Henry Darcy and the Public Fountains of the City of Dijon
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1Geotechnical Translations

Henry Darcy is best known for his empirical law on fluid flow through porous media that he published as an appendix to his book Les Fontaines publiques de la ville de Dijon. Darcy had built a water supply system for Dijon in 1840, and in 1856, shortly before his death, he wrote the book to guide other engineers in constructing similar projects. A recent English translation of Darcy’s 650-page book provides previously unavailable information on his approach to solving problems of water distribution, a new field at that time, and his views on the humanitarian value of this project.

Darcy describes how he gauged nearby springs and selected an abundant spring to divert to Dijon via a 12-km underground aqueduct. He built two reservoirs, 13 kilometers of pipes and 115 street fountains in Dijon. These fountains supplied free water for all inhabitants, water for flushing the streets, and water for fire pumps.

The book contains 4 parts and an appendix. Part 1 is a description of the historical water situation of Dijon and attempts to provide water for the city. Part 2 discusses the construction of the aqueduct and the internal distribution system. Part 3 presents experiments that Darcy conducted on the aqueduct and distribution system. Part 4 discusses the appropriation of the springs, which belonged to a nearby village, and purchase of the property under which the aqueduct would be built. The appendix contains eight sections on such topics as the water supply systems of London and major French cities, artificial and natural filtration of river water, Darcy’s Law, and pipe making. A separate 28-plate atlas includes drawing of the components of the Dijon water supply system, the Pitot tube, and the apparatus Darcy used for his experiments on water flow though sand.