NP TS De-acidification of paper Annex 1

COMMENTARIES / Document associated to N 2340

DECISIONS

FOLLOW UP 2012-08-30
Annex 1

NWIP: Recommendation on methods of validating the success of deacidification processes for printed and handwritten documents

Scope
Archives and libraries contain vast quantities of documents printed on acidic paper and professional deacidification of this paper is essential for their preservation. A general method of verifying the success of such deacidification procedures, which are normally carried out by commercial companies, is required. This Recommendation describes methods which can be used to measure this success.

Purpose and justification
The cultural mandate of archives and libraries to preserve valuable documents and publications for both present-day society and generations to come - and to make these documents and publications available for evaluation so that mankind can gain a better understanding of the past and learn from it - is seriously threatened by the deterioration of the paper these documents and publications are written or printed on due to its acid content.

The main reason for this deterioration lies in the industrial processes used to manufacture paper from around the mid-19th century onwards. The acid residues due to the use of sizing, mechanical wood pulp and other additives, combined with other influences such as air pollution, has led to an ever-increasing deterioration of the paper. This acid-induced degradation has now become a major problem.

In order to preserve written matter, the effect of harmful acids must be stopped. Various deacidification techniques have been developed for this purpose, most of them being offered by commercial companies. The aim of deacidification is to appreciably improve the durability of paper. This is achieved by adding an alkaline reserve to neutralize existing acid content and prevent the renewed impact of acid for at least some time (buffering).
Without a verifiable means of measurement, it is not possible to assess whether paper has been deacidified or not, or to what degree deacidification has been successful. This Recommendation defines standards, testing and evaluation methods and uniform documentation procedures. The Annex contains interpretation aids for evaluating the results of measurements.

A distinction is made between process verification (initial testing) and process validation (routine monitoring). Process verification is used to prove that a technique actually fulfils its defined purpose. Process validation is used to check that the effectiveness determined by process verification is actually being achieved in the course of the actual work. Process validation therefore presupposes and is based on process verification.

In terms of deacidification techniques, a distinction is made between continuous single-sheet deacidification, discontinuous (batch) deacidification and single item (book) deacidification. Manual single-sheet deacidification, as used in restoration workshops, can also be verified using the methods described in this Recommendation.