

EXPERTISE ON DRINKING WATER LOSSES IN WATER SUPPLY SYSTEMS IN THE AREA OF OPERATION OF AQUATIM S.A.

Goal of the project

Expertise on drinking water losses in water supply systems in Timisoara

Short description of the project

Within expertise ,the following factors that influence water losses in a water supply system were analyzed:

- the age of the distribution networks
- the material used in distribution networks
- location and the execution of the distribution networks
- the corrosion of the networks
- the operating mode of the networks and the working pressure
- the density of connections per kilometer of distribution network (connections, fountains , hydrants)
- The number of accidents . The quality and execution time of distribution

Project implemented by

AQUATIM S.A.

Implementation period

01.05.2014-17.05.2014

Main activities

- Managing water loss is a complex technical problem and it takes a long time (20-40 years) to achieve. It involves a variety of factors in each system as well as technological progress in the field. In this framework there are developed the following concepts : a systematic approach , technical and financial support and long-term commitment.
- Splitting water supply system in counted sectors enables directing the detection activity in that part of the distribution system with the largest loss, it allows to identify the investments needed and clasify investments in order of priority. In this regard , Timisoara's distribution network was divided into 19 sectors, and for two of them the designing and implementing procedures have started.

Research Centre

Research Centre for Hidrotechnics

Financed through/by

AQUATIM S.A.

Research Team

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Results

- Analyzing the effects of AQUATIM strategy applied over the years throughout the area of operations, there can be observed a reduction in physical losses from over 40 % in 2002 to below 35% in 2013.
- Therefore , the decrease of relevant losses can be achieved over several years of efforts , the more it tends to lower the levels of losses the more difficult the process becomes, which is why there must always be a balance between the losses and costs of repair / rehabilitation.
- A continuous concern of the AQUATIM leaders is the continuous improvement of personnel and the acquirement of special equipments . The loss detection team from 2012 was equipped with a device for Prelocation defects called " Logger noise and frequency for monitoring piping networks" which simultaneously measures the noise level and frequency spectrum of the water loss .
- With this equipment, in 2013, there were detected with 220 % more conduction defects in the water distribution network of Timisoara City, which did not come up in the year 2012. This led to a visible reduction of real losses .

Applicability and transferability of the results

Currently, AQUATIM extended their active management strategy concerning the tracking of the losses in all operating area. Thus were audited all water distribution systems in the grounds surrounding Timisoara, and in the future there will be audited the water distribution systems of the localities belonging to the Subsidiary.

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