Sale Product Literature.

The British Steel Corporation

CHOSE **PYROCLOR**

FIRE RESISTANT TRANSFORMER COOLING FLUID

FOR THEIR SHOTTON WORKS AT DEESIDE



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British Steel Corporation's new £7.5 million cold reduction strip mill at Shotton Works was successfully commissioned recently.

The new mill is the main feature of a £20 million development scheme which will increase the plant's cold rolling capacity by 500,000 tons a year to a total of 1.6 million tons.

Eleven Pyroclor-filled transformers, each of 2,600 kVA, provide a variable voltage DC supply, via thyristor convertors, to twin armature 3,000 h.p. shunt wound motors driving the main rolls.
A second group of Pyroclor-filled transformers, each of 350 kVA, are used to provide power for the screwdown motors.

WHY DID BSC ENGINEERS CHOOSE PYROCLOR AGAIN IN THIS MASSIVE PROJECT?

Design Flexibility

Because the fire resistance of Pyroclor allowed a high degree of flexibility when siting both the main and auxiliary transformers.
For example, the main drive transformers stand in a compound alongside the mill immediately adjacent to the rotating machines which they supply.

Reliability in adverse operating conditions

Despite the degree to which the working environment for men and equipment has been optimised in the design and construction of this mill, inevitably conditions in such a heavy industry are less than ideal for electrical equipment. BSC's lengthy experience of operating Pyroclor-filled transformers has shown them to be extremely reliable and essentially maintenance-free.

Cost

Ever increasing energy costs are a strong incentive to keep cable runs and consequently power losses to an absolute minimum.
Again, the inherent safety of the Pyroclor-filled transformer allowed siting at the "load centre" with cabling carried directly to the thyristor convertors in the basement below.
The potential savings in this area will offset the somewhat higher initial cost of the Pyroclor-filled transformers.

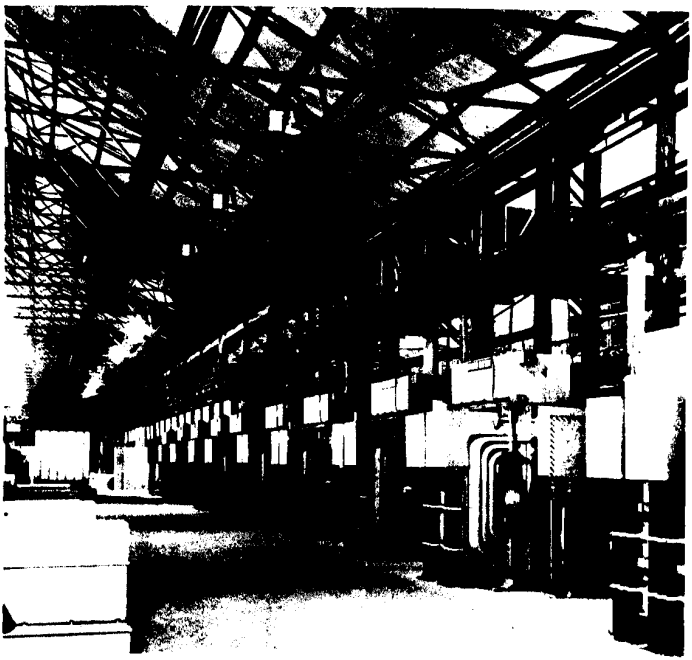
Environmental Consideration

Pyroclor contains PCBs which may persist in the environment if allowed to escape. While loss of fluid from hermetically sealed transformers is a relatively rare occurrence, the British Steel Corporation clearly had to take account of this possibility.
After discussions with Monsanto, BSC has laid down practical guidelines for its operators at Shotton and elsewhere to be followed in the event of an accidental spillage.
These include the collection of the Pyroclor using absorbent materials which are then disposed of by controlled high temperature incineration.
Any potential user of a Pyroclor transformer should discuss the procedures for dealing with accidental spillages and for ultimate disposal of the transformer with the manufacturers and also read the guidelines on handling of askarels published by the CIGRE Study Committee No. 15 Working Group 02 or the American National Standard guidelines proposal published in the United States by NEMA.
All the transformers involved in the Shotton installation have been manufactured to the standard hermetically sealed specification for askarel-cooled transformers by English Electric, now part of the GEC Group.

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Why not use the enclosed business reply card to send for the 'Pyroclor' literature?

TOWOLDMON0022365



Main drive motors and Pyroclor-filled transformers for the five-stand tandem cold reduction mill



Main drive thyristor convertors and circuit breakers located immediately below the Pyroclor-filled transformers.

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