

# INTERNATIONAL PRESERVATION

A Newsletter of the IFLA Core Programme on Preservation and Conservation

N° 10 - July 1995

# NEWS

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*PAC is on the move: two new directors have been appointed. In April, Mr. Takao Shimamura succeeded Ms. Ayako Kaihara in Tokyo and, in May, Mr. Ramón Sanchez became head of the Caracas centre replacing Ms. Bernarda García. It is a great pleasure to welcome them and I hope that this new team, which is going to meet for the first time in Budapest next Summer, will do its best to enhance the PAC activities. I thank Ayako Kaihara and Bernarda Garcia for the work they have done at the head of their PAC Regional Centres.*

*During the last months I have had the opportunity to visit three of the Regional Centres: Leipzig in December 1994, Washington in February 1995 and Caracas in April. This gave me the opportunity to see how they worked and to understand their specific difficulties and plans for the future. Jan Lyall, from Canberra, came to Paris in May to attend the “Memory of the World” meeting, which enabled us to meet. Everyone present at this UNESCO meeting thanked her for the excellent job she had done with the guidelines and the questionnaire. We all appreciate her work and thank all those who gave their time to translate and answer this questionnaire.*

*Contact with associations, institutions and NGOs has been one of my concerns since I became director of PAC. Things are on the move with regard to this too. ICA and PAC have prepared a draft survey on photographic collections which is being sent to their members. Caracas, through ABINIA (Asociación de Bibliotecas Nacionales de Iberoamérica), will prepare a project for Latin America that could be used as an example to extend the safeguarding of photographic collections to other regions. Close links are being forged between PAC and the Commissions on Preservation and Access. Also, the IFLA Section on Conservation and PAC have decided to collaborate on a regular basis and no doubt the PAC directors' meeting in Budapest, followed by the Satellite meeting on Conservation, will strengthen these links.*

*One of our tasks for the months to come will be to examine the possibility of improving the geographical division of the world between the different Regional Centres. This is a process which could lead to the creation of new centres.*

**Marie-Thérèse Varlamoff ■**



# BIBLIOTHEQUE NATIONALE DE FRANCE

## *The Technical Centre in Marne-la-Vallée*

### *Time frame:*

**May 1994: beginning of the construction**

**August 1995: construction completed**

**November 1995: storage areas equipped**

**January 1996: workshops operating**

The centre is being built in a suburb East of Paris, called Marne-la-Vallée (Bussy Saint-Georges borough). The different workshops will be operating in 1996. Mass treatments, too cumbersome to be sited in the new library's building, will be the centre's main focus.

### *Missions*

- Storage of one copy of printed, audiovisual and electronic documents coming from the legal deposit. That copy, of absolute conservation, will never be communicated.
- To contribute to the safeguarding of the most endangered documents that are stored on the different sites of the Bibliothèque nationale de France, these being Rue de Richelieu, where specialized collections are to remain, and Tolbiac (XIIIth district) where printed documents and periodicals are to move to.
- To take part in the training of professionals of preservation and conservation.
- To test new techniques and implement research activities in order to improve today's techniques and treatments.

### *Activities*

The copies of absolute conservation of the printed documents will be stored at 18° C and 40 % RH in air conditioned storage areas, equipped with shelving 10 meters high, and without intermediate floors. The copies of audiovisual and electronic documents will be classified according to their chemico-physical characteristics. Their restoration and/or duplication onto other materials (particularly digitization) will be insured.

As for printed documents, stress will be laid on the treatment of paper in the following ways: leafcasting, lamination or splitting, mending of damaged bindings, and boxing adapted to documents.

The most requested or disintegrated documents will be duplicated on microfiche or microfilm.

Fungus or insect infested collections will be disinfected. The facilities will hold about 300 m3 of documents per year.

Finally, a strengthening-deacidification process is being studied to allow 300 000 volumes to be treated each year.

Batches of documents to be treated will be prepared in the storage facilities where they will in the first place be diagnosed. Thirteen channels of treatments will be available at the Technical Centre, combining for example restoration-deacidification-duplication or disinfection-duplication.

### *Training*

A special area is being allocated for training which will include class rooms, laboratories for practical exercises and an auditorium, in order to raise the level of awareness of preservation and conservation in all staff, to train in safeguarding techniques and allow professionals to meet. A documentation centre will be accessible to all the people concerned, and act as an information and reference point for the different laboratories.

In addition, a technical and scientific advisory laboratory will be created to conduct tests on materials; analyse documents at the request of both the various collection departments, and the duplication and restoration workshops. Chemico-physical and microbiological activities will be furthered. Links with other foreign laboratories will be strengthened.

The efficiency of the centre is ensured by the interconnexion of the workshops which lead directly to the storage areas.

**Lionelle de Lépiney,  
Director of the Technical Centre,  
Direction des Services  
de Conservation** ■

**The Technical Centre in Marne-la-Vallée is part of the new preservation and conservation apparatus set up by the Bibliothèque nationale de France. Its activities will start once some of the collections move into the new library's buildings in the XIIIth district in Paris.**

## A Survey on Mass Deacidification Processes

The inquiry conducted by the Bibliothèque nationale de France in 1990, showed that nearly 2,6 million documents (monographs and periodicals) published between 1870 and 1960 contained acidic papers, some of which had already become brittle. Another inquiry conducted in 1992 indicated that a total of 11 million books in French libraries were in jeopardy. That alarming rate can be found everywhere else in the world.

