

BRE Burn Hall 3 x 160kW Extraction Fan Control - Case Study

BRE, based in Watford near London, UK operates the largest 'burn hall' in Europe. The burn hall is used to carry out flammability testing on various domestic, commercial and industrial products. BRE previously used three 185kW two-speed AC induction motors controlled by star-delta starters to drive large fans to extract fumes from the burn hall after product testing had been undertaken. As the extract fans

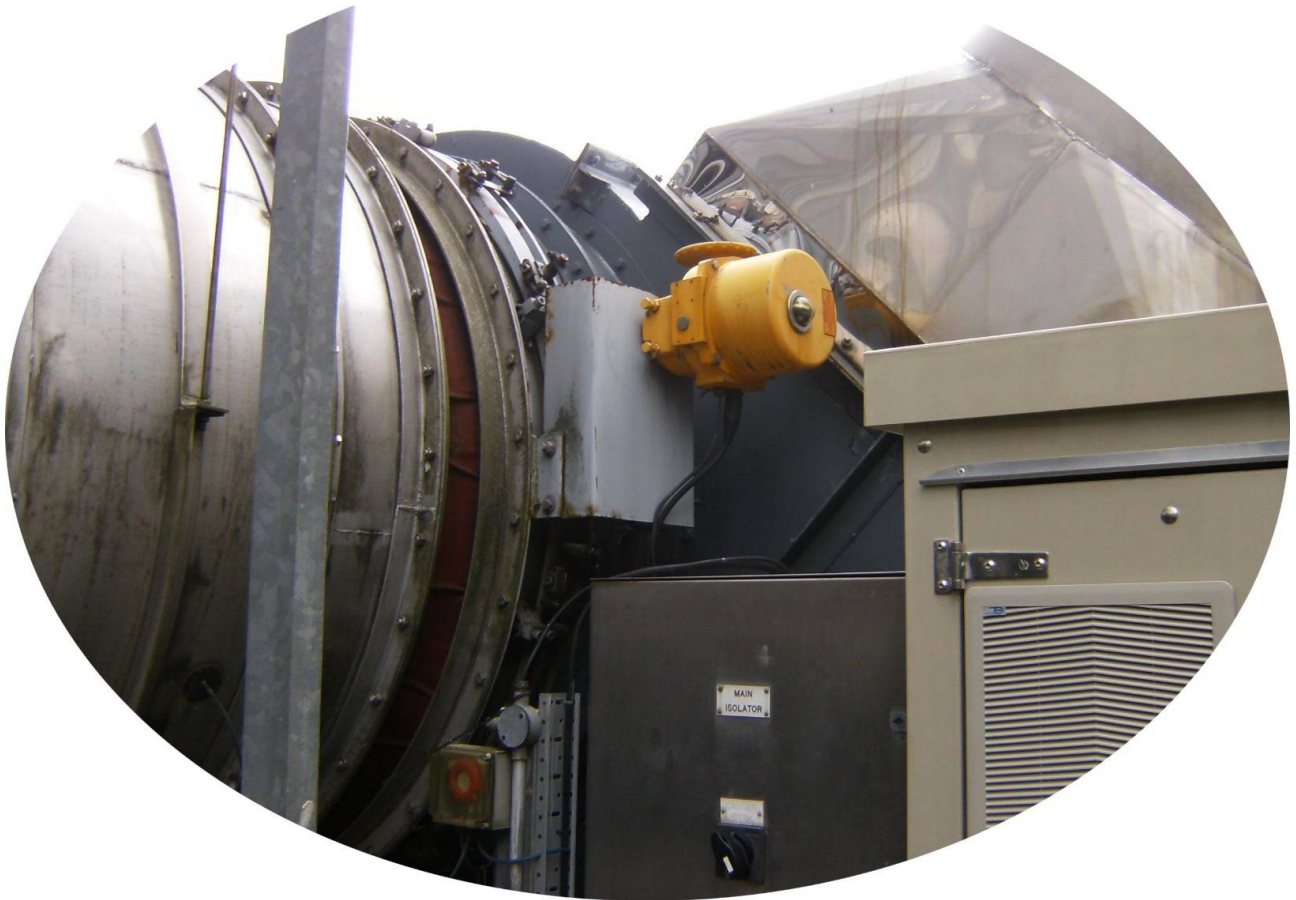


(VSD) control system. Motor Control Warehouse in conjunction with BRE, have now designed, built and installed a fully automated VSD control system using three Invertek Optidrive HVAC, 160kW, IP55 AC Drives. The drives are housed in purpose built glass fibre weather resistant enclosures.

The existing two-speed motors have been adapted for inverter control and have been fitted with specially designed output inductors between inverter and motor to reduce the dV/dt (fast rise and fall) of the switching edges seen by the motor. The new system was integrated in to BRE's existing automated



In addition, Optidrive HVAC allows fans to run for less time and at lower speeds, greatly reducing maintenance costs and acoustic noise generated by the fans. Kes concludes: "Automated control of fan airflow also eliminates the need for valve adjustments, again reducing maintenance costs. This all combines to provide an overwhelming argument in favour of using Optidrive HVAC for energy efficient fan control.



**Thanks for reading this case study, if you need more information please contact us on 0044
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