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SHELFLIFE

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A NEWSLETTER FROM THE LIBRARY BINDING INSTITUTE

Binding and Deacidification: A Discussion of New Techniques to Preserve Monographs in Research Collections

By Robert Strauss

My interest in Library Binding began in December 1979 when I accepted a position at the University of Minnesota Library Bindery (the Bindery). I was not a complete novice since I had experience assembling binding shipments as a student worker in the library at the University of North Dakota. When preparing to shelve the volumes returned from the bindery, I marveled at the newly bound serials with their shiny buckram covers, but, I never gave a second thought to how each book was made. I was just grateful that I didn't have to find and re-shelve single issues of each periodical.

When I arrived at the Bindery this all changed; suddenly I was talking about oversewing, cleat sewing, hand sewing, rounding and backing and something called "Class A" binding which was determined to be the best binding by an organization I had never heard of... the Library Binding Institute (LBI).

I attended my first LBI meeting in 1981 as the newly appointed head of the Bindery and have been hooked on the structure and construction of library bindings and the role binders play in the preservation of collections from my first day at the Bindery up to this moment where I find myself writing an article almost thirty years to the day later.

Has much changed in thirty years? Casual inspection of a bound serial or more particularly a monograph seems to reveal a book which has changed little over the past thirty years; nothing could be further from reality. For the remainder of this article we will return the periodical to its shelf and turn our attention to the monograph which, until recently, has been an infrequent subject of discussion, in relation to binding styles and methods of construction.

Casual inspection of a bound serial or more particularly a monograph seems to reveal a book which has changed little over the past thirty years; nothing could be further from reality.

When I started at the Bindery in 1979, ninety percent of all monographs received some form of sewing to consolidate the text block. Paperbacks, old and new, were usually sent to a device called the "cleat sewer"; this machine milled the old hot-melt adhesive from the spine, cut groves (cleats) into the text block, laced a single line of thread in a figure eight pattern around the cleats along the entire length of the text block, attached new endpapers and applied a film of PVA adhesive to the back of text block. All of this was done in a single pass. Most hardcover monographs were oversewn, a few lucky books were either sewn-

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THE ORIGINAL HARDCOVER BOOK BINDERS

by-hand or had their original sewing left in place and received only a new cover.

Thanks to the efforts of many people, particularly the work of Paul Parisi and Jan Merrill-Oldham, long time editors of the *Guide to Library Binding* and leaders in the development of new standards for library binding, I am happy to report that (to my knowledge) not a single monograph has been "cleat sewn" in decades and today most volumes have their original sewing retained, are sewn-through-the fold or are double-fan adhesive bound. The result is a volume that on casual inspection may look a lot like a book bound thirty years ago but certainly does not "act" like that book. The new monograph has wider margins, is more openable so it can be read and copied, is stronger than a "cleat sewn" book, and, if the need arises, can be re-cased without disturbing the text block. In the new world of Google Text, this means that these volumes will open well enough to be scanned without the need to disband the pages, surely a achievement that will result in the retention of more original monographs in research collections; a result with a value which can only be guessed at today.

Although I am not sure if the number is four, six or ten, more than a single copy should be saved; the decision regarding how many I will leave to the librarians. This, however, points to the heart of my argument for a new type of monograph preservation service – one which partners a new binding structure and deacidification as a solution to a preservation problem sitting in library stacks.

Historically, most binding programs have been focused on periodical collections, while deacidification programs have been focused on collections of monographs. Since serial use in electronic form has increased in use by library patrons, collections are changing from duplicate paper copies to born digital resources. Preservation of these digital serial collections has shifted from the binding of the paper issue to the archiving of the digital original. Some say this has resulted in the need to bind fewer periodicals thus reducing the amount of money needed to maintain paper copies. I would like to suggest that we choose to redirect these unused funds to a new preservation option that includes binding and deacidification.

As I mentioned in the previous paragraph, deacidification is most widely used in monograph collections. The focus, however, has begun to shift recently to include collections of archival records and manuscripts being chosen for deacidification. When the Library of Congress began its pioneering work on deacidification, the items considered best candidates for treatment were new books. This made sense since a book recently printed on acidic paper would receive maximum benefit from treatment since it's pages before treatment are strong and after treatment likely to stay that way for decades, if not centuries, once the harmful effect of the acids are neutralized. While some new books are selected for deacidification today, most items come from retrospective collections, usually area studies such as Africana, East Asian, Latin American or Eastern Europe, or, special collections where the item is of particular value. I think of these items as coming from "collections of distinction".

Once a collection has been chosen as a good candidate for deacidification, the selection criteria for monographs is relatively simple. Factors to consider include the paper's acidity and strength. Does the page flake when it is handled, making this a candidate for reformatting and is the binding intact?

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Binding and Deacidification

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I am interested in the volumes that are rejected for treatment because their bindings failed.

While we cannot undo the ravages of acid attack on already weak paper, we certainly can "fix" the problems caused by broken bindings. Most libraries do not have the luxury of enough staff to allow for a survey of their monograph collections to find and select items with broken bindings. Preservation Technologies staff have worked with scores of collections to select items to be deacidified and during this process thousands of books have been left on the shelves usually because the item had either a detached cover or a single break in the text block. These items might be candidates for an in-house repair unit but typically repair units are already overwhelmed dealing with items from the circulation desk or other needs such as exhibition or interlibrary loan. I have always been disturbed to see these slightly damaged, easily repaired books still on the shelf continuing to be ravaged by the "Slow Fires" of acid attack when a simple fix is available.

