BEST PRACTICE

LOCATION:		**ARTICLE YEAR**	**2018**
ACTIVITY:	**Access & Egress & Working at Height**	**COMPANY:**	**CEMEX UK**
SUB ACTIVITY:	**N/A**	**COMPANY LOCATION:**	**Local Asphalt Sheffield**
BEST PRACTICE No:	**BP2042**	**COMPANY TEL:**	**0000**
COUNTRY OF ORIGIN:			

TITLE

Bitumen system telemetry protection system

ARTICLE

CEMEX undertook an investigation following an incident in which a bitumen tank went well over temperature, the bitumen nearly reaching its flash point.

The study identified that the design of the bitumen tank heating systems on all CEMEX's aging tanks could allow them to go over temperature. If this occurred, it was possible that the tank would rupture, for the tank to catch fire or, in the worst-case scenario, to explode and cover the surrounding area with bitumen.

The investigation also found that, in the previous twelve-month period, there had been two other instances where a bitumen tank had overheated. Fortunately, this had been picked up by plant staff before critical temperatures were reached.

This fault arose because it was possible for the main contactor to fail and weld itself in a position where the power supply was locked permanently on, overriding all the other safety circuits.

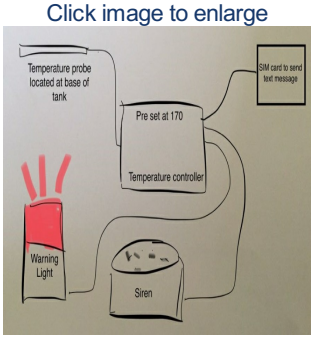
Once the fault had been identified, it was recognised that a solution would need to be designed and implemented quickly. Within a month, a system was installed that monitors tank temperatures. If the temperature in the tank deviates from the pre-set high and low temperature points, the system will sound a siren, trigger a flashing light and send out a text alert to relevant personnel. This system has been further enhanced by incorporating it within the trace heating at the Sheffield plant.

BENEFITS

- Significant safety hazard has been removed for old bitumen tanks
- The system was low cost – circa £5K filled
- Automated warning system
- Exploring whether system could be used in other applications e.g. bearing failures.

ARTICLE IMAGES

Click image to enlarge



System design

Click image to enlarge



New monitors