particles. The condition that particles are at a standstill and wind drift mutually is unstable.

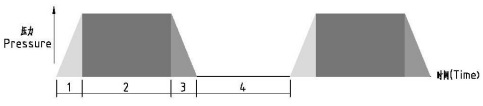
**5 部份流：**
输送空气速度极端过小时，粒子滞积管底，气流流过其上，滞积的粒子层表面的一部份粒子因气流而不规则移动；滞积层也随时间的推移，宛如砂丘一样移动。
**Parts Flow：**
When the air velocity is low extremely, the particles blogged down at the bottom of pipe and the airflow flow through it, the surface parts of the accumulated particles move irregularly due to the airflow. The accumulation horizon is moving like sand hill with the time flying.

**6 栓　流：(密相)**
在充满输送管的状态，滞积的粉粒体层被空气压力推动而输送。
**Stagnant Flow：(Dense Phase)**
At the fulfill delivery condition, the accumulated particles are being conveyed at the promotion of air pressure.

### 连续式与 BATCH 式区别

**The difference of continuous conveying and batch conveying**


连续式输送方式 Continuous conveying




Batch 式输送方式 Conventional batch transport

1. 输送管加压时间
   Filling the transportation pipe
2. 输送时间
   Transporting
3. 吹扫时间
   Air blowing out
4. 输送物加入时间
   Accepting the material

### 输送压力/速度/输送管中的型态关系图

**The relation schema of Conveying Pressure/velocity/Pipe**