What is this fix? The good news is that it is currently being addressed. Permanence and non-damaging operability are the attributes we are seeking when rebinding monographs which are candidates for deacidification. Strength and durability used to be the primary criteria. Your library binder offers methods which allow for flexibility and durability.

First, I would like to address the method of leaf attachment; I am proposing no significant change. If the sewing is intact and strong it should remain as is. If it is weak, strengthen the weak area but do not re-sew. If the volume needs re-sewing, retain the signature and re-sew by machine (or by hand if needed). Finally, if none of these methods will work, then double-fan bind the text block.

The most significant structural change I am proposing is a change in endpaper attachment. Most endpapers are attached using the same method of attachment as the leaves of the book. Sometimes a bead of glue is put between the endpaper and the first page of the text to disguise old adhesive that is left from the previous binding.

As an alternative to the normal method, I would like to suggest that an endpaper with a thin cloth or paper tail of at least ¼ inch be used and, that the tail is pasted to the clean spine of the text block and then covered with cotton lining which extends the full length of the text block. In my opinion, this method of attachment is strong enough to withstand use but will not cause damage to the somewhat weak first page of the text block. Remember, this in not a new book and, with this in mind, I would like to go a bit further and suggest that a commercially available paper (the same as those used in conservation laboratories) be used in the endpaper. At first glance this might seem more like a luxury than a necessity, but, if indeed the stream of work in a bindery is shifting from serials to monographs and knowing that every library binder is doing one-of-a-kind specialty work routinely, why not make this small aesthetic change which will result in a volume retaining some of its historical characteristics?

Now, the cover. The ANSI/NISO/LBI Library Binding Standard, Z39.78-2000 allows for alternative cover materials. It used to be that F grade Buckram or its equivalent set the standard to which all library binding material was compared. In recent years, cloth manufacturers and cover material suppliers have made remarkable advances in the development of alternatives to F grade Buckram. Today, thin and strong, acrylic coated cloth is available in a spectrum

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of finishes and colors which meet or exceed the performance numbers for edition bound books. The original volume probably failed because of the stress paces on the joint. This joint is made of the original cover material, lining and end sheet. Time and use took its toll. I am not suggesting that we replace this compromised cover with a weak cloth, I am suggesting that there are book cloths on the market that are strong and attractive, made with library binding in mind, and that we should not be afraid to use them. Ask your library binder to show you alternative covers and explain their functionality and relationship to the library binding standard. Today, there are more choices than ever in cover materials. You and your binder can decide together what is best for the use of your collections.

For the rest of the binding, I recommend that we stay with current practice; the cover board, lettering style, size and color should be chosen to compliment the size, weight and age of the volume.

I haven't forgotten to include deacidification. Research presented at the most recent American Institute of Conservation conference indicated if deacidification is combined with reduced temperature in storage areas (48F), we could expect this to result in as much as a thirty times the normal life expectancy for an average volume. Prior research established a three to five time life extension if no environmental changes are made. Librarians are already choosing to deacidify thousands of books annually; I am suggesting that if we work together to carefully rebind volumes and then deacidify these volumes, we will be able to preserve entire collections for future research. Best of all, this option is not something which will take years to develop. Using the current standard for library binding, ANSI /NISO/ LBI Library Binding Standard, Z39.78-2000, and working together with our colleagues in libraries, we can begin to offer this service today.

While there are many people I would like to acknowledge, this article and more importantly, my continued interest in library binding would not exist without Fritz James, Barclay Ogden, Greg Campbell, Gary Frost, Don Etherington and the spirits of Paul Banks and Bill Anthony.

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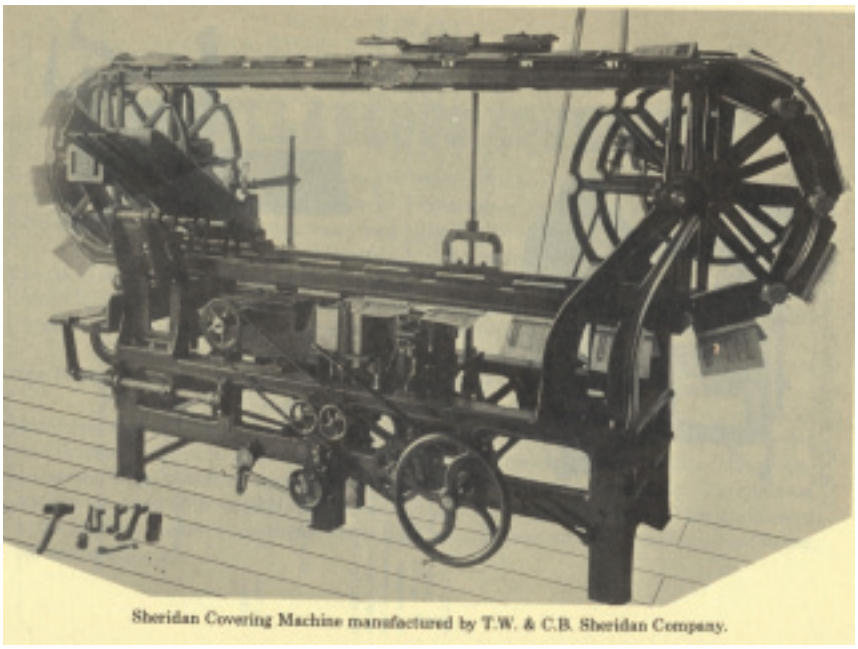
The Many Different Kinds of Adhesive Bindings - Part 1

By Werner Rebsamen

How times have changed. Just 40 years ago, the majority of hardcover bound books were sewn through the fold (Smyth-sewn). It was considered to be a "sin" to bind and furnish such bound book blocks with an adhesive only. Nobody expected them to hold together for several readings. Even in the early 1970's, when this author was in charge of getting the world's first completely automatic book-manufacturing facility going - printing and hardcover binding up to 70 books a minute - we had to use a white, pigmented hotmelt to hide our "sins." Hotmelts used in paperback bindings had a sort of golden color. Although sewn books dominated every day of book manufacturing, this all-new system no longer allowed for this method of binding. Now, thanks to new technologies and, especially with advanced formulations of adhesives, the majority of all books bound are using various kinds of adhesive binding methods. In fact, there are so many types of adhesive bindings it is a difficult task to know them all. The purpose of this article, in two parts, is to sort out the various kinds of adhesive bindings without going into details or specifics.



