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The New Library Scene

LIBRARY BINDING INSTITUTE

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Superior Materials Used in Library Binding Make the Difference!

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To fully appreciate the unsurpassed strength and durability certified library bindings offer, one must not only look at the binding structures but also the specified materials in the new ANSI/NISO/LBI Standard that make all the difference! Repeated studies and tests performed by ALA, LBI and independent testing facilities confirmed that on the average library bindings are capable of enduring 100 or more circulations. Today's edition bound books, especially the majority which are adhesive bound, do not even make it to ten circulations. ALA's publication "Development of Performance Standards for Binding Used in Libraries, Phase II" describes the word *circulation* as follows: The loan of library materials for a fixed period of time - normally two, three or four weeks. A *withdrawal* is a short-term circulation of a book from the reserve book room of an academic library - normally for use within the library, but also for overnight or weekend use.

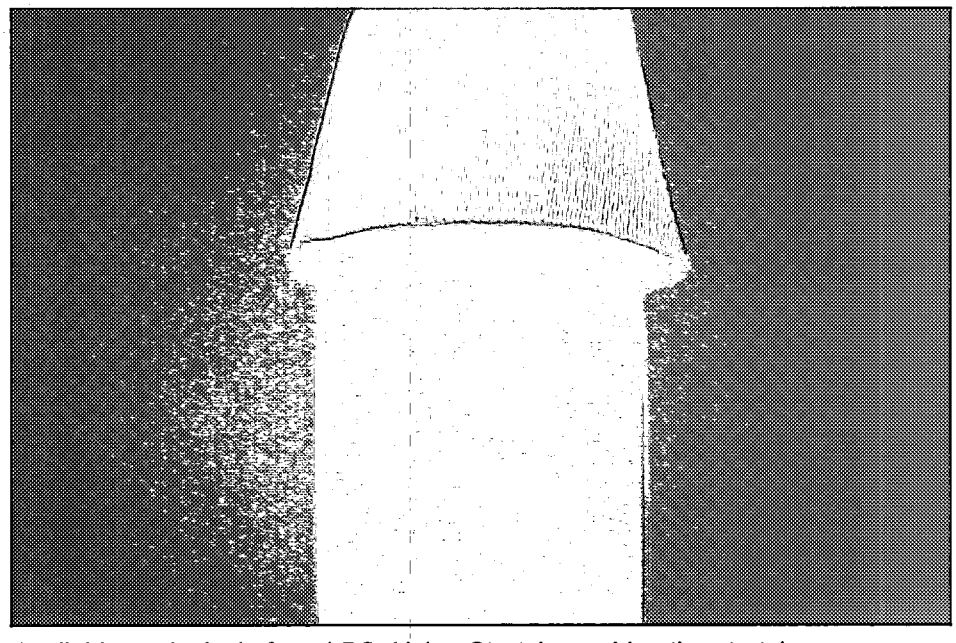
I believe you would agree that the original quality of today's edition bindings leave much to be desired. Let's go back and study a little history of why library binding started in the first place. In the early 1900s, it became apparent to librarians that the bindings on books subjected to repeated use at the library did not last. In 1905, the American Library Association established a Bookbinding Committee. They published some guidelines for quality bindings in 1915. The very first set of specifications was issued in 1923. At that time, publishers, librarians, book manufacturers and library binders all cooperated with each other and that marriage lasted about a decade.

But publishers wanted to save money on the bindings, so their book manufacturers had to listen to their clients and do what they specified. In an effort to stem the obvious outcome (poor bindings), ALA issued a library binding standard in 1934. Needless to say, the success of this effort was negligible. Librarians and library binders more or less found themselves on their own. Although library binders cooperated with the book manufacturers for over a decade, the two organizations split in 1935 and went their separate ways. The Book Manufacturers' Institute (BMI) concentrated on state textbook specifications, the Library Binding Institute (LBI) then concentrated, in cooperation with ALA, only on library bindings. Ever since, both organizations have done a remarkable job to refine their specifications. It should be noted, that the book manufacturers' textbook specifications are only for certain states; all other books produced do not meet any specifications or guidelines. Even though in 1992, I was part of an ALA-sponsored group that wrote a NISO Standard on "Durable Hardcover Binding for Books," most book manufacturers and publishing production managers are not even aware that such a document exists.

