

$$\Delta p_{pipe} = (\lambda_s + \mu \lambda_s) \frac{\rho v^2 L}{2 D}$$

$$P_n = \frac{\gamma R}{H} \left[ 1 - e^{-(\mu k_f z/R)} \right] + P_{no} e^{-(\mu k_f z/R)}$$

# Pressure Vessel System

Pressure Vessel conveying plants are the classical method of pneumatic conveying. Intensive research, development and testing have provided technical know-how and design parameters that permit the trouble free handling of materials previously considered to be 'difficult'.

The size and type of pressure vessel employed is determined by the particular application.

Rula supplies pressure vessels with throughput ranges from 1 T/h to 150 T/h. Conveying distances of more than 2000m and temperatures of up to 300 deg C have been successfully achieved.

## Pressure Vessel Systems

Rula have done:

- Single Units for discontinuous batch conveying
- Continuously operating twin units with a surge bin / hopper
- Multiple Pressure vessel systems
- Multi-TTS system (with Turbuflow piping)

## Design Features

- Low energy consumption resulting from small volumes of conveying air
- Efficiency even over long distances
- Minimal wear
- Fully automatic and maintenance friendly operation

Multi-TSS Pressure Vessel System



Double Pressure Vessel system



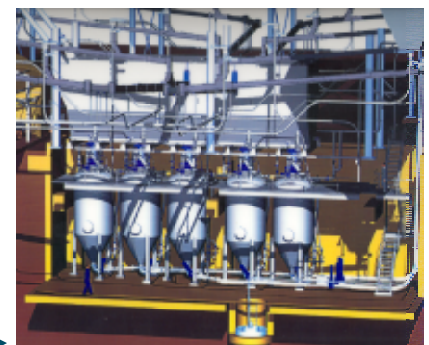
Single Pressure Vessel System



Typical Pressure Vessel

### Key

1. Pressure Vessel
2. Shut-off valve
3. Filling Valve
4. Discharge Valve
5. Mixing Chamber
6. Pressure Indicator
7. Level Indicator
8. Fluidizing Nozzle
9. Conveying Air Supply
10. Conveying Line
11. Conveying Line Vent Pipe
12. Pressure Vessel Vent Pipe



Multiple Pressure Vessel System - Majuba

