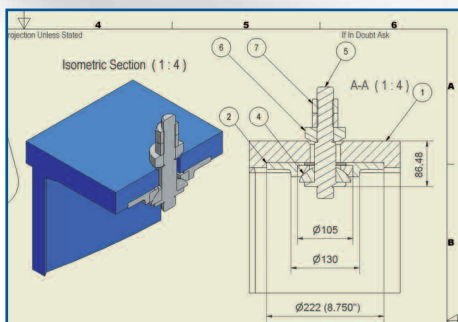




'FTL Technology have shown themselves to be highly technically competent'



Improved hanging arrangement

Longer Life for PF Mill Cylinders

FTL Technology are now manufacturing a new nitrogen actuated cylinder for the Power Generation and Cement industries. **RodasRam** is a designed, developed and patented cylinder to replace the existing hydraulic/pneumatic cylinders currently in use on Babcock 'E' type mills. These mills were designed for the pulverisation of coal at power stations and cement works worldwide.

The advantages and benefits of the new 'Rolling Diaphragm' cylinder are numerous

- Oil Free System – Nitrogen only
- Nominal Life 30,000 hours (actual 50,000 hours completed on site)
- Individual isolating valve for each cylinder plus minimes test point to enable testing whilst in operation.
- Low maintenance cost / reduced downtime
- Low repair costs
- Environmental improvement
- Operates at 50% lower than current working pressure

Some of our actual installations are...

Ferrybridge

Ferrybridge was our first installation in the UK and had the first set of 8 cylinders installed in January 2003, which have run trouble free for over 12 months so far. The plant has since fully converted a further total of 8 mills, and the aim is to complete another mill during 2004. Mick Culley, Boiler Engineer at AEP says of the change, 'The rams are still being reviewed but early indications are that they are proving to be very reliable. The service provided by both Andrew Hewitt and Mark McCormack has been excellent and they have shown themselves to be highly technically competent, by resolving some early technical issues quickly and efficiently.'

Lafarge

The Lafarge, Hope, cement plant has 2 x 7.9E10 mills for pulverizing coal for their cement works.

FTL Technology has installed a set of rams plus control panel and pipe work at the plant. The second mill has just been commissioned. On the 10E mills, the ram position is at the bottom of the cylinder and by way of a flange connects to the push rod.

The cylinders on the 7E mills are hung from the opposite end to the more standard 10E type mill. There are fulcrum arms connected to the cylinder clevis which transfer load up the top ring.

Trevor Shaw of Lafarge says, 'The new design control system is far less complex, yet gives us the ability to run full diagnostic checks on each individual cylinder. If a cylinder is found to be mal-functioning, the system is designed to allow us to isolate it & replace it on the run. Cross contamination due to pressure leakage is no longer an issue, plus the elimination of oil leakage helps environmentally, which we see as a major factor.'



New Control System

Ratcliffe-on-Soar

The cylinders are also in use at E.ON UK's Ratcliffe-on-Soar Power Station. The only difference between Ratcliffe and Ferrybridge being the hanging arrangement of the cylinders.

Ratcliffe have ordered 8 complete sets of cylinders plus control systems. This will complete 1 full boiler. The first two sets were commissioned in the first quarter. The balance will be commissioned during the Spring / Summer of this year. Anthony Landers and John Arthur of E.ON UK are, "delighted with the cylinders and see the installation as a big winner. There was a lot more potential for leakages with the old system and the control cabinet was over complicated; maintenance costs will drop, and no oil leaks makes everything look cleaner, and gets rid of a possible fire risk."

'We are delighted with the cylinders and see the installation as a big winner'

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RodaRam systems are now currently fitted or under test at Drax, Didcot, Budge Budge, Electabel and Rio Escondido.

