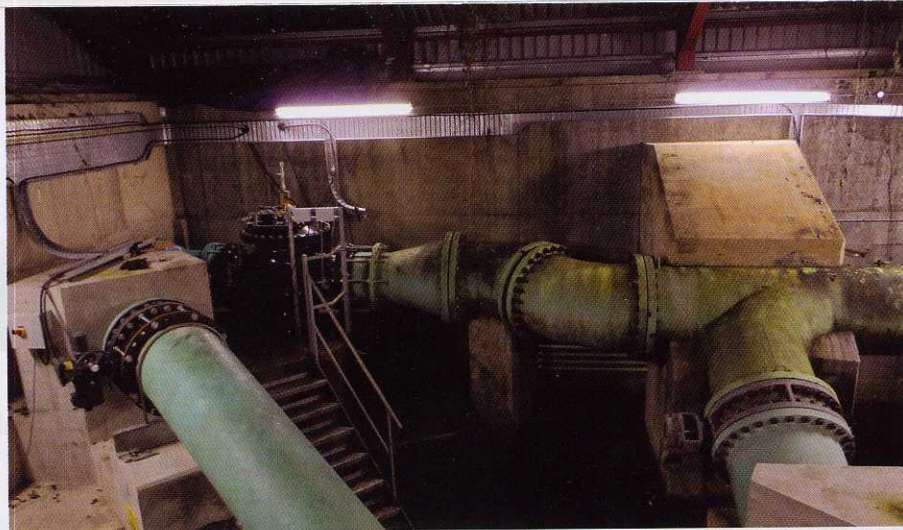


Overnight success

The overnight replacement of a control valve in a water treatment works in Merthyr Tydfil has resulted in the protection of a vital water supply, following what was a very smooth transition to the new set-up.

Further to investigations of 'Pin Holes' by non-destructive testing of a strategic flow control valve at Dŵr Cymru Welsh Water's Pontsticill WTW near Merthyr Tydfil, it was found that in less than five years, cavitation had caused extensive detrimental and potentially fatal wear to the plug valve, which was in danger of imminent failure. Should this have failed completely, the Water Treatment Works would have flooded and reinstatement would probably have taken several days, placing 70,000 customers at risk of losing supply.

Although there was a replacement plug valve on hand, the water company sought advice from Industrial Valves' technical specialists (IVL Flow Control) as to the suitability of this type of valve in this environment. It was pressure differentials would inevitably lead to a repeat of the cavitation



problems and another potential loss-of-supply situation. IVL recommended a series 300, 600 mm EOY control valve as an alternative, along with a technical assessment which Dwr Cymru Welsh Water accepted.

It was alright on the night

The difficult replacement was carried out overnight, and the removal of the existing valve and re-installation of the new valve was achieved within an eight hour overnight shutdown period between 8 pm and 4 am, with IVL's engineers on hand to assist.

IVL Flow Control's director Craig Stanners said: "when dealing with such large volumes of water from a health and safety and water quality point of view, the planning and effort that goes into ensuring a smooth transition has to be absolutely meticulous".

Dŵr Cymru Welsh Water's chief operating officer, Peter Perry, commented: "The detailed planning, competent risk assessment and above all, leadership and teamwork to get the job done in such a short space of time overnight is highly commendable."

He continued: "On the night after the new valve was installed, I was surprised that the flow came on so smoothly and did exactly what I was hoping it would do."

"Since the install of the new valve we have noticed that the changes to the flow

required by network and the high lift pumps (which can be as much as 20 mld at any one time) have been a lot smoother than before. The control of the chemicals, which are flow-paced from the front-end, has also improved enormously."

"Should the plug valve have failed completely, 70,000 customers would have been at risk of losing supply"