# At Coors Brewing Company

## 4B’s HotBus Hazard Monitoring System

‘By constantly monitoring the bearing temperature, it is possible to anticipate the point at which the bearing is going to stop working effectively.’‘Plant data can be placed into an Excel spreadsheet for further analysis, and emails can be triggered for certain plant data or alarm conditions.’ By Simone Biock

Preventative maintenance is what the 4B HotBus Hazard Monitoring System is all about. A serial network for continuous bearing temperature and remote sensor monitoring, the 4B HotBus digital monitoring system allows the different sensors in a plant to be connected into one network and to be displayed in real time on one output unit. The system is extremely user&#151friendly. It comes with user&#151adjustable alarm and shutdown trip points, an easy&#151to&#151use logging and trending software, and it gives the user the ability to enter his/her own sensor names. Before Coors Brewery started to use the 4B HotBus System, the company’s hazard monitoring system was a patchwork of homemade stand&#151alone equipment that was linked to an output monitor. The problem with such small, isolated equipment is threefold: it is more expensive, it becomes obsolete in a short period of time, and it cannot be monitored in a very effective way.

A consultation document concerning compliance with ATEX legislation was presented to the Coors Engineering Department, and it highlighted the need to install a temperature monitoring system on some of their handling equipment. As a result of this, a seminar was arranged and presented to the Coors’ Engineering Department to make them aware of the options available and the benefits of each of them. Further consultation took place between the parties involved and the T500 Elite digital monitor was finally chosen as the system to be installed at the Burton (Hawkins Lane) Maltings.
The system comprised of three networks, each having its own T500 Elite and R500 Relay Unit. The smallest of the three networks covered the area containing the kiln fans and required only three addressable nodes, while a second network of comparable size utilized eight nodes. The third and largest network, covering the silos and bulk storage areas, supported a total 30+ nodes, and stretched to a total length of 830 mtrs without the need to install any “repeaters” on the line. All of the networks were used to monitor NTC bearing sensors that screwed into an existing grease nipple without the loss of the maintenance function of the nipple. The three networks were then connected to an F500 gateway device that allowed them to operate with the data logging and trending software also supplied by Braime. This system allows all of the alarms generated by the T500 to be captured and displayed

in real time, giving the Maintenance Department a timely warning that a problem exists within the plant. The system will also capture “fleeting” alarms of Since this system is constantly under review and development several new types of node that allow alternative sensors to be monitored, 4/20mA, 0 &#1515vDC, PT100 / PT1000, have been prototyped and can be made available. The following shows a schematic detailing the three levels of the T500 Elite “Hotbus” system. They range from a simple digital temperature monitoring system with adjustable trip points to a complex communications system that can be interfaced to an end&#151users DCS.
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