CHENG DU

P&G IWS 5.0

全力以赴 全域突破

Project Name:
Making PCC Pipeline Innovation Design

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Dept.: MSG

Background

The 4F PCC material discharge pipeline has long suffered from severe noise issues, with operational noise at **84.1 dB** and peaking at **110 dB** when the vibration system was active. The project aimed to eliminate this noise source, fulfilling a long-standing desire of the making department and creating a "WOW Workplace" working environment.

What was done?

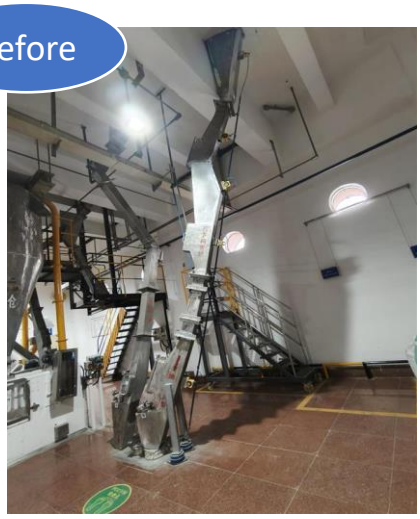
The team successfully delivered an independently innovative solution that transformed the area from high-noise/low-efficiency to low-noise/high-efficiency:

- **Significant Noise Reduction**: Noise levels were drastically reduced from **110 dB to 74 dB**, completely eliminating the occupational noise hazard.
- **Energy Savings:** Compressed air loss was reduced by **95%,** saving approximately **5,000 RMB** annually in energy costs.
- **Maintenance Efficiency:** Maintenance costs dropped by **86%**, saving approximately **7,000 RMB** annually.

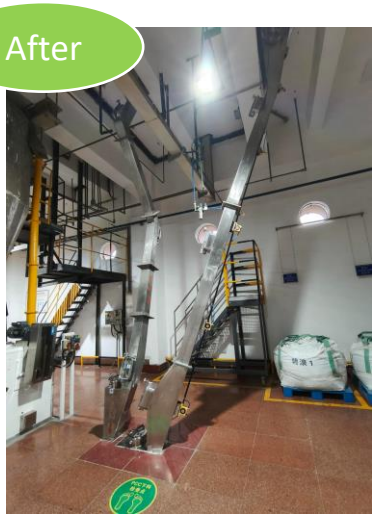
How it works?

The project implemented three core innovations:
New Bridge-Breaking Mechanism (Noise Elimination): Replaced the traditional "external overall vibration" method (the primary noise source) with a new system using an "internal pneumatic cylinder with an external chain pull" to break material bridges/blockages.
Straight Pipe Deceleration (Spill Prevention): Changed the piping from curved elbows to straight pipes. To address the challenge of high-speed powder flow in straight pipes, a "terminal scraper deceleration" device was added to slow down the material, ensuring smooth flow without dust buildup or spillage.
Maintenance-Friendly Design: Optimized the existing flange observation ports and access doors to make daily cleaning and troubleshooting significantly faster and easier.

Before



After



▼ 80 # /month
Touch#

▼ 95%
Compressed Air Saving

▼ 2M $/Y
Value Creation