

Seminar 1/2:

INTEGRAL SUSTAINABLE WATER MANAGEMENT IN THE PAPER INDUSTRY: A CASE STUDY

ANGELES BLANCO & CARLOS NEGRO

Professors, Chemical Engineering Department
University Complutense, Madrid

Visiting Professors at UBC's Pulp and Paper Centre

WHEN:
Tuesday August 23

TIME:
12:00-1:00pm

*(Seminar 2/2 will be held at
1:00-2:00 pm)*

WHERE:
Pulp & Paper Centre
2385 East Mall
Room 101

WHO:
Open to students, faculty
& industry

**For more information,
contact:**
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SPEAKER BIO:

Prof. Blanco works in the Chemical Engineering Department of the Complutense University of Madrid (UCM). She is the leader of the Cellulose and Paper Research Group and of the Advance UCM-HOLMEN Laboratory placed within the facilities of Holmen Paper in Madrid. Her research activities are focused on pulp and paper research in the area of wet-end chemistry, paper recycling, deposit control, sustainable water use and recently on nanotechnology and on development of treatment trains for water reuse in various industrial sectors.

Prof. Negro is a Professor of Chemical Engineering at the Complutense University of Madrid. His research interest is focused mainly on sustainable water use in the industry, wet-end chemistry, paper science and technology, recycling and nanotechnology. Carlos' group has made a broad range of contributions to the paper recycling industry and the sustainable water use for different industrial sector including: chemical industry, paper industry, petrochemical, packaging, stainless steel and food industries. He is also President of the Spanish Chemistry & Society Forum.

ABSTRACT:

The paper sector is leading water reused in terms of separation of loops, recycling of processed water and development of advanced strategies for internal and external water reclamation and re-use. However, water closure has a limit when the accumulation of contaminants become exponential, therefore additional treatment concepts are necessary to further reduce water consumption without affecting the process nor the product quality.

This seminar will use a case study of a modern paper mill producing newsprint from 100% re-covered paper to show the approach towards an integral sustainable water use. The seminar will show the drivers for the technological approach in two steps:

1. Increasing water circuit closure (from 12.5 to 7 m³/t of paper)
2. The use of alternative water sources to further reduce the fresh/potable water consumption.

Main results from the viability studies carried out based on pilot plant studies will be presented for the different cases as well as their main limitation. An industrial plant for reclamation of municipal water has been built and 100% reclaimed water has been successfully used in Holmen since 2013 as a result of this research.