An early picture of a "Perfect" Binder. Picture on file compliments of the late James Averill, V.P. of the former Sheridan Company.

Where did the word "perfect binding" originate?

Perfect binding is the most commonly used expression for an adhesive binding. Yet, very few people know where this technical description of a binding process started. Other words used in the trade are "patent or stitch-less" binding. Research done for a graduate thesis at RIT traced it all to a patent issued on May 11, 1887, belonging to Horace L. Arnold of Brooklyn, NY. The patent refers to "a method by which several leaves compromising a book or pamphlet are secured to each other preparatory to its receiving its cover." The graduate student doing this research was Dr. Richard M. Adams. He studied plants and lignin fibers for his Ph.D., but may have had difficulties finding an appropriate position in this particular discipline. This is most likely the reason he joined RIT's Printing Management Graduate program. For his graduate thesis, Adams researched paper fibers and spine preparation methods used for adhesive bindings - a thesis which earned him great respect and kudos by experts around the world. As he investigated various types of spine preparation, Dr. Adams found the following patent description for the "perfect" binding method:

.....Their folded edges are removed in a suitable manner. This may be done by cutting the edges away, but they will preferably be removed by tearing, so as to leave the edges in a somewhat rough and ragged condition. The back edges are then provided with a number of transverse cuts. When the volume is in this condition, there is applied to the back, which contains the cuts, a coating of tempered glue or cement, which contains in a thoroughly distributed condition a quantity of fiber which may be of a suitable kind, either hair or hemp or pieces of string or any suitable materials.

A most interesting patent description, in a language no longer accepted using Microsoft Word! Since a strong adhesive was not available in earlier times, it looks like fibers were added to the glue to achieve a stronger bond.

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Having done some research on the history of binding techniques, this writer is of course familiar with processes used before the invention of the "perfect" binding process. The large, printed sheets were folded. Prior to the last fold, a string was pierced through the bind fold from the inside out with the string showing on the inside being approximately 4 inches long. After the individual signatures or sections were gathered, a person holding the book block on the fore edges shook it so that none of the strings remained between the folded signatures. Thereafter, the book block was inserted into a clamp and forwarded to a gluing station, which most likely contained animal or vegetable glue. A rotating brush then directed the sticky strings to the left and right. Covering followed, creating the very first commercial adhesive bound paperback books. Bear in mind, those were folded signatures. The patent issued added spine preparation and, as a result, created the "perfect" binding. As we all know, perfect binding was anything but perfect until the late 1960s, most likely due to the lack of a good, bonding adhesive.

Adhesives used for the binding processes

In order to understand all aspects of adhesive binding, we first need to familiarize ourselves with some of the adhesives used. We will no longer discuss gelatin (animal) or vegetable glues as they are being used only in rare instances like phone books - that is on items which must be able to be recycled 100 percent.

Hotmelt is a wax-like adhesive. Similar to a candle, if the wax is heated, it will turn into a fluid. If the heat is taken away, it will coalesce. If a candle is dripping its liquid wax onto a cold surface, the solidification is then almost instant. That is how hotmelt works. The average temperature is approximately 360 degrees Fahrenheit, enough to burn your skin if not handled with caution. Of course, there are many different formulas for hotmelts. Some adhesive companies have informed this writer that they easily number into a thousand different kinds! Bookbinding is only a small market for them. Take, packaging, for example. For this, all hotmelts must be formulated for specific processes. In print-finishing or bookbinding, hotmelts may be used for high speed magazine and catalog bindings. In addition, they must be designed for a specific adhesive application, that is for the machinery or system used, for example, application via a glue pot or extrusion nozzle. Hotmelt sets or returns into an almost solid state within 2 to 25 seconds.

PVA is an abbreviation for Poly Vinyl Acetate. It is a water-based, cold emulsion adhesive, similar to the familiar "Elmers" glue. Again, there are many different formulas. In adhesive binding processes, some are being used as primers in combination with hotmelt or as a straight one or two shot application of PVA's in the production of quality bindings. Other, high quality PVA formulas are being used for the double-fan process in library binding - adhesives which must meet the tough ANSI /NISO/ LBI Library Binding Standard, Z39.78-2000 specifications.

There are two different kinds of PVA adhesives: homopolymers and internally plasticized co-polymers. Sometimes, the two are mixed together, depending how and for what they are being used. These water-based adhesives take a long time to dry and therefore are not suitable for the high-speed production of books and magazines. **PUR** adhesives represent a new generation which has solved many problems when binding difficult, glossy papers. These polyureathane adhesives require an expensive application system as some of the fumes generated

Adhesive binding of softcover and hardcover books in an office environment made easy. Example shown - the Fastbind system.

But be careful, do your homework. Supplies such as the pressure- sensitive binding materials needed for a hardcover binding may cost more than a professional binding done by a certified library binder.

