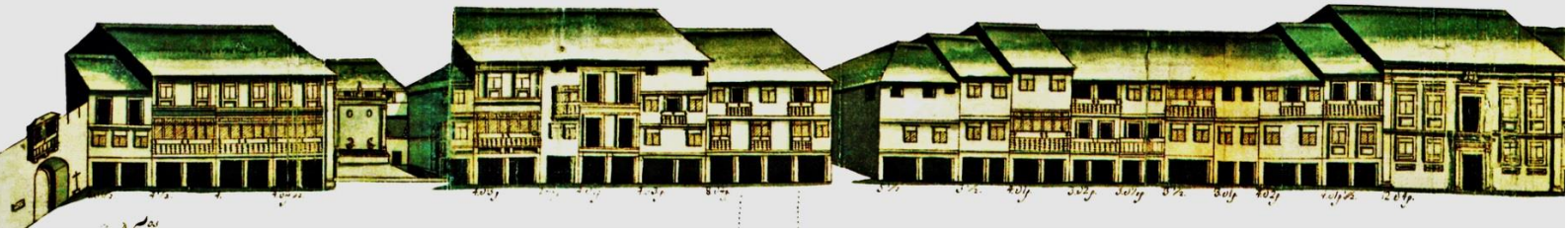


O desenho da arquitetura

VIII INTERNATIONAL SEMINAR SERIES ON THE HISTORY OF ARCHITECTURE. *Architectural Drawing.*



Challenges of Technology in early Italian Renaissance Drawings.

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Keywords

Hydraulic technology; Water-works; Fountains; Automata.

Abstract

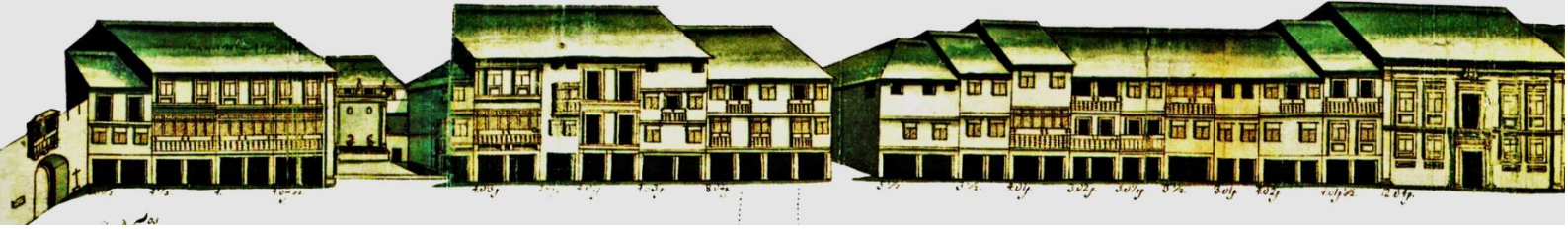
In the 15th century, the exceptional knowledge of hydraulic application is to be found in the architectural treatises of the Sienese engineers Mariano di Jacopo, called Taccola and, soon after, in Francesco di Giorgio Martini and in the Venetian physician Giovanni Fontana. Their works are described in illustrated books mainly related to hydraulic devices. These artist-engineers have played a fundamental role in promoting the technical knowledge of the devices and their mechanical application through a renovation and re-evaluation of the ancient texts.

For the first time their treatises have clarified a simple and efficient mechanism, through detailed drawings, showing the application of the physical principles that the ancient texts had described often without illustrations, and were known to the artists through medieval copies.

The paper analyses the studies done by these 15th century artist-engineers, related to hydraulic devices and their application, including water-wheels, automata, hydraulic pumps and fountains. The technical illustrated texts are accompanied by accurate and detailed three-dimensional drawings which are the necessary foundation for the understanding and interpretation of the construction and function of the devices. Their treatises can be seen as an attempt to overtake the secrecy of the medieval craft-guilds and promote the technical knowledge that had been transmitted over the centuries only orally or through rough notebooks of the workshops.

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