Even where standards, like the old LBI specifications existed, there was always room for improvement. The late Susan G. Swartzburg stated in her book "Preserving Library Materials" published in 1980 in the chapter on library binding, page 63: "Durability: as evidenced, there is still concern among librarians that many library bindings are not as permanent as they could be, which for our purpose may be defined as 'durable,' for many new binding materials have not met permanent/durable standards and further, the LBI standards are "minimum standards." Ms. Swartzburg then continues that ALA and LBI are presently working on the topic of permanence. In the same chapter, she stated that permanence for a particular volume for 300 to 500 years is not importance and concluded that what counts is that library bindings need to withstand 100+ circulations. This chapter also verified that edition bound books

will last only about 10 readings and then continued that "perfect binding" is in reality far from perfect, an item we have covered before in this publication. Ms. Swartzburg concluded "that it is cheaper to rebind a volume when it can still be rebound commercially than to replace it."

The ANSI/NISO/LBI Standard covers exactly what Ms. Swartzburg and a dedicated group of preservation librarians wanted library binding to be. It describes the technical specifications and materials for first time hardcover binding of serial publications and paperbound books for library use, and rebinding of hardcover books and serials intended for library use. As stated in the standards foreword, "the principle mission of the library binding industry is to extend the useful life of library books and periodicals." Strength of a particular binding and material used were the yard sticks. The standard concentrates on performance and durability. Needless to say, such new performance specifications were a challenge to our suppliers of bookbinding materials. The committee working on the creation of the standard conducted several rounds of testing to meet these performance benchmarks. At the same time, the opportunity arrived for additional improvements. The following are some brief descriptions and comments about the major materials used in library bindings. In future issues, we may devote an entire edition on cover materials, reinforcing techniques used, end paper constructions, etc.



Available exclusively from LBS, Nylon Stretch provides the stretch necessary for an excellent rounding and backing of the book block.

ENDPAPERS/REINFORCING MATERIALS

Permanence of papers used in library binding has always been a prerequisite. Those specifications just had to be updated and verified. Papers used must meet a certain weight and pass critical performance standards as specified by the paper industry (TAPPI). This includes bursting strength, folding endurance, tensile strength and tear resistance. These specifications are valid for papers used for stubbing, pockets, setting out inserts and most of all for end papers.

Recently, I had a technical dialog with a library binding purchasing agent. Although the standard does not specify it, the purchasing agent, a very conscientious and knowledgeable librarian, wondered if Tyvek could be used for pockets. The question can be answered with "Yes" as reconfirmed by one of the original members of the ANSI/NISO/LBI Standard team. Tyvek is a superior product in terms of performance as compared to paper as a pocket material. Tyvek has tremendous strength and resistance to tearing and is, we believe, pH neutral. Tyvek has been used by library binders as a pocket for some time with no negative ramifications. This is an important item as more and more books contain CDs. For such tasks, a strong non-migrating pocket is a requirement.

THREADS AND TAPES USED FOR SEWING

As there are different methods of sewing (oversewing, sewing through the fold and side sewing), each method had to be identified. In addition, there are many different qualities of threads - linen, cotton, nylon, cotton-covered polyester etc. as described in a previous New Library Scene (NLS) (i.e. June 1984,- available in book form, "Technically Speaking," which contains 51 articles written by me, from the LBI office). Therefore, each sewing method has its own thread specification in regard to the weight and strength.

Sewing tapes must be a certain width, have specific weaves and must meet a specified strength criteria.

WOVEN REINFORCING MATERIALS

Endpapers must be reinforced with a

woven material commonly known as "cambric."

Side-sewn books require a heavy duty cloth commonly known as "drill." Both fabrics must meet certain specifications such as tensile strength and tear resistance.

Backlining materials must also be woven and meet critical tensile strength and tear resistance specifications. In library binding, these relatively expensive, high quality materials must extend over and onto the end papers at least one inch. Over the years, we have seen much research and testing being done with back lining materials. If a book is to be rounded and backed, it must be stretchable in its width. It is the back lining which gives a book block the strength and durability that is expected from a library binding. For comparison, an edition bound book uses only a flimsy cheese cloth over the spine and onto the end papers.