To date the processes in use are: Akzo, Lithco-FMC, Bookkeeper, Wei T'o, the latter, designed for the National Archives in Canada has been modified to meet the requirements of the Bibliothèque nationale de France in its plant sited in Sablé; Battelle Inc. (Germany) set up its facilities at the Deutsche Bücherei in Leipzig.

### Results

The results of the studies carried out in laboratories indicated that the life span of deacidified papers would rise by 3 to 5. However, deacidification treatments often come too late, when documents are already dangerously deteriorated, and can but be regarded as an intermediary solution before duplication or strengthening. Duplication is the only way to allow documents to be accessible again. However acidity isn't the only factor that deteriorates documents: oxidation, due to the presence of lignin and rosin sizing in papermaking, alters the cohesion of the fibres during the aging process, and accelerates their degradation when non cellulosic compounds, such as additives and other impurities, are added.

### Methods combining both mass deacidification and strengthening treatments are being sought

The British Library (BL) has commissioned the Department of Chemistry of the University of Surrey to carry out topical research. Their process is based on the impregnation of the books by acrylic monomers. Polymerization is achieved 'in situ' with gamma radiation. The BL

has conducted a study on the economic-technical feasibility of the project developed with a Canadian partner, International Nordion Ltd. Essays are being performed in a plant near London. Around 200,000 - 400,000 documents should be treated annually to make the fruitful process.

Titanium alcoxide used by Battelle Inc. has a slightly strengthening effect but remains insufficient to treat brittle books. A more efficient agent is still being sought in the deacidification plant at the Deutsche Bücherei. Among other products, isocyanate is being tested.

### R & D at the Bibliothèque nationale de France

So research must be focused on simultaneously strengthening deacidified books and preventing oxidation. In this respect, the Bibliothèque nationale de France has signed an agreement with Separex, a French company, to develop a new process of book treatment aiming at extracting the products responsible for the paper's deterioration, then impregnating them with strengthening and neutralizing products dissolved in supercritical carbon dioxide (CO<sub>2</sub>). This technology has been patented by CEA (Commissariat à l'Énergie Atomique) and the exclusives rights are now owned by Separex.

The supercritical CO<sub>2</sub> as a fluid vector entails low costs, is innocuous and chemically inert. Thanks to its low viscosity (it reacts almost like a gaz), active products penetrate the books thoroughly. This project of research and development will be financed by the Agence Nationale de Valorisation de la Recherche over a 2 1/2 year period. The plant will be set up within the Technical Centre of the Bibliothèque nationale de France in Marne-la-Vallée and treat up to 300,000 documents per year.

**Astrid Brandt,**  
Scientific Adviser,  
Direction des Services de Conservation,  
Bibliothèque nationale de France ■



**F**or twenty years, research and experiments on mass processes for XIXth and XXth century acidic and brittle papers have cost large sums of money to the most important libraries in the world that aim to protect their collections against later acidic deterioration, by neutralizing the paper's acidity and strengthening it with an alkaline buffer.

# LIBRARY OF CONGRESS

## Library of Congress Mass Deacidification Update



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Over the past two years, the Library of Congress (LC) continued its commitment to enhance and encourage the development of mass deacidification technologies through an earlier, Congressionally-approved, two-part deacidification Action Plan. Under Phase A of the plan, the Library pursued refinement of the diethyl zinc (DEZ) gas-phase process that was patented by LC in 1975. Phase B permitted the Library to offer a programme of evaluation and testing to other promising deacidification technologies; under this provision, Preservation Technologies, Inc. (PTI) of Pittsburgh asked the Library to evaluate its Bookkeeper process, which utilizes submicron-sized magnesium oxide particles suspended in a fluid to neutralize the acid in paper.

### *Akzo Chemicals Withdrew from the Deacidification Business*

With the DEZ process, the Library conducted a series of planned test runs in the Akzo Chemicals deacidification plant in Texas and succeeded in eliminating process-related problems that were experienced earlier with the DEZ technology. However, Akzo Chemicals withdrew from the deacidification business in April 1994 and terminated its DEZ license with the U.S. Commerce Department effective in September 1994. The Library has not requested Congressional support at this time for a DEZ initiative because of projected high DEZ capitalization costs and because of encouraging developments with the Bookkeeper process, which affords lower capitalization costs along with other attractive features.

Under the second phase of the Library's Action Plan, as indicated above, a Library-appointed evaluation team studied the Bookkeeper deacidification process. An earlier generation of PTI equipment, known as "Bookkeeper II," was being used by PTI when the Library's evaluation team initiated its examination of the Bookkeeper process over a year ago.

Based upon results obtained with that earlier Bookkeeper equipment, the evaluation team concluded that the Bookkeeper process demonstrates the potential for meeting the Library's technical requirements for mass deacidification. The group indicated further that the process already meets many of the Library's specifications. The technical team also recommended that the Library work with PTI to enhance the Bookkeeper process.

