



NORTH ANTELOPE ROCHELLE MINE TRANSFER TOWERS & CRUSHERS

CLIENT - Confidential
LOCATION - Wright, WY
COMPLETED - 2006

DESCRIPTION

Matrix PDM Engineering provided final analysis and design engineering for a portable steel in-pit crusher at the North Antelope Rochelle Mine facility. The facility mines Powder River Basin (PRB) coal from an open-pit mine and transports the large particles to the crushers and hoppers via large trucks.

Structural engineering was provided to design the modular steel structure and hopper with 4 foot thick walls. Additionally, designed as the first portable in-pit crusher, it features the largest feeder-breaker designed by McLanahan.

The product flow involves up to six-inch diameter pieces being dumped into the hopper and fed into the feeder-breaker. Once broken down to smaller particles, the coal is conveyed to the crushers via a 72-inch belt conveyor.

PRINCIPAL FEATURES

- First in-pit crusher structure was designed to be able to be transported
- Design featured the largest feeder-breaker produced by McLanahan
- Hopper design included a 43-foot x 29-foot opening with an overall size of 85-feet x 37-feet
- Design accommodates up to six-foot diameter chunks of PRB coal
- Hopper design has a 573-ton capacity and was 44-feet tall
- 11-foot wide feeder-breaker
- 72-inch belt conveyor

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