Abstract for IAQ2004

Title: The effects of air purification at the National Archives on the quality of durable storage of their paper based collection.

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Abstract
Based on national and international research in the 90ties, that showed the accelerated ageing of paper based materials by air pollutants, the National Archives of the Netherlands received a fund for installing a full air purification system. The funds were received from the National fund program "Delta-plan" for cultural heritage.
The National Archives in The Hague is the largest public archive in The Netherlands and houses almost 1000 years of Dutch history in 93 km of documents, maps, drawings and photographs.
In 1994 the pilot on air purification started, and their purification system is based on a developed Dutch quality guideline. It contains a dust filter, an electro potential filter, two chemical filter sections and finally a fine dust filter.
In order to establish the quality of the air purification and its effect on the collection, a non-purified storage room was claimed. Two storage rooms were equipped with defined newly manufactured and old (original) archival materials and analysers for measuring continuously the concentration of acidic and oxidative pollutants. Yearly paper samples have been taken for analyses, and the technical air quality in terms of ventilation and recirculation was evaluated. Monthly the amount of pollutants, present in both storage rooms, was evaluated.

Now, after our 10-year research, conclusions can be drawn on the effects of air cleaning related to the stored materials, which is unique in the word. This paper describes briefly the experimental set-up, the analyses and the indoor air quality evaluation related to the performance of the test materials stored in the National Archives.