### *New Bookkeeper Equipment and Further LC Testing*

While the evaluation team was drafting its observations about the results achieved by Bookkeeper processing and about subsequent accelerated aging and independent lab testing of materials treated with Bookkeeper II equipment, PTI and the Library pursued two important, complementary activities:

PTI engineered and installed its new "Bookkeeper III" equipment, with a current capacity for treating up to 100,000 books per year and capable of being cloned to handle a greater volume; and the Library initiated a limited contract to treat 600 additional test books to assist PTI in addressing some of the issues that were being identified by the evaluation team.

In light of treatment results obtained with the Bookkeeper process, the Library presented Congress in December 1994 with a second deacidification Action Plan, consisting of two phases that will run concurrently for two years (1995-97). As indicated above, Congress has now approved the new LC Mass Deacidification Action Plan, which calls for two simultaneous initiatives:

**Phase A:** A brief process enhancement initiative with the Bookkeeper process to be followed by a limited production effort. Over a two year period, this demonstration contract would result in trea-

**C**ongress has approved a plan submitted by the Library of Congress to begin using a new book deacidification technology while continuing to evaluate other methods until 1997.

ting 72,000 books. The focus will be on achieving an improved product at lower cost. Since the Bookkeeper process does not impart odors or cause physical damage to treated materials, we expect to make rapid progress with process enhancement. We anticipate that most of this effort will be devoted to the limited production initiative, resulting in deacidification of actual books from the Library's permanent collections.

### ***LC Wants to Encourage and Evaluate Other Technologies***

**Phase B:** The goal of this phase of the Action Plan, with guidelines to be announced in the *Commerce Business Daily*, is to encourage and evaluate other technologies that can demon-

strate a potential to meet or exceed the Library's deacidification requirements (complete deacidification, adequate alkaline reserve, an increase in the life of paper by at least three times its normal expectancy) without damage to collections. The Library is also hopeful that, during this phase, a U.S.-based company will recognize the potential for commercialization of the DEZ technology and develop a facility for deacidifying books through this process.

The Library's proposed two year plan reflects our determination to support the active development of mass deacidification technologies. We remain hopeful that our dedication to this effort, combined with mutual involvement by other like-minded institutions, will result in fulfilling the continuing interest of the library and archival communities in resol-

ving one of our most pressing preservation challenges.

Please feel free to contact one of the persons listed below if you desire further information or if you would like to discuss the reports about Bookkeeper or DEZ or the Library's deacidification Action Plan.

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#### **DEZ**

- Compatibility with almost all the constituent parts of the book
- No solubilization of inks and dyes
- Minimal odor level
- Treatment applicable to all types of papers
- Alkaline reserve: 2 to 3 % deposited thoroughly
- Dangerous chemical that must be handled carefully (flammable in the presence of oxygen)
- Plant to be set outside the library
- Technology for which staff are needed 24 hours a day
- Treatment to be performed by a subcontractor

#### **BOOKKEEPER**

- Compatibility with all the constituent parts of the book
- No odor
- Distribution of pH homogenous
- Modest estimated start-up costs
- Facility to be located in a local institution
- Environment safety secured

## A Unique Library "Preventive" Preservation Technology

### Call for Information

The Department of Information and Library Studies at Loughborough University is carrying out a British Library R&D Department funded project investigating current disaster management practice.

One of the aims of the research is to **consider policy and activity in countries other than the UK.**

Please contact **Graham Matthews**, Project Head, tel + 44 1509 223065, e-mail: [g.matthews@lut.ac.uk](mailto:g.matthews@lut.ac.uk) or **Paul Eden**, tel + 44 1509 223098, e-mail: [p.eden@lut.ac.uk](mailto:p.eden@lut.ac.uk)  
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**D**uring the fall of 1994, the Library of the Academy of Sciences (BAN), St. Petersburg, Russia, and the Library of Congress installed a brand new preservation automated boxing technology that produces custom fitting, utilitarian, protective enclosures for book volumes and related paper-based materials.

This technology produces from 200 to 250 clam-shell book boxes per day, with each box fitting its book volume precisely. These two libraries are the first libraries to adopt this technology for use in preserving deteriorated collections that also suffer from physical stress and abuse on shelves. The technology was created as a direct result of the devastating fire that hit the Academy of Sciences Library on February 14, 1988. The boxing system for BAN was purchased with a grant from the Getty Grant Program of the J. Paul Getty Trust.

### 180,000 Titles Were Damaged

The Library of Congress, supported by a grant from the Reader's Digest Foundation and working with the Getty Conservation Institute also, has provided preservation assistance to BAN, working with its Director, Dr. Valerii Leonov and his technical staff in devising a plan of action to preserve the foreign language collections severely damaged by fire and water. Out of the original collection of 500,000 titles (consisting of seventeenth, eighteenth and nineteenth century texts) 180,000 were exposed to the ravages of fire, smoke, water and high humidity, with several thousands lost altogether. Many of the volumes are unique, having marginalia through the texts. The resulting effects of the damage caused much loss of leather and vellum spines, distorted text blocks, loss of book boards, text leaves and bibliographic information, and the entire collection was covered with soot and debris.

