

CARDOX AT RUGELY POWER STATION, U.K.

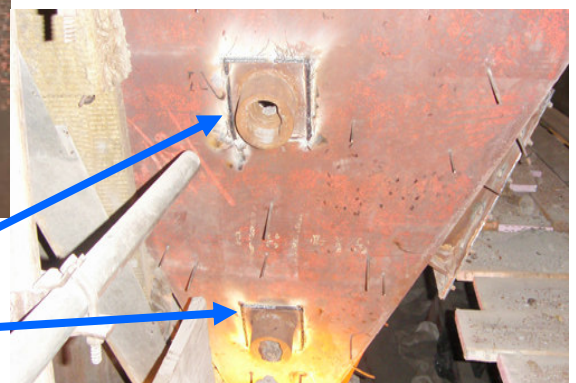
NOREC are a Company providing quality assured contract management services to the power generation, utilities and minerals industries At Rugely Power Station the frequent build-up and blockages of hot ash and dust in the **ECONOMISER HOPPERS** led to Norec contacting **Cardox International Limited** to provide an efficient, reliable and safe method of clearing the build-ups using **THE CARDOX SYSTEM**



Economiser Hopper 1 was blocked from base of hopper to 2nd floor level



Inspection hatch is opened to reveal build-up of hot ash & dust



Special Sockets are installed onto the lower area of the Economiser Hoppers.

The operation—**SIMPLE / FAST / SAFE**

- [1] A small hole is made in the ash / dust build-up (**Duration 2 seconds**)
- [2] Cardox Tube (pre-charged with liquid CO2 (just like a fire extinguisher)) is secured into a Tube Holder and inserted through the Socket into the build-up and locked in position by turning through 90 degrees (**Duration 20 seconds**)
- [3] The Cardox | Tube is then activated and build-up cleared

Sockets were then welded in position on 2nd floor level of Economiser near to each corner of hopper

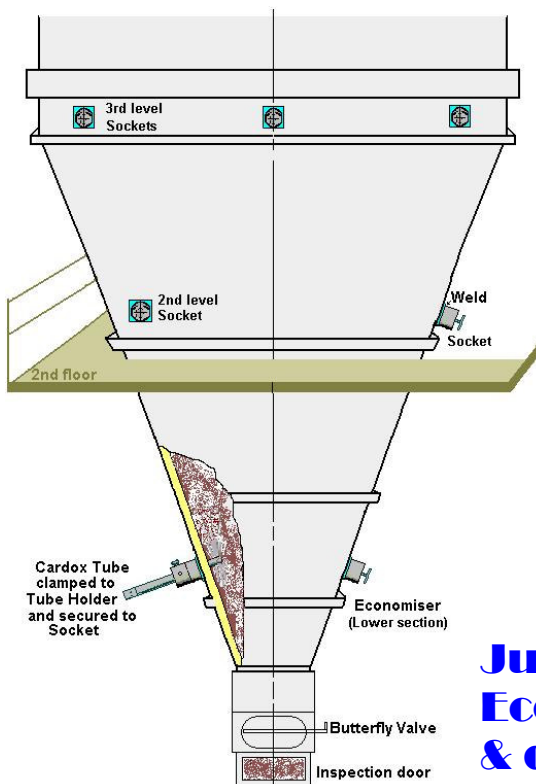


Cardox Tube

Tube Holder

Tube Socket

SCHEMATIC VIEW OF ECONOMIZER



Cardox Tube inserted into Socket on 2nd floor of Economiser

Just 6 (six) Cardox Tubes had the Economiser completely cleared of ash & dust build-up

NOREC's Crawford Weir quoted:

"Using the Cardox System has removed the human element normally used to unblock the hopper which also makes the complete exercise safer to undertake. Risks normally met are removed even with the unit on load. There's no way we would return to the previous methods!" Of course, using Cardox dramatically reduced the down time involved and subsequently costs.

2nd and 3rd level Socket with Cardox Tube Inserted

Operator views inside hopper after Cardox Tubes have been activated in Economiser

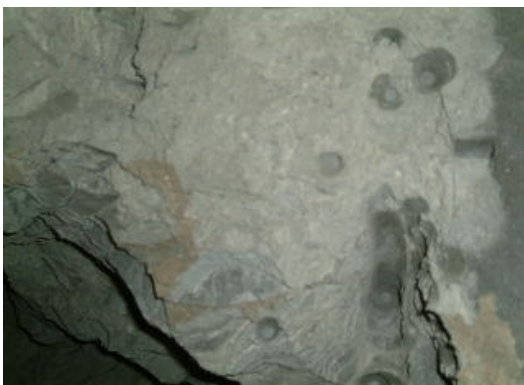


View from inspection hole shows broken dust / ash



Views through 2nd level inspection hatch shows build-up clinging to walls - Thus Cardox Tubes required at 3rd level

The hardness of dust / ash can be clearly seen



Another view from inspection door, shows the ash / dust above at 3rd level of Socket locations



Two Cardox Tubes at 3rd level Sockets ready to be activated

After Tubes have been activated—view inside Hopper of broken dust / ash down into Hopper Discharge Valve

