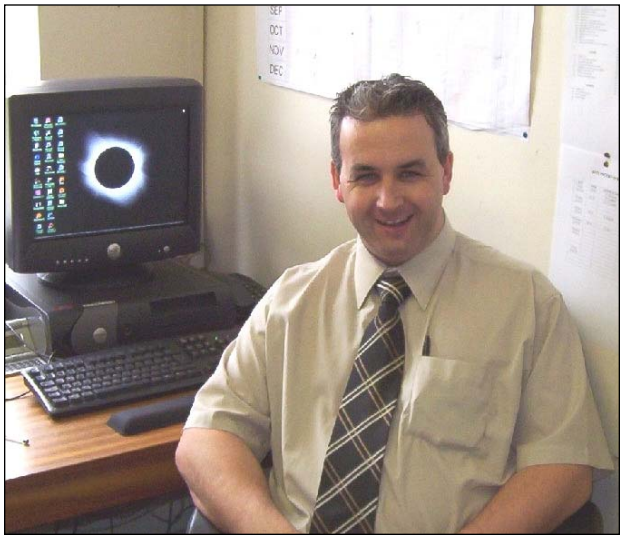
UK Coal Cuts Downtime

Motorized Pulley Powers Kellingley Colliery Conveyor

UK Coal's Kellingley Colliery avoided 30 days of downtime and 300,000 tons of lost production in 2004 thanks to their tailings conveyor drive upgrade in 2003. Since the system does not have redundant conveyors, tailings belt stoppage meant mine production stoppage…this "tail" was wagging the "dog."



Mine Surface Manager, Mick Barry, is smiling because tailings belt stoppages have been eliminated.

Faced with an aging conveyor system, frequent stoppages, and a 30,000 £ ($56,700) annual conveyor maintenance budget, UK Coal's Engineering Manager, Steve Pringle, and Mine Surface Manager, Mick Barry, decided to improve the 500 tph conveyor drive reliability while decreasing maintenance costs.

They replaced the problem-prone exposed dual motor/gearbox center drive arrangement with a 75 kW (100 HP) Rulmeca Motorized Pulley, installed at the discharge end.

Rulmeca Motorized Pulley drives belt at discharge end.

The 800 mm (31.5") diameter Model 800H Motorized Pulley was installed in one morning because the motor and gearbox are enclosed within the pulley shell and it was not necessary to revise the conveyor support structure.

Controlled by a variable frequency drive on a 550v/3phase/50 Hz power supply, the Motorized Pulley saves 6,000 £ ($11,340) per year in reduced electrical power consumption thanks to its higher overall efficiency.

Mr. Pringle said "We expect our first year's performance to be fairly typical because the Motorized Pulley's motor and gearbox are automatically self-lubricated within the hermetically-sealed pulley shell." Regreasable labyrinth seals protect the internal components from water and dust ingress.

Now the power plant fed by Kellingley Colliery need not rely on expensive oil during tailings belt stoppages because they've been eliminated.

Elevated conveyor discharges tailings at 500 tph. Photo insert shows close-up of 75 kW Rulmeca Motorized Pulley prior to installation.

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