The staff at BAN carried out a heroic effort in dry cleaning the collection and putting the collection back in shelf order, an arduous and time-consuming task, identifying volumes with the existing bibliographic records. An estimate was made that it would require at least 20 fully trained conservators over 50 years to fully restore and preserve this damaged collection — a daunting task. This was an impractical prospect since

the majority of the collection would have to stay on the shelves with very little physical support, with volumes leaning and distorting against each other, causing additional post-disaster deterioration.

### Phased Conservation: A Preservation Philosophy

After many technical discussions with BAN colleagues, it was decided to adopt a preservation philosophy, originating at the Library of Congress, called *Phased Conservation*. Simply stated, phased conservation consists in breaking down the elements of full conservation treatment and environmental needs into phases, with the first phase aimed at protecting the entire collection as the first order of business. It was agreed to box the entire collection and obtain full condition records while carrying out this task. This would provide time in which to determine priorities for individual conservation treatment in future planned phases.

We were to discover that to box the entire collection, with a type of wrapper box (often called a phased box) would increase shelf space by approximately 9 mm per book volume and there was no possibility for BAN to provide the extra shelf space, nor the manpower needed for this time-consuming approach. Analysis of 20,000 volumes, that had been measured for boxing at BAN, revealed that there was no consistency in size to allow for a large range of standard sized boxes to be made. Apart from the high cost of producing many different dies to cut the board (over 5,000), this approach would not have reduced the need for substantial added shelf space.

In search of a solution to the problem, 60 boxes were re-measured with a kilogram weight resting on the volume to measure its thickness. Since the volumes had been exposed to water, the thickness had expanded and upon drying, the thickness did not return to





*Right: phased conservation boxes.*

the original dimensions existing before the fire. It was discovered by this test that an average of 4 mm compression was achieved by using a one kilogram weight. If a boxing technology could be designed that would produce custom fitting boxes and not increase the added thickness by more than 4 mm, no extra shelf space would be required. There was no such technology that could meet such demands.

### ***Book Thickness Increasing no More than 4 mm***

The problem was solved by Custom Manufacturing Inc., Fairfield, PA, USA (CMI) who invented the computer controlled and automated machinery to make high quality archival book boxes to custom-fitting dimensions, without increasing the thickness of book volumes more than 4 mm. This technology, which is now supported by integrated computer controlled book measuring devices and label making

programmes, produced the first 11,000 boxes for the damaged foreign language collections at BAN. The result was that less than half a meter of extra shelving was required to house 11,000 damaged volumes.

With so much emphasis given to finding methods of mass deacidification for deteriorating book collections perhaps less attention has been given to the physical protection such collections need. The traditional clam-shell book boxes have proven to be by far the best protection of all other box designs in maintaining a rigid support for volumes that would otherwise twist and rub against each other on library shelves. The twisting of text blocks is one of the major causes of structural breakdown. Such breakdown cannot occur when a book is protected within a clam-shell box, whether leaning or not. Hand-made book boxes are very expensive and time-consuming to produce. Similar protection is achieved by using boxes

made with high quality, archival, E and B flute corrugated board. When these boxes are produced by the CMI boxing technology, they are made to fit and close without added attachments.

### ***Boxes Resisted Fire Damage Better***

In addition, the CMI boxes help to protect against environmental pollution. An extreme case was in a recent library fire in the United States where adjacent volumes not protected by CMI boxes were severely damaged, but those in CMI boxes survived remarkably well. The fire resistance factor is an interesting development and is still being assessed. It appears that certain physical properties of the boxing board that was developed for the CMI system, combined with a very critical close fit between the book and the box, may greatly increase the ability of the boxes, thus the ability of the books, to survive damage from fire and water.

The tradition of boxing book collections goes back many centuries in Japanese and Chinese cultures. The microclimate protection provided has proven the test of time and although paper-based records are customarily boxed in archive collections, book collections have not been provided similar protection, especially those of low use and/or suffering from chemical and physical deterioration. Although many libraries throughout the world provide services for making hand-made boxes the costs are high and production rates low. The CMI technology now provides the means to cost-effectively box collections at high production rates, thereby making it a legitimate and practical alternative to more costly approaches. By using this technology to augment their in-house systems, libraries with very large collections can now box vast numbers of books with no increases of resources and/or staff.

**Peter Waters,  
Conservation Officer  
Library of Congress** ■

# DEUTSCHE BÜCHEREI

## Longer Shelf Life for Books

The lack of paper permanence is due to the sulphuric acids in industrially produced papers. The traces of acid lead to a decomposition of the cellulosic fibres and thus to a loss of the paper's strength within 50 to 100 years, which is accelerated under poor storage conditions.

### *The Largest Deacidification Facility in the World*

In Germany, the demand for mass preservation technologies to save deteriorating books and papers is a topical item in library policies. With support from the German Federal Ministry for Research and Technology, in 1987 the Deutsche Bibliothek and Battelle started a research programme aimed at the implementation of mass deacidification in Germany.

One of the highlights of this programme was the commissioning of the worldwide first mass deacidification plant - the Deutsche Bücherei in Leipzig in June 1994. The plant was designed and constructed by Battelle. With its projected annual capacity of 400,000 books, it represents the largest mass deacidification facility in the world. In addition, Battelle has a smaller unit in operation at its facilities in Eschborn. The unit currently has contracts from 13 German and 3 US libraries and/or archives and is actively treating books in this unit.

