

Study and Mapping of Aveleda's Water Network

Estudo e Mapeamento da Rede de Água da Aveleda, S.A.

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BACKGROUND: Aveleda, S.A. is a family company founded in 1870 whose main mission is to create wines renowned for their quality. Their dedication, simplicity and excellence, as well as ethics and responsibility make this company one of the most successful and largest producers of wine, in Portugal. As part of its growth strategy and the need for efficient management of its resources and processes, Aveleda showed their current concerns in the management of water supply and the detection of existing points of leak. In this sense, the company has shown strong interest in implementing this project.

OBJECTIVES: The main objectives of this work are to improve the knowledge of the water network in the three axes; supply, distribution network and waste, optimizing the monitoring of consumption. From this knowledge rationalization plans will be implemented and study the feasibility of reusing rainwater.

METHODOLOGY: To achieve the objectives of this work will be used some computer tools of mapping like Google Earth, particularly at an early stage for diagnosis of the current situation. In a second phase, the installation of flow meters will aim to systematize and monitor consumption for water distribution validation considering all the funding and infrastructure. Floor plans on an appropriate scale, are a key element for this project. If there are no, conducting field work (including surveys of the entrances and exits of water) is indispensable. In this field work will be collected information on the location of inputs and outputs (main and secondary), buildings and infrastructure. It will be realized the design of the network complemented by the results of the measurements obtained, which will allow over time a greater control of the distribution and improving the traceability of the network and consumption.

RESULTS AND CONCLUSIONS: The theme of water has become increasingly important, given its scarcity. In this area, all the knowledge and the proper maintenance of the supply and distribution networks it is essential for the control of leakage / loss. This project is expected to improve the knowledge of the water network and all associated extensions, have steadily increased perception of significant consumption areas. On the other hand, gain entry to the network quickly and efficiently in case of need, as well as in contingency situations. Subsequently, the systematized information will also enable the efficient management of water consumption, the implementation of the rationalization plan, reporting with consequent improvement in communication and awareness across the board.

Keywords: *water as a productive resource; water consumption racionalization; water resources management.*