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FACULDADE DE CIÊNCIAS E TECNOLOGIA
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Dimensionamento Optimizado de Redes de Distribuição de Água

Dissertação submetida para satisfação parcial dos requisitos necessários à obtenção do grau de Mestre em Hidráulica e Recursos Hídricos pelo Departamento de Engenharia Civil da Faculdade de Ciências e Tecnologia da Universidade de Coimbra

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Resumo

Neste trabalho de mestrado faz-se uma breve revisão da simulação do comportamento hidráulico das redes de distribuição de água e a análise económica das mesmas. Segue-se uma revisão dos principais trabalhos sobre a optimização dos sistemas de distribuição de água. De seguida apresenta-se a técnica de optimização que será utilizada neste trabalho. Esta técnica é calibrada para este problema do que resulta um algoritmo específico. Durante esta actividade são apresentados e estudados alguns exemplos da literatura internacional, apresentando os respectivos resultados.

Palavras chave: sistemas de distribuição de água, optimização

Abstract

This work starts with a few words related with the steady-state flow equations in water supply systems and their costs. Then the state of the art is up-dated with the most important work done in water supply systems optimization field. After that, the optimization tecnic, used in this work, is introduced. The tecnic is shaped to solve this problem. During this activity some examples are showed and we analys their results.

Key words: water distribution systems, optimization

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