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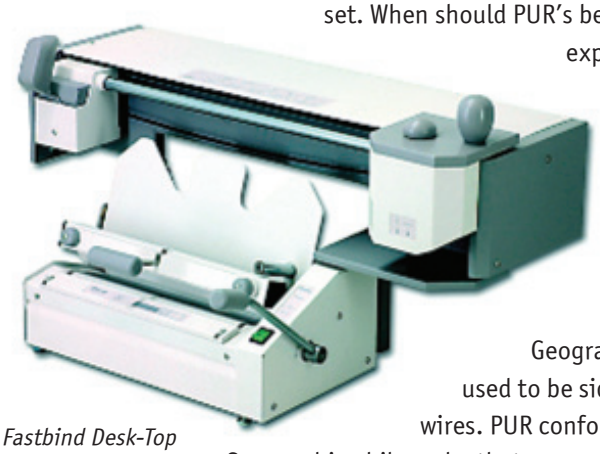
are slightly toxic. However, once the PUR adhesive coalesces, cools and returns into a solid state, the danger is gone. The results are strong and durable bindings. PUR's work very much like a hotmelt but it takes much longer to set. When should PUR's be used? This rather expensive adhesive is ideal for glossy papers covered with solid inks or toners. PUR adhesives prevent ink solvent migration. One good example of this is the National Geographic magazines which used to be side-stitched with heavy wires. PUR conforms to the National Geographic philosophy that none of their magazines will ever come apart and must be able to be recycled. If the magazines are recycled, the PUR will wash out of the pulp like wire staples. PUR's aging characteristics are 500 years plus.



Fastbind Desk-Top Adhesive Binder

In summary and valid for all three adhesives discussed, they are used with the following application techniques:

- Pre-applied hotmelt tapes and covers (Desktop systems only.)
- One shot, which means a simple application, using only one glue pot
- Two shot, which means the use of two different glue pots - one usually being a primer
- Extrusion which means application through a nozzle

Desktop binding systems

There are many different kinds of desktop binding systems, the majority of which use hotmelt in one form or another. Attractive assortments of covers which have a strip of hotmelt already extruded into the spine area can be purchased. The sheets to be bound are inserted into the pre-scored covers. The desktop binding system will then reactivate the hotmelt and fuse the sheets and cover together. Other systems similar to the ones used on the DocuTech use a strip of paper or cloth which is coated with hotmelt. The problem with these systems is that for all the various bulks (thickness of item to be bound), different sizes of covers or strips will be needed. This problem can be solved by using thin sheets of hotmelt. The strips required are cut to size, inserted into the cover, and reactivated with heat. The fusion is the same. Powis, www.powis.com, describes its hotmelt strip system for a new automated Stitchfree TM Binding machine as "No messy glue pots to clean and maintain."

Some of these binding systems are now suitable for binding hard covers and photo books. To get an idea of all the desk-top binding possibilities, including hard cover binding, visit www.fastbind.com.

Although still rare, some desk-top systems are now available using PVA cold emulsion adhesives. One new German invention by Ribler, www.ribler-gmbh.de, called the "Junior" binder is coming into the market this fall (Graph-Expo in Chicago). This does feature cold-emulsion, PVA extrusion. The advantages to this are no heat, no smell, a superior lay-flat binding, and best of all, it requires no cleaning up of glue pots. All the operator has to do when finished for the day is wipe off the extrusion nozzle with a moist cloth.

It should be noticed, that, with some exceptions, like premium models of Fastbind and others, most desk-top adhesive binding machines or gadgets do not feature any spine preparation. This may be fine if the paper stock to be bound is uncoated. If slippery, coated papers covered with ink or toners are being bound, this could spell trouble. The new German invention making its debut this fall has an optional, patented spine preparation station to cope successfully with such problems. Since it requires a lot more machinery, the price of the binding machine is almost double. This is the initial investment. What counts afterwards

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is the quality produced. In other words, before investing into any such desk-top binding devices, know exactly what you intend to bind. Be careful before you invest. Some mediocre "spine-preparation" systems are simply razor cuts and will not expose the paper fibers like the more expensive systems.

Small, one shot adhesive binding systems

Whereas the desk-top binders are used in office or small in-plant printing environments, the mostly single or multiple-clamp, one shot binders are floor models which already allow some production in small bookbinding environments. These may include library binding facilities which are often asked to bind some soft cover books. Virtually all, without exception, feature spine preparation. The folded signatures are milled in the spine area, the paper fibers are exposed, and often, notches are milled into the spine as well. The prepared book block then automatically moves over a single glue pot which contains hotmelt adhesive at a temperature of approximately 360 degrees Farenheit. The covers may be fed into the perfect binding machine manually or the machine is equipped with an automatic feeding device. After adhesive application, the clamp moves the book block over the cover station. The cover, precisely aligned and in register, then moves upward and is pressed onto the spine of the book block which is covered with the adhesive. Two cover breaker blades then nip the sides to assure a uniform, square back. The bound items are then ejected from the perfect binder and, thereafter, are trimmed smooth on three sides.

The very latest options, although still rare for such binding machines, are the use of PUR adhesives. This again, copes with difficult to bind papers, most often heavily coated with solid ink and toners.

Commercial adhesive binding machines

In this category are a huge variety of binding systems. Since the industry binds a variety of items like paperbacks, catalogs, magazines, phone books, text books, and travel guides, all of these products must be bound in a competitive fashion. For example, small

The all-new Junior adhesive binder does feature an exclusive, patented spine preparation. Note the exposed paper fibers.A unique PVA adhesive extrusion application requires no cleaning-up.A binder ideal for high quality hard-and softcover bindings. (Ribler)

size paperbacks are printed and bound 2-up, which means two books are bound at once.

