

Industry: Mining & Aggregates

Products Used: PLCs /// Drives /// HMIs

Mitsubishi drives for Blue Circle Cement kiln upgrade

Blue Circle Cement is using 375kW, MT-A140E inverters from Mitsubishi Electric as part of a £26 million plant upgrade at its Hope Works in the Peak District. The new inverters are the largest installed on the site and will drive the rotation of two 70 metre long, 5-metre diameter rotary kilns (which weigh around 750 tonnes) at 2.5 rpm.



The two kilns at Hope Works, which makes over 1 million tonnes of cement a year, are fed with a mixture of shale and limestone taken from two quarries on the site. The Mitsubishi MT-A1 40E AC inverters chosen by Blue Circle to turn the kilns are the most compact drives in their class. Simplifying maintenance the high power drives use the same intelligent and interactive parameter units as Mitsubishi's smaller A series inverters. The parameter units use plain English text and a graphical display that makes the big drive very easy to set up and use.

Application story first released November 1998 by Mitsubishi Electric UK

Hope Works is situated high in the Peak District and is subject to frequent lightning strikes. For this reason the control system has been specially designed to ensure that plant operation is not reliant on communications links.

Blue Circle has been using Mitsubishi drives for many years and there are around 60 at the Hope site, on such applications as cooler grates and fans. According to Mike Franklin, chief engineer (E&PC) at Blue Circle, "satisfaction with the past performance and reliability of these drives, together with Mitsubishi's ability to provide solutions to their application needs were major factors in choosing the new kiln drives".

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Hope Works, Blue Circle

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The central plant control system operates on a closed communications loop which receives analogue and digital signals from a series of remote motor control centres. Each motor control centre has a stand alone Mitsubishi A1S PLC. Each PLC controls up to 20 motors and exchanges data with the central control system via a protocol converter and a MAC-50 HMI display. There are in the region of 30 Mitsubishi A1S modular PLCs on site, all of which can be expanded or networked to meet any future system demand.