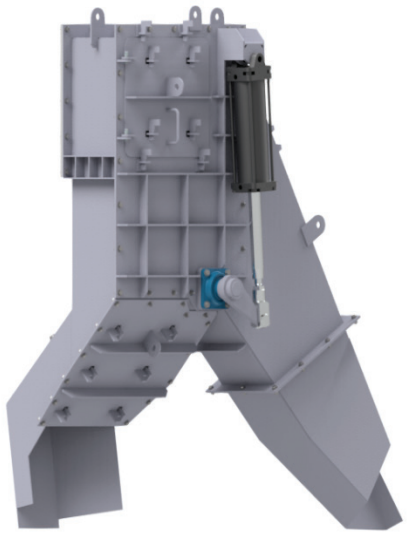
FRASER-LEVER
engineered advantage



CASE STUDY:

REDESIGN OF DIVERTER CHUTE

Client:
Brisbane City Council

Location:
Brisbane, Australia

Mineral Type:
Asphalt

Services Provided
- Mechanical Design
- Materials Handling

Situation:

Brisbane City Council approached Lever to design a replacement diverter chute at one of their Asphalt plants.

Challenge:

The diverter chute needed an improved seal against the internals of the chute to ensure reject product did not flow into the product stream. Drawings of the existing chute were unavailable, and the chute had been modified extensively on site with no record of the modifications. The chute geometry was complex and difficult to accurately measure. The slope and apertures of the chute were required to be sustained or improved to avoid material blockages.

Solution:

Lever engineers recorded the dimensions of the existing chute, including accurately determining battery limits. The chute body was redesigned with a new gate enabling easier maintenance and ensuring a positive seal, while maintaining the maximum achievable slope and chute aperture. The chute was also designed to enable replacement of the outlet of the reject chute, to avoid on site rework in future.

Actuation was achieved using a pneumatic cylinder that was plumbed into the existing air system. The wear patterns on the existing chute were also studied and a combination of wear liners were selected to ensure long life and manufacturability.

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