If a binder is capable of running at a speed of 15,000 books, this will result in a production of 30,000 paperback books every hour! For magazines and catalogs, there are adhesive binding systems which bind up to 18,000 an hour. These heavy duty adhesive binding machines vary, all depending on the work a particular binding facility. Some smaller binding establishments are satisfied with a production speed of just a few thousand per hour. Others invest in mid-range adhesive binding systems, allowing a production of up to 10,000 books per hour, and yet others, invest millions into sophisticated adhesive binding systems capable of a variety of binding styles and high speed productivity.

What kind of adhesive bindings can all these systems offer? In Part Two of this article, to be

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Saving the Written Word: Mass Deacidification at the Library of Congress

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Library Saves Permanently Valuable Books

The Library of Congress, with strong support from the U.S. Congress, has provided leadership in the development and evaluation of mass deacidification processes and their application to valuable books collections and other paper-based items to achieve economies of scale. Through a competitive process, the Library has awarded a series of contracts for mass deacidification to Preservation Technologies, Limited Partnership (PTLP) of Pennsylvania. The company is providing book preservation services to the Library using the firm's Bookkeeper mass deacidification process. The fourth contract, awarded in November 2005, will enable the Library to treat 1,250,000 books and at least 5,000,000 sheets of manuscripts by the end of October 2010. The long-term objective is to treat at least 250,000 books and 1,000,000 manuscripts sheets annually for the next 30 years (the remaining 30 years of the 35-year plan). By the end of 2006, the Library had extended the useful life of 1.7 million books and 4 million sheets of manuscript materials from the national collections.

By the end of 2006, the Library of Congress had extended the useful life of 1.7 million books and 4 million sheets of manuscript materials from the national collections.

LC Encourages Others to Mass Deacidify Library & Archival Materials

The Library encourages other institutions to prolong the useful life of invaluable library collections and archival holdings through mass deacidification — either by negotiating separate agreements or by forming, with other institutions, partnerships that could achieve economies of scale through the treatment of large quantities of materials.

Library "Demonstration Site"

Given the effective operation of its mass deacidification program for books over the past several years, the Library is serving as a demonstration site for managers and technical staffs from other libraries, archives, and cultural institutions. Anyone interested in learning firsthand about administrative and work flow procedures required for mass deacidification programs should contact Kenneth E. Harris, Preservation Projects Director, Preservation Directorate, Library of Congress, LM-G21, Washington, DC 20540-4500. Telephone: (202) 707-1054; Fax: (202) 707-3434; Internet: khar@loc.gov

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Adhesive Bindings

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featured in the next issue of *ShelfLife*, the following will be explored: spine preparation techniques, one and two shot bindings, the production of book blocks for hardcover bindings with appropriate reinforcements, lay-flat bindings like Otabind, RepKover, Libretto, Swissbind, deep-notch bindings, Burst and Perfo-punch bindings and, of course, double-fan adhesive bindings.

In any industry, technology moves at an extremely fast pace. These binding styles are more evolutionary than revolutionary; however, they do offer constant improvements. All this to enhance the end-use requirements of a product we all love so much–Books!

Werner Rebsamen is Professor Emeritus at the Rochester Institute of Technology and the technical consultant to the Library Binding Institute. He can be reached at wtrebs@localnet.com.

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On-site Contract Work in LC Buildings

Under contract terms, the vendor is providing onsite services in Library of Congress buildings. The company's employees select books for treatment, pack and ship volumes to the deacidification plant, and reshelve books following treatment. After training by Library personnel, the contractor's onsite workers are overseen by a company supervisor, and the Library monitors their progress against contract objectives.

Selection Criteria and Procedures

Deacidification treatment is reserved for books that are acidic and at risk of loss if no action it taken. Due to its role as the national library and the official library of the U.S. Congress, the Library is focusing primarily on selection of "Americana" for early treatment under the mass deacidification program, emphasizing the selection of endangered volumes from collections that are central to the Library's mission. Screening and treatment is being undertaken beginning with the following LC book classes, which have been approved for deacidification processing by Library administrators, preservation managers, and the LC Collections Policy Committee:

Class B
- Philosophy, Psychology, Religion (completed)

Class C
- Genealogy & Biography (completed)

Class D
- General History (completed)

Class E
- U.S. History (completed)

Class F1-975
- U.S. Local History (completed)

Class JK
- U.S. Political Science

Class KF
- U.S. Federal Law

Class PN Americana
- Literary History and Collections

Class PS
- American Literature (completed)

Classes PZ3&4
- Fiction in English (completed)

Class T-TJ
- Fiction in English (completed)

Contractor staff working onsite in LC buildings examine each book in collections that have been designated by Library management for deacidification screening. Overly brittle books are left on the shelf.

The Library is focusing primarily on selection of "Americana" for early treatment under the mass deacidification program.

Books with the following characteristics are generally not considered for deacidification treatment with the Bookkeeper process:

- Text paper is alkaline or permanent (these books aremarked with a white dot on the spine, as are books that are deacidified; in both cases, this mark indicates longevity of the text block)
- Text paper is coated or super-calendered (coated paper is not a high priority for deacidification, due to its alkaline coating)
- Title is already available in (or scheduled for) microform or digital format, or it is a candidate for future reformatting due to advanced embrittlement of the paper
- Duplicates of a given imprint of a specific title (only one copy of any given imprint is treated)

Most books that are deacidified are volumes that are structurally sound enough to be treated in the Bookkeeper vertical treatment cylinders. However, books that have limited binding damage (hinge, joint, head, or tail damage) or are too large for

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treatment in a Bookkeeper vertical cylinder can be deacidified in other ways by the contractor — horizontally in manuscript-treatment equipment or sprayed.

