

Workshop 5 Maintenance of Vortex Regulators

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The workshop did not attract many delegates and those who did attend seemed to want to listen rather than speak of their experience. This was somewhat surprising in view of the fact that there are over 1500 no. Vortex regulators in use on the UK. Could it be that these devices do not require maintenance or is it simply that no one actually carries out any Performance Monitoring and their use is governed by the policy of "out of sight - out of mind". If this is the case, it is worrying as the use of such regulators is likely to be accelerated as the new Water Companies come to grips with the problems of flooding and keeping pace with development.

I would strongly recommend, therefore, that a programme of Performance Monitoring be instigated as soon as possible to ascertain the real facts regarding Vortex regulators.

Having gone off at somewhat of a tangent, I will return to the subject of maintenance of Vortex regulators to say that the workshop's discussion disclosed that good design and careful installation is vital for successful operation. Once this is achieved problems appear only to occur with fat build up, large debris becoming lodged in the mouth of the regulator which then attracts further debris (rags and other solids) and long floating debris such as timber batons and similar. These tend to jam in the regulator and act as a trap for other smaller debris.

The majority of problems (very few actually documented) are attributable to bad design and installation. Too low a DWF velocity causes settlement which can lead to blockage, rough benching, concrete debris in the channel, sharp edges and badly aligned regulators all can cause problems. The minimum DWF velocity should be in the range 0.75m/sec - 1.25m/sec for effective operation. Any benching should be steeply sloped (1 in 5) to the channel to ensure self cleansing in so far as it is possible. One final point is that pulses of high flow say from a pumping main into the regulator can cause the deposition of debris which, in turn, could lead to problems in the control system. This should be avoided if at all possible.

Finally I shall re-iterate my pleas for Performance Monitoring and thank all those who attended workshop No. 5 "The Maintenance of Vortex Regulators".