### *Both Library and Archive Collections Can be Treated*

The basic idea of Battelle's mass deacidification method is to subject bounded books and archival documents to a chemical neutralization treatment that makes the acids in the paper innocuous. This is done by a liquid phase treatment in a batch-process with batches up to several hundred kilograms. This process works with a new neutralization agent containing

magnesium-titanium-ethylat which deacidifies papers and supplies an alkaline buffer of magnesium carbonate. A new non-polluting, non-toxic silicon-organic solvent replaces the environmentally harmful CFC's used by former processes. Due to the excellent compatibility with most common materials, the process can be applied to both library and archival collections.

### *The Deacidification Treatment Comprises Three Stages :*

- predrying : reduction of the moisture content of the paper
- deacidification treatment : chemical neutralization with Mg-Ethylat/ Ti-Ethylat dissolved in Hexamethyldisiloxane (HMDO)
- postdrying : removal of solvents from the paper

The Battelle concept offers two efficient vacuum drying processes, one with micro-wave heating, the other with conventional heating, depending on requirements.

During predrying, the books and documents are slowly heated in a vacuum up to 60° C. Due to the very low pressure, all air is extracted from the pores of the paper. When predrying is finished, the chamber is filled with the alkaline deacidifying solution. The vacuum treatment guarantees that the solution enters rapidly all pores of the paper. The paper is completely filled with the liquid. Even closed books and documents in boxes are entirely impregnated. The acid neutralization and alkaline buffering processes take only a few minutes.

The treatment chamber is then emptied and the postdrying starts. During this process the solvent is completely removed from the paper. Like predrying, the postdrying of the impregnated books and documents takes place in vacuum with simultaneous heating. Again the

**B**attelle has developed a proprietary mass deacidification process using an environmentally friendly, magnesium-based liquid solvent. Pre- and post-treatment by vacuum insures high levels of uniformity of deacidification. The benign characteristics of the solvent leaves books and archival unaffected with regard to coloration and inks, adhesives and leather bindings.

temperature is controlled to a maximum of 60° C. The exhaust vapors from the drying chamber are cooled in the solvent recovery unit, the condensate being collected and recycled. The plants have an automatic process control. Thus, the paper deacidification process is easy to use, very fast and allows large annual capacities.

### ***The Battelle Process Can be Used for all Kinds of Books***

- no limitation in size
- no limitation in book paper (including coated paper)
- no limitation in book cloth or other covering material (including leather

bound books, books with metal clips and plastic book jackets)

- extremely damaged books.

#### **All kinds of archival materials**

- no side effects to printing inks, stamps and colors
- bounded and unbounded archival materials
- archival material in closed paper-boxes
- brittle archival materials

#### **All kinds of maps.**

The pH-value after treatment is dependant on several factors such as the type of paper, its age and the

original acid content. Normally, the neutralization raises the pH-value in the alkaline range from about 8.5 and 9.5. The alkaline buffer of magnesium carbonate amounts to 1 to 2 %. The whole treatment takes two hours using micro-wave heating and three days using conventional heating. Including follow-up processing, the books and archival materials, can be sent back to the libraries in approximately four-six weeks.

**Ulrich Behrens**

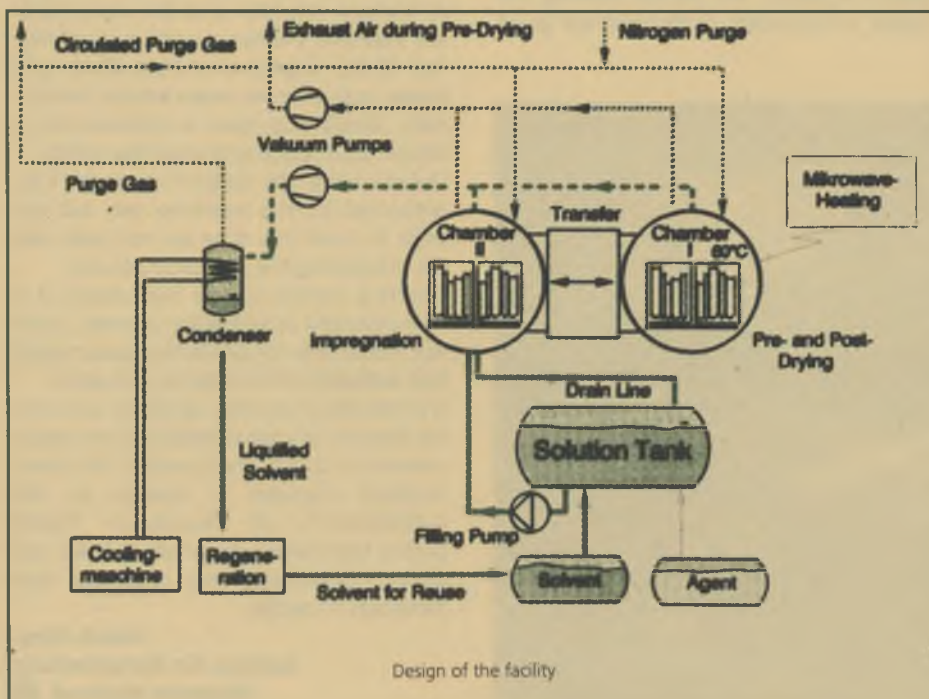
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## *Paper Splitting: An Old Skilled Technology Becoming Industrialized*

**Since 1964, the staff of the Zentrum für Bücherhaltung (Conservation Centre) at the Deutsche Bücherei (Leipzig) has been practising paper splitting in order to strengthen 19th and 20th century newspapers. With the increase in expertise they have dreamt of raising both the quality and quantity of the process to a higher technical level. Twenty years later, the first mechanical splitting machine was implemented.**

In order to know how a paper splitting machine works, one has to remember the traditional way of splitting single sheets of paper.