Books with the following characteristics are considered good candidates for mass deacidification in the Bookkeeper vertical treatment chambers:

Bound Volumes

- Hardbound books generally treat better; however,
- Paperbacks are OK, if they are in good condition and structurally sound (it is critical to perform the brittleness fold endurance test on the paper and to determine whether binding adhesive is too degraded to support the text)
- Plasticized covers will not fully absorb the magnesium oxide and will require wiping off by contractor staff after treatment

Bindings in Good Condition

- No detached covers (boards)
- Leather covers with red rot are OK
- Minor damages (e.g., head cap, head, or tail, as well as minor spine tears and minor hinge or joint damage) are acceptable — should be noted on packing lists, to prompt additional examination by contractor staff

Text Block in Good Condition

- No loose or torn pages
- Leaves not overly brittle
- No "blocking" (pages stuck together)

Size Parameters

- Large and heavy books and oversize unbound materials can be treated in Bookkeeper chambers or sprayed.

Quality Controls

The deacidification process, utilizing magnesium oxide (MgO) to neutralize acid in the paper, takes two hours from the time books are placed in the Bookkeeper cylinders until the volumes are ready to be packed for return to their home library. All steps in the process, from selection to reshelving, are monitored to ensure that the intended results are achieved. The Bookkeeper process meets the Library's basic preservation requirements by:

- raising the pH level of treated paper to the acceptable range of 6.8 to 10.4pH
- achieving a minimum alkaline reserve of 1.5% or more
- extending the useful life of paper (measured by fold endurance after accelerated aging) by over 300%.

Surrogate test papers that are inserted in 10% of the treated batches of books are tested by both LC and the contractor for alkaline reserve in order to avoid the destructive testing (titration) of actual pages from collection books. At LC's request, the contractor also tests one disposable test book per week to confirm that the process is working properly. Test papers and test books are returned each week to LC for additional laboratory testing.

A further quality control check for alkaline reserve in each batch of books (8 per batch) is made by dividing the weight of the batch into the weight of the MgO used to treat it.

All treated books are marked, like the alkaline books left on the shelf during selection screening, with a white dot on the spine. A Bookkeeper label is also attached inside the back cover of each treated book.

Manuscript Deacidification

Preservation Technologies has developed new equipment that it is using to offer deacidification services for loose manuscript and archival materials. The Library contracted with Preservation Technologies to build and install a horizontal treater and a Bookkeeper spray booth in the Madison Building on Capitol Hill. Installed in August 2002, this equipment is enabling the Library to treat on-site paper-based materials in non-book formats, such as manuscripts, maps, music scores, pamphlets, and posters.

LBI Elects New Officers and Directors

LBI Members elected the following new Officers and Directors on May 5, 2007 at the Annual Membership Meeting in Santa Fe, New Mexico:

OFFICERS

President
Gerrit Dykhouse, 2007-2009
Wallaceburg Bookbinding

Vice President
Mark Hancock, 2007-2009
Utah Bookbinding

Treasurer
Jack Tolbert, 2007-2009
National Library Bindery of Georgia, 2007 - 2009

DIRECTORS

Bruce Jacobsen, 2006 – 2008
Bridgeport National Bindery

Mark Lovekamp, 2005-2008
Bound to Stay Bound Books

Duncan Campbell, 2006-2009
Campbell-Logan Bindery

Eric Fairfield, 2007-2009
The HF Group, Inc.

Jim Orr, 2007-2010
Perma-Bound Books

Lang Wightman, 2007-2010
LBS

Library Binding Scholarship Memorial Fund

The LBI Scholarship Memorial Fund was started in memory of longtime LBI member Mel Kavin, Kater-Crafts Bookbinding. The purpose of the fund is to provide scholarships for library binding educational opportunities. This fund will honor the memory of those, like Mel, who have made significant contributions to the library binding industry.

If you are interested in making a contribution, complete the form below or contact Debra Nolan at LBI at 561-745-6821 or dnolan@lbibinders.org, for more information. A letter to the family acknowledging your contribution will be sent.

Memorial Fund Contribution

Please accept my gift of $_____ to the Library Binding Memorial Fund.

Name _____

Address _____

City _____ State _____ Zip _____

Daytime Phone _____

Email Address _____

Please make your check payable to the Library Binding Institute and note Memorial Fund on the check. Mail to: LBI, 4300 South U.S. Highway One, #203-296, Jupiter, FL 33477. To contribute via credit card, please contact the LBI office at 561-745-6821.

What is a Certified Library Binder?

"A book is the only thing which man has made that asks nothing from him, but only the opportunity to give ... The existence of books has enabled our society to develop to the point where the accumulated mass of our experiences, freely available to everyone, provides resources, and the opportunity to use them, to each generation. The improvement of the lot of mankind is directly related to the availability of the book to all who seek its treasures." - *A Few Thoughts on Books*, written by Dudley A. Weiss, former LBI Executive Director.

