

Dear All

We have completed 15 years.

I take this opportunity to thank you for all the support you have given us. I also express our gratitude to all of you who helped us make our **PRINT PACK 2005** show, a grand success. Special thanks to those who visited our stand.

In the past many of you have demanded that technical tips on book binding may be sent out in the form of a news letter. **Welbound Times** is an attempt to address this requirement. We intend to start of this as a 4 page newsletter and see where it takes us from there. The next issue is targeted for April-June.

We will have our in-house experts commenting, reporting and writing on subjects related to book binding. We will also try and get opinion of experts from outside. We would also request the readers to support us by sending in queries, suggestions and share your experience with us in order to make this more interactive. This will be an opportunity share news from the market, new product launches and installations.

You are receiving this because you are in our mailing list. We would appreciate to know from you whether you would like to receive this newsletter in future also.

Looking forward to your support to make this a grand success

K C Sanjeev

Managing Director, Welbound World Wide

PRINTPACK 2005

Printpack 2005 was the grandest show on Graphic Art Equipments ever hosted in India. The organizers IPAMA and ITPO did very well to conduct a successful show.



By CM of Mizoram having a look at Pickwel

We had displayed the complete range of Book Binding machines including folder, gatherers, various models of Perfect Binders, and trimmers. We also had displayed a 4 Knife Trimmer for finishing double up books. This is the first type of such machine ever displayed in India; Welbound kept up its reputation of bringing in a "first-ever" again.

A Web Offset Printing Machine "Printwel" also was launched, announcing the company's "progression" from