COVER BOARDS

In the past, only one specific board qualified for library binding. Binders boards used to be, and to some degree still are, respected as the ones every other board is measured against in regard to quality and performance. Binders boards are made to full thickness in one piece on a wet-lap machine. These boards have high density and therefore were the only ones considered and accepted for library bindings. There are many other board structures now on the market. Some fourdrinier and laminated board structures have proven themselves with equal performance characteristics. Extensive testing over several years of these "others" board structures resulted into accepting some of them for library binding; that is, as long as they meet the general requirements as specified in the standard.

COVERING MATERIALS

Grade F Buckram is still a requirement for all heavier library bindings. This heavy duty fabric is recognized throughout the world as being the very best. I notice advertisements on a regular basis in a German bookbinding journal. The ads praise the American cloth for library binding as having no equal in regard to performance and durability.

For lighter weight library materials (under two pounds), the use of a heavy duty cloth is not always needed. For this reason, the new NISO/LBI specifications allow "in compliance with instructions from the customer" that a C-1 grade cloth may be used. Both Grade F and Grade C-1 cloths must meet stringent performance specifications in regard to abrasion resistance, breaking strength, colorfastness, grease resistance, tear strength, odor and water resistance.

An on-going debate among library binders and librarians revolves around whether polyester laminated papers over boards show the same performance characteristics as a C-1 Grade cloth cover and whether this is acceptable within the new standard. The new standard does allow for exceptions as long as they comply with the specifications. In any case, it would involve only light weight volumes and may only be used with the customers' approval. Books over two pounds still must be bound into the classic and durable Grade F Buckram covers. More on that topic in the last segment of this article.

ADHESIVES

With the exception of double fanning, the new standard cannot specify which adhesive is best. Only an emulsion copolymer, internally plasticized polyvinyl acetate adhesive (PVA) can be used for double fanning, gluing the spine and for lining the spine.

All other adhesives used for various processes shall be capable of forming a permanent bond between the surfaces joined. The standard does specify that the adhesive force shall be such that the bonded materials cannot be separated without damaging them.

LETTERING FOIL

An identification on the spine or on the front of the cover is an important item. Remember those earlier bindings where the lettering oxidized and disappeared?

The lettering foils used for library binding must meet stringent specifications in this regard.

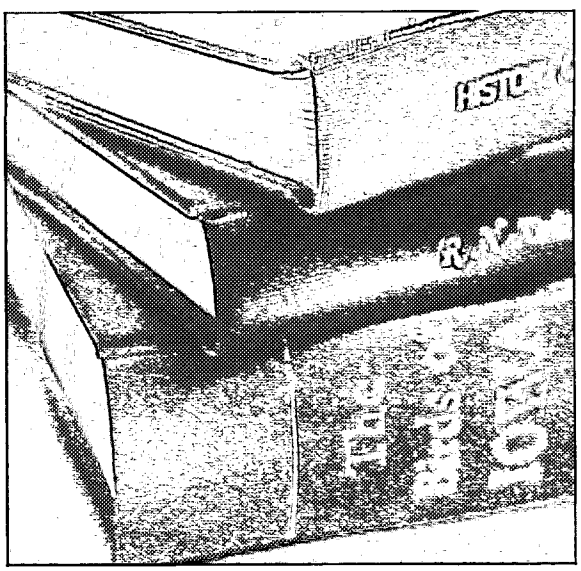
COMPLIANCES

As stated earlier, the last thing library binders and its dedicated suppliers want to do is to sit still and enjoy the accomplishments as outlined in the ANSI/NISO/LBI standard. The material specification allow for exceptions which make room for future research and testing. It clearly states: "Should a new material be developed that meets or exceeds the performance specifications cited in the Materials Specifications, that new material may be substituted if the procedures as outlined in Section 4 are followed."

In this Compliance chapter, relevant testing procedures are described. Performance and longevity of the new material shall be at least as great as that of the material it replaces.

In short, library binding has come a long way in the last 100 years. The materials used these days give us assurances for performance and durability. The late Susan Swartzburg would be proud if she could see what certified library binders and their suppliers have accomplished since she wrote her book on Preserving Library Materials. Her advice on the merits of library binding will be appreciated by all those who must maintain a valuable collection of printed materials.

Editor's Note: The complete NISO/LBI Library Binding Standard may be downloaded or purchased at http://www.lbibinders.org.



F-grade Buckram provides the ultimate protection and durability so that books can withstand heavy use.