Paper splitting is a process based on a good knowledge of paper and an acquaintance with its properties. Traditionally, a support paper is brushed out on both sides of the original sheet with hot gelatine, and a margin of 3 cm or so is left, so as to have an angle when the original is split.

For this process using a gluing machine is important, as it is the only equipment that guarantees an even distribution of the glue due to an incorporated water heater - gelatine must be heated between 30°C and 60°C depending on the brand. The warm water runs in a double wall container where gelatine is stored and where the machine's roller dips in.

After gluing, the layer - composed of the sandwiched original paper - is put between special cardboards under pressure in a stack of 10 layers. These are left overnight. The next day, two staff members split the original by tearing it open.

### *It is Like Opening and Closing a Piece of Paper*

How does it operate? The support papers are glued to the original, the three-layer system is weaker in the middle for, as the saying goes, a chain always breaks at the weakest link. It is important that the glue has not penetrated through the original but only clings to the surface.

Splitting is like opening and closing a piece of paper, but before closing the paper, a core paper is inserted and glued

with a mixture of methylcellulose and carboxy methylcellulose (Mg CO<sup>3</sup> and CaCO<sub>3</sub>). Finally the support paper is removed by bathing it in hot water or in an enzyme bath.

The different steps of the process such as gluing, splitting, adding core paper and closing are now performed by the machine.

The principle is identical to hand splitting. There are a few significant differences however: instead of single sheets of support papers, 2 tapes - 250 m long and 50 cm wide - are used. Both are used on their own gluing machine and move toward each other. Before joining, the original is put on the sticky surface of the tape below.

### *An Aesthetic Process*

As the machine moves continuously, pairs of rollers are used instead of an ordinary press. After leaving the gluing machine, the layer enters the splitting machine, then each support paper takes half of the original and runs a mirror-symmetrical distance till they meet again. When the layer is opened, the glue and the core paper are inserted, the two support papers with half of the original meet from above and below, and the core paper arrives horizontally. Finally, the layer is collected on a bobbin after passing through the rollers.

Unfortunately, the support paper can't be dissolved by the machine yet, but we hope to have this done by next year and are completing the process gradually.

Splitting comes as the last stage of a well-organized conservation process, after wet treatments for preventing paper aging and leafcasting for replacing lost parts.

It meets the economic, aesthetic and ethical demand of conservation and the requirements of quality and quantity. This development involves a change in the conservator's job description. Never before has there been such a need and such a challenge. This challenge has been met in Leipzig.

**Henrik Otto,  
Zentrum für Bücherhaltung  
Deutsche Bücherei** ■



# NEWS FROM THE REGIONAL CENTRES

## ■ *South-East Asia and the Pacific*

The March 1994 launch of the NPO's Community Heritage Grants programme generated a stunning level of interest in its first year. The Office serviced over 500 requests for guidelines and application forms, and ultimately received 205 completed application forms.

Close to \$800,000 in funding was requested by school and university libraries, religious archives, municipal libraries, charitable organizations, historical societies, museums, genealogy and family history groups. Even a zoo applied.

In 1994 the National Library and the Department of Communications and the Arts were able to provide \$40,000 to fund 15 applications. While this is a start, clearly more funding needs to be found if we are serious about preserving our national treasures.

Two successful applications particularly serve to illustrate the diversity of projects funded. The survival of rarely used Aboriginal languages will be just one of the consequences of a grant of \$5,000 to three Northern Territory libraries concerned with safeguarding important relics of recent Aboriginal cultural life. The libraries of the Northern Territory University, the Summer Institute of Linguistics and Nungalinya College, a multi-denominational Christian education institution, have joined together to rescue three collections of Aboriginal language documents by digitally copying them onto laser disks.

A world away in metropolitan Melbourne, the Australian Children's Folklore Collection, housed in the Australian Centre, has received a grant of \$4,872 to complete the documentation and storage of a most remarkable collection.

Dr. Dorothy Howard, who was a post-doctoral Fulbright Scholar, travelled every State of Australia in 1954-55. She was a pioneer in her field on two continents and in three nations and was the first professional to recognize the variety and significance of our children's folklore.

In Australia she recorded in letters and photographs, the rhymes and games of hundreds of children as well as the childhood memories of adults, gathering together a vast collection of play lore from 1870 to 1955. Much of the material has never been published despite containing invaluable insights into the social and cultural life of Australian children over an 80-year period.