> "A book is the only thing which man has made that asks nothing from him, but only the opportunity to give."
> Dudley A. Weiss

Certified library binders are innovators and highly skilled craftsmen who have been dedicated to ensuring the highest standards in library binding for more than seventy years. Producing many books on time that are durable, flexible, and aesthetically appealing, certified library binders are also the original "one-off" demand binders and are branching out into areas such as on-demand printing and short run binding. Today's certified library binder is involved in more aspects of book production and preservation than ever before - from printing books, to prebinding them, to rebinding them, scanning books for digital storage and/or production, and book repair/conservation. In addition to handling books of all shapes and sizes, certified library binders – in accordance with the ANSI/NISO/ LBI Library Binding Standard Z39.78-2000 - work with newspapers, journals, maps, music, and rare books.

Now, more than ever, librarians are faced with a number of choices with regard to the care and maintenance of their collections. Certified library binders can lend their expertise and services in this regard. Their knowledge helps to guide librarians with decisions such as when and how to bind knowing there are a variety of factors to be considered. Ultimately, library binding is the most permanent and best, long-term preservation option.

Building on improvements in production and quality over the years, certified library binders are uniquely poised to also work with publishers and can print one or 1,000 books, according to specifications, quickly and accurately. Their experience with the care and handling of a variety of library materials, combined with rapid production technology, makes certified library binders a natural choice for the growing on-demand, hardcover book business.

In the *Library Binding Manual*, Maurice F. Tauber writes "The preservation of cultural and intellectual heritage in printed form is the collective responsibility of many individuals and groups. No one, in good conscience, in or out of the library, who is concerned with books, can avoid this duty. The responsibility for preservation is shared by publishers, suppliers, and manufacturers who create the book, the librarians who serve as custodians and interpreters of the printed record, the binders who bind or rebind specifically for library use, the library administrators who must allocate funds for binding, and especially, the community which uses the books." The role of the certified library binder in book production and preservation has expanded since these words were first written. Who better, then a certified library binder, to entrust with this noble endeavor?

LBI Library Binding Institute

Continued next page

ACME BOOKBINDING
100 Cambridge Street
PO Box 290699
Charlestown, MA 02129-0212
Contact: Paul Parisi
VOICE: 617-242-1100
FAX: 617-242-3764
EMAIL: info@acmebook.com
URL: www.acmebook.com

BOUND TO STAY BOUND BOOKS, INC.
1880 West Morton Road
Jacksonville, IL 62650-2697
Contact: Robert L. Sibert
VOICE: 217-245-5191
FAX: 217-245-0424
EMAIL: rsibert@btsb.com
URL: www.btsb.com

BRIDGEPORT NATIONAL BINDERY, INC.
PO Box 289
Agawam, MA 01001-0289
Contact: James M. Larsen
VOICE: 413-789-1981
WATS: 800-223-5083
FAX: 413-789-4007
EMAIL: info@bnbindery.com
URL: www.bnbindery.com

CAMPBELL-LOGAN BINDERY, INC.
212 2nd Street N.
Minneapolis, MN 55401-1423
Contact: Gregor R. Campbell
VOICE: 612-332-1313
WATS: 800-942-6224
FAX: 612-332-1316
EMAIL: greg@campbell-logan.com
URL: www.campbell-logan.com

DENVER BOOKBINDING COMPANY., INC.
2715 - 17th Street
Denver, CO 80211-3995
Contact: Richard Lundquist
VOICE: 303-455-5521
WATS: 800-727-4752
FAX: 303-455-2677
EMAIL: dbbc@denverbook.com
URL: www.denverbook.com

THE HF GROUP, LLC
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EMAIL: jayfairfield@thehfgroup.com
URL: www.thehfgroup.com

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1010 N. Sycamore Street
North Manchester, IN 46962
Contact: Jim Heckman
Contact: Scott A. Fultz
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FAX: 260-982-1130
EMAIL: jheckman@thehfgroup.com
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URL: www.thehfgroup.com

The HF Group - NC
6204 Corporate Park Drive
Brown Summit, NC 27214
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URL: www.thehfgroup.com

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URL: www.thehfgroup.com

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63 East Broad Street
Hatfield, PA 19440-2464
Contact: Lee Ogden, III
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URL: www.thehfgroup.com

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Contact: Keith S. Roberts
Contac: Eric M. Fairfield
VOICE: 804-732-8970
FAX: 804-732-7474
EMAIL: kroberts@thehfghoup.com
EMAIL: efairfield@thehfgroup.com
URL: www.thehfgroup.com

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121 Avery Street
Walla Walla, WA 99362-1669
Contact: Terry D. Hymas
VOICE: 509-529-4220
FAX: 509-529-6880
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thymas@thehfgroup.com
URL: www.thehfgroup.com

HOUCHEN BINDERY, LTD.
340 1st Street
Utica, NE 68456-6061
Contact: John Salistean
VOICE: 402-534-2261
WATS: 800-869-0420
FAX: 402-534-2761
EMAIL:
jcs@houchenbindery.com
URL: www.houchenbindery.com

KATER-CRAFTS BOOKBINDERS
4860 Gregg Road
Pico Rivera, CA 90660-2199
Contact: Judy Howard
VOICE: 562-692-0665
FAX: 562-692-7920
EMAIL: katercrafts@earthlink.net
URL: www.katercrafts.com

LEHMANN BOOKBINDING, LTD.
97 Ardelt Avenue
Kitchener, Ontario N2C 2E1
CANADA
Contact: William R. Lehmann
VOICE:519-570-4444
FAX: 519-570-4452
EMAIL: office@lehmannbookbinding.com
URL: www.lehmannbookbinding.com

MUTUAL LIBRARY BINDERY, INC.
PO Box 6026
Syracuse, NY 13217-6026
Contact: Otto E. Rausch
VOICE: 315-455-6638
FAX: Call to have fax turned on!
EMAIL: srausch27@aol.com

