Evaluation of the reduction of pressure fluctuations in a branch of the SES water supply system after the installation of a Real-Time Control (RTC) system

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ABSTRACT

The Syndicat des Eaux du Sud (SES) in Koerich installed its first Real Time Control (RTC) System in 2017, which now controls all but one of the basins in a branch of its water supply system (Garnich, Clemency, Pippach, Bertrange: the "Clemency Branch"[1]). The SES distribution system is generally characterised by highly fluctuating flows, with an associated expectation that the stresses SES pipes are encountering may be relatively high. However, the Clemency branch is also characterised by low inflow heads in some basins, with associated supply issues under certain conditions. At the time of installation of the RTC it was expected that pressure fluctuations would be significantly reduced as a result. Pressure sensors in the branch are now available and it can indeed be observed that this is the case, mainly due to much more constant flows, even though one basin is not yet controlled. Water availability for individual basins has also been improved partly due to the improved pressure balance but also due to the auto-adaptive nature of the RTC which will restrict flows to basins with low priority to favour a basin which it considers to be "under stress". RTC systems are now being installed in large parts of Luxembourg and will play a considerable role in the water management of Luxembourg in the future.

[1] A. Cornelissen[2], T. Levy[1], G. Schutz[2], N. Ney[1], D. Fiorelli[3], Predictions of the reduction of pressure fluctuations in a branch of the SES water supply system before and after the installation of a Real-Time Control (RTC) system, CEOCOR 2017