**Katy Bellingham,**  
**Preservation Officer.**

**Joanne Paull,**  
**Administrator**  
**National Library of Australia ■**

## ■ *Eastern Europe*

Henrik Otto (Deutsche Bücherei) went back to the National Library of Slovenia in Ljubljana to train the library's staff on the newly acquired leafcasting machine, a gift from the Bavarian Government

Leafcasting is a convenient method to replace losses (holes) in sheets of paper. In my eyes the results one gets with a leafcasting machine are more convincing than traditional repairs with

Japanese paper. Operating it isn't very difficult but only practice gives perfect results. So different books have been treated during the course. One of them, a victim of the only bomb that fell on the town and hit the library's building during World War II, had been burnt. Fire damaged documents are among the most difficult to repair because of the burnt fibers that can't be linked easily with the ones added by leafcasting - burnt

fibers lose their normal hygroscopic nature, they become inert and strains appear between the characteristics of the new cellulose and the burnt parts-. Hopefully, solutions will be developed for this type of damage in the near future, in order to relieve conservators who are already very busy with acidic papers.

**Henrik Otto,**  
**Deutsche Bücherei ■**

## ■ *USA and Canada*

1994 was a year of self-examination and assessment for the Preservation Directorate at the Library of Congress. The outcome of the planning process initiated in response to concerns expressed by LC staff, that preservation was not being responsive to the needs of the collections is:

- to develop plans for a collections care programme

- to develop a short- and long-term plan for library-wide education and training
- to establish research and testing priorities for 95
- to develop and implement a selection policy for preservation
- to develop guidelines for self-service photocopying
- to investigate methods for the safe

transport of rare and non-rare collection materials

- to develop a publication plan
- to develop a bridge position between the Conservation and Binding Offices to provide opportunity for career enhancement.

**Diane Nester Kresh,**  
**PAC Regional Director**  
**Library of Congress ■**

## Latin America and the Caribbean



From left to right: A. Alvarez, D. Turupial, T. León, R. Sanchez, M.-T. Varlamoff.

### New Director

Ramón Sanchez-Chapellin has been appointed the new director of the Regional Centre. A very experienced conservator, currently head of the Division of the Conservation of Paper-based Works of Art, Mr. Sanchez first studied the conservation of documents at Centromidca, Dominican Republic, at the Escuela de Artes Aplicadas y Oficios Artísticos of Madrid. He completed his training at North Eastern University, Mass. (USA), at the Balboa Art Conservation Centre in San Diego, at the Boston Public Library and the Olmstead National Historic Site, Mass.

### Preservation Course

The conservation centre began its fourth international preservation course in January 1995. Five students from Cuba, Nicaragua, the Dominican Republic, Ecuador and another three from Venezuela were accepted upon fulfilment of the requirements. Grants were awarded

by Unesco. The course consists of approximately 1200 hours of theory and practice. When completed, participants will be able to assist curators in the preservation of historic material and to implement preservation principles for books and paper-based works.

### Visit of the Director of the International Focal Point

Marie-Thérèse Varlamoff, director of the PAC Programme, visited the centre in April 1995. She attended several working meetings with technicians and professionals in which strategies for future actions and plans were decided.

Ms Varlamoff gave one conference on the new building of the Bibliothèque nationale de France for the Biblioteca Nacional de Venezuela's staff, and one on the conservation of paper-based works of art at the Galeria de Arte Nacional of Venezuela.

Ramón Sanchez ■

### Ms Varlamoff's Report of the Visit

The visit to the PAC centre in Caracas proved to be very fruitful. It lasted a week so as to enable me to visit most of the locations of the library. I was impressed by the level reached in the field of automation, by the new Foro Libertador building where most of the services should be sheltered by July 1995. The national library assumes the leadership for public libraries in Venezuela and also plays a leading role in Latin America and the Caribbean through ABINIA and PAC.

The Conservation Board is divided into 7 sections with a staff of about 30. Although they are quite aware of the latest technologies and practices in the field of preservation, it is sometimes difficult to reach the requirements of international standards because of climatic conditions, insufficient staff and funds.

The accent has been put on microfilming rather than deacidification, extreme cleanness of the stacks, and training for outside conservators. The restoration of rare books or manuscripts as well as prints or drawings is practiced according to the best and most commonly used methods.

At the end of my visit it was decided that Ramón Sanchez would be appointed director of the regional centre replacing Bernarda García who is head of Technical Services. The strategy will concentrate mostly on different points: raising funds for an advanced training course on conservation, promoting the regional centre in participating more actively in IPN and in the activities of the section on conservation, disseminating regular information on the numerous activities of the centre, helping the international centre review the *Principles for the Preservation and Conservation of Library Materials*, and implementing a survey on the safeguarding of photographic collections.

What struck me most was the enthusiasm and skill of the staff, along with their strong desire to participate in regional and international activities. The Biblioteca Nacional de Venezuela wishes to remain one of the most competitive and outstanding national libraries in the region and to extend its experience and *savoir-faire* to less advanced libraries.

M.-T. V. ■

# HQOC

HAUTE QUALITÉ DE CONSERVATION

## *ARCHIVER - PRESENTER*

*Plis Barrière*  
*Pochettes Papier Permanent*  
*Pochettes Film Patrimoine*  
*Classeurs Patrimoine*  
*Boîtes Patrimoine*

## *DUPLIQUER*

*Papier Photocopie Conservation*

## *RESTAURER*

*Pâte Linters de coton*  
*Papier Barrière*  
*Papiers Japonais*  
*Buvard Neutre 100 % chiffon*

## *MONTER - ENCADRER*

*Vélin de Montage*  
*Papiers Permanents*  
*Cartons Museum*  
*Cartons Conservation*  
*Contrecollés Beaux-Arts couleur*

# *Patrimoine*

  
**CANSON®**

## Literature

### ■ PRESERVING LIBRARY MATERIALS, a manual

By Susan G. Swartzburg

2nd ed., 1995

503 pp

ISBN 0-8108-2855-3 (acid-free paper).