NATIONAL LIBRARY BINDERY COMPANY OF GEORGIA, INC.
PO Box 428
Roswell, GA 30077-0428
Contact: Jack W. Tolbert
VOICE: 770-442-5490
FAX: 770-442-0183
EMAIL: nlbga@mindspring.com

NATIONAL LIBRARY BINDERY COMPANY OF INDIANA, INC.
55 South State Avenue, Suite 100
Indianapolis, IN 46201-3876
Contact: Joseph A. Cox
VOICE: 317-636-5606
E-MAIL: jcox@nlbco.com
URL: http://www.nlbco.com

PERMA-BOUND BOOKS
617 East Vandalia Road
Jacksonville, IL 62650-3544
Contact: James Orr
VOICE: 217-243-5451
FAX: 217-243-7505
FAX WATS: 800-551-1169
EMAIL: jorr@perma-bound.com
URL: www.perma-bound.com

RIDLEY'S BOOK BINDERY, INC.
2435 North Triphammer Road
Ithaca, NY 14850-1047
Contact: Donald J. Ridley
VOICE: 607-257-0212
FAX: 607-257-7977
EMAIL: sales@ridleysbookbindery.com
URL: www.ridleysbookbindery.com

SAN VAL, INC.
1230 Macklind Ave.
St. Louis, MO 63110
Contact: Neil Jaffe
VOICE: 314-644-6100
FAX: 314-647-0979
EMAIL: njaffe@booksource.com
URL: www.sanval.com

SOUTHERN LIBRARY BINDERY CO.
2952 Sidco Drive
Nashville, TN 37204-3777
Contact: Mike Walker
VOICE: 615-244-5045
WATS: 800-637-3509
FAX: 615-244-5046
EMAIL: slibrarybindery@bellsouth.net
URL: www.southernlibrarybindery.com

TUSCALOOSA LIBRARY BINDERY
PO Box 20323
Tuscaloosa, AL 35402-0323
Contact: James L. Rosenfeld
VOICE: 205-758-2204
WATS: 800-239-BIND
FAX: 205-759-1659
EMAIL: tusbindery@aol.com

UNIVERSAL BINDERY (MAN), LTD.
1415 Spruce Street
Winnipeg, Manitoba R3E 2V8
CANADA
Contact: Stuart Davis
VOICE: 204-783-3890
WATS: 800-665-1405
FAX: 204-783-4188
EMAIL: sdavis@universalbindery.com
URL: www.universalbindery.com

UNIVERSAL BINDERY (SASK), LTD.
516 Duchess Street
Saskatoon, Saskatchewan S7K 0R1
CANADA
Contact: Gib Davis
VOICE: 306-652-8313
WATS: 888-JOE-MENU
WATS: 888-563-6368
FAX: 306-244-2994
EMAIL: unibindery@aol.com
URL: www.joemenu.com

UTAH BOOKBINDING COMPANY
573 W. 4800 South
Murray, UT 84123
Contact: Mark Hancock
VOICE: 801-685-6151
WATS: 888-700-3871
FAX: 801-685-0182
EMAIL: mark@utahbookbinding.com
URL: www.utahbookbinding.com

WALLACEBURG BOOKBINDING & MFG. CO., LTD.
95 Arnold Street
Wallaceburg, Ontario N8A 3P3
CANADA
Contact: Gerrit Dykhouse
VOICE: 519-627-3552
WATS: 800-214-2463
FAX: 519-627-6922
EMAIL: gerrit@wbmbindery.com
URL: www.wbmbindery.com
USA Address
PO Box 533
Marine City, MI 48039-0733
EMAIL: helpdesk@wbmbindery.com

WERT BOOKBINDING, INC.
9975 Allentown Boulevard
Grantville, PA 17028-8709
Contact: Gary L. Wert
VOICE: 717-469-0626
WATS: 800-344-9378
FAX: 717-469-0629
EMAIL: gary@wertbookbinding.com
URL: www.wertbookbinding.com

Application for Institutional Membership

Application for Institutional Membership

We hereby apply for Institutional Membership in the Library Binding Institute.

Institution _____

Contact Person _____

Address _____

City _____

State _____

Zip _____

Telephone _____

Fax _____

Email _____

Today's Date _____

LBI Member Benefits

- A subscription to *Endpaper*, LBI's monthly member e-newsletter;
- A subscription to *Shelflife*, LBI's quarterly publication with information on the latest in library and hardcover book binding;
- A listing on LBI's website, www.lbibinders.org;
- The member rate for LBI publications and conferences; and
- Access to and networking with certified library binders, their suppliers, libraries, and other organizations which support library binding.

When the Library Binding Institute (LBI) was formed more than seventy years ago, adherence to the highest possible standard in library binding was one of the organization's founding principles. Upholding and advocating high standards continues to be an essential component of LBI's mission.

The importance of preserving the written word cannot be underestimated. Increasing awareness about the value of library binding is critical, as is educating library professionals on the long-term care, preservation, and maintenance of their book and serial collections. As the premier resource on library binding information and education, the Library Binding Institute exists to support librarians in this endeavor.

An institutional member shall be any non-commercial library binder, person, organization or institution whose interests, activities, or occupation are related to library binding. Institutional members are entitled to participate in all programs and services of the Library Binding Institute. Dues for this category of membership are $100 a year. Please complete the application and return with payment to The Library Binding Institute.

Remit with payment to:
The Library Binding Institute
4300 South U.S. Highway One
#203-296
Jupiter, FL 33477
To join by credit card, please contact Debra Nolan at 561-745-6821.