

## ***Reduction of pipe stress in the SES after the installation of a Real Time Control (RTC) system***

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The Syndicat des Eaux du Sud (SES) Koerich will be installing its first Real Time Control System which will have control of a branch of its water supply system (Garnich, Clemency, Pippach, Bertrange und Bertrange Mess, the “Clemency Branch”). In the SES, the overall supply system is strongly hierarchical with at its centre one very large storage tank (Reibierg). Therefore, the System is characterised by highly fluctuating flows, which can rapidly vary from almost zero to 1000 m<sup>3</sup>/hour in some pipe sections (see Figure 1). There is therefore an expectation that the stresses these pipes are encountering are relatively high. However, at present there are no (pressure) measurements available to confirm or quantify this assumption. The SES is installing control valves in most of their communal reservoirs to reduce the flow fluctuations. However, the expectation is that the installation of the RTC4water, RTC system on the Clemency branch will produce a much more dramatic reduction on the flow fluctuations and therefore the pipe stresses in this part of the supply system. By the time of the conference, detailed simulations will be available to support this assumption and some real data may also be available.

Figure 1: Simulated flows in the SES system at midnight (left) and at 7:20 in the morning (right)

