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ABB drives help visitors get a clear view of Roman bath

One of the UK's major visitor attractions is using ABB drives to ensure that condensation does not obscure visitors' views.

The Roman Baths in Bath, built in 60-70 AD around a natural geothermal spring, receives nearly a million visitors a year, who come to see how the Roman engineers used this natural resource to provide bathing facilities for the temple and spa complex that flourished there 2,000 years ago.

The monumental remains of this first century religious spa are now owned by Bath & North East Somerset Council, which has recently re-displayed the entire site. One improvement is a glass walkway, approximately four metres long by a metre wide. This allows people to walk across the main drain that carries overflow water from the baths to the River Avon. The problem was that condensation on the glass from the warm water obscured visitors' views of the drain.

To find a solution to the problem, ABB Drives Alliance member APDS installed a 0.37 kW ABB machinery drive controlling a fan. Using the drive's real time clock, the system runs at full speed, 50 Hz, throughout the night on cheap rate electricity, clearing the condensation from the glass walkway panels in time for the museum opening at 9:00 or 9.30am. It then runs at 33 Hz throughout visitor hours to keep condensation away and to keep the noise produced by the fan to an acceptable level.

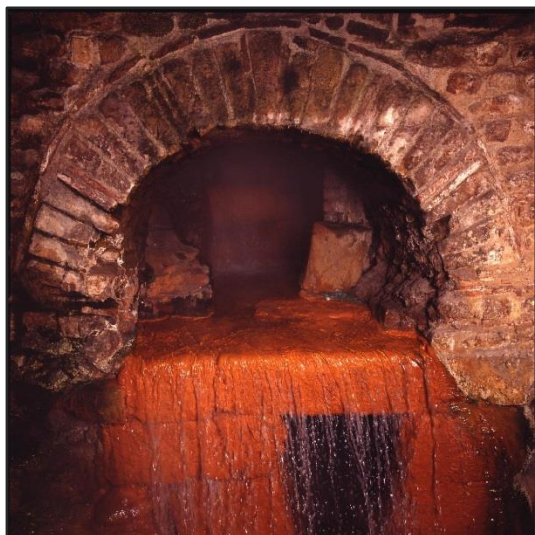
The fan and drive were in place for six months to prove the concept. The trial period proved that the method worked and two more fans driven by ABB machinery drives have now been installed.

Iain Johnston, Facilities Manager for Heritage Services, a department of Bath & North East Somerset Council, says: "The water comes from the natural hot spring at around 46 degrees centigrade and at this point in the drain has cooled to around 36 - 38 degrees centigrade. When the walkway was installed we noticed that people could not see the water flowing below through the drain because of the condensation.

"Possible solutions suggested were adding vents alongside the glass but it was thought that this would make the walkway too hot and steamy. Another was adding heating elements in the glass but this could weaken the glass and make it unsafe for visitors."

Says Johnston: "The situation is now much better than it was. Because the drive is variable-speed, we can run the fan at high speed before opening for visitors and then slow it down to keep the noise to acceptable levels."

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Caption: One of the UK's major visitor attractions is using ABB drives to ensure that condensation does not obscure visitors' views of the hot spring water.

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For more information please contact:

Layla Hewitt
Marketing Communications
Phone: 01925 741517
Email: layla.hewitt@gb.abb.com

ABB Ltd.
Daresbury Park
Daresbury
Warrington WA4 4BT

Emma Jenkinson
Armitage Communications
Phone 020 8667 2218
Email: emma.jenkinson@armitage-comms.co.uk