All aspects of preservation are covered including photographic materials, image and sound records, microfilms. Glossary, Appendixes, Bibliography and Index.

Scarecrow Press, Inc.

52 Liberty Street - P.O. Box 4167

Metuchen, New Jersey 08840 USA

Fax: 908 548-5767

### ■ CONSERVAPLAN: Documentos para Conservar

It is a series of instalments gathering the translations into Spanish of documents on preservation of international

interest written in other languages. Addresses of suppliers are included.

#### Documentos para Conservar n° 1:

*Principios para la Preservación y Conservación de Materiales de Bibliotecas* by J.-M. Dureau y D.W.G. Clements.

#### Documentos para Conservar n° 2:

*Longevidad del Libro; Informes del Comité de Pautas de Producción para la Longevidad del Libro* by the Council on Library Resources, Inc.

#### Documentos para Conservar n° 3:

*Conservación de Obras de Arte en Papel* by Roy L. Perkinson.

**Conservaplan n° 4** contains four essays by Gary Frost, a binding expert on the book and its changing structure throughout history. With an objective and dense style, Frost invites us to understand a craftsmanship that has accompanied humankind along 2000 years.

**Conservaplan n°5** will be available by the second semester of this year, and will be containing texts for a manual, collected by Frost on a four-month course given in Caracas and issued by the Centro Nacional de Conservación at the Biblioteca Nacional de Venezuela. The elaboration of the manual is the result of the work between Frost and Alicia Briceno, a teacher on Book Preservation Techniques and head of the Division of the Preservation of the Books Printed after 1850, and Lourdes Blanco, former director of the Centro de Conservación who translated and edited the publication.

Available from the editor of

Conservaplan

Centro Nacional de Conservación Biblioteca Nacional de Venezuela Zona Industrial La Trinidad Caracas

### ■ BOOKKEEPER AND DEZ LIBRARY OF CONGRESS REPORTS

The first 30 + pages of separate

reports on these two processes are available paperbound and on Internet.

Free paperbound copies (including all of the appendices not reproduced on Internet) can be obtained from the Preservation Directorate.

Please contact:

Ken Harris

Library of Congress

Preservation Directorate

Washington D.C., 20540 USA

Fax: 1 202 707 3434

### ■ LIBRARY SCANS WHITMAN ITEMS AND PRESERVES THEM

in *The Gazette* of the Library of Congress, March 24, 1995.

A paper by Gail Fineberg that describes the different stages of restoration of the poet's notebooks and their scanning as part of the conservation process and that will make them accessible via Internet too.

## Events

### ■ 14 August - 29 September 1995, LONDON, UK

#### The Preservation and Conservation of Photographic Materials

A course for experienced conservators and conservation students aimed at introducing theory and practical skills in the preservation and conservation of photographic images.

The Centre for Photographic Conservation

233 Stanstead Road, Forest Hill

London SE23 1HU

☎ 081-690 3678

Fax: 081-314 1940

### ■ 19 - 23 September 1995, TÜBINGEN, Germany

#### 8th IADA Congress

Preventive conservation and environmental matters will be the most discussed topics of the Congress.

IADA Kongreß

Postfach 2623

D-72016 Tübingen, Germany

Fax: ++ 70 71/3 50 70

### ■ 5 - 7 October 1995, PARIS, France

#### ARAAFU 4th International Symposium

Restoration, unrestoration and reresoration: what are the grounds for new restoration operations on

works of art ?

Bilingual French/English

Conference ARAAFU 95

C/O Marianna Moinot

175, rue du Temple

75003 Paris

### ■ 23 - 26 October 1995, ESSEN, Germany

#### Electronic Documents and Information:

##### From Preservation to Access

Access to and formats of electronic documents are not yet internationally standardized.

Libraries and librarians are facing an exciting future and have to keep with many issues in mind.

Preservation strategies, acquisition policy, legal issues, storage and retrieval, adaptation to future technical equipment, and more to

be dealt with.

Essen University Library

Universitätsstr. 9

D-45117 Essen, Germany

☎ 02 01 1 83 37 00

Fax: 02 01 1 83 32 31

### ■ 27 - 30 November 1995, BRISBANE, Australia

#### Multimedia Preservation: Capturing the Rainbow

Interactive multimedia are like rainbows - perceptible but not tangible. The only way to re-create them is to understand how they are produced.

Trade displays and demonstrations.

National Library of Australia

NPO - Jan Lyall / Kate Bellingham

Canberra Act 2600 Australia

☎ 06 262 15 71

Fax: 06 273 44 93

## CALL FOR PAPERS

*IPN* next issue, due December 1995, will be devoted to training in conservation and preservation all over the world. If you have developed original and successful training activities, can you send your paper to the editor before October 1st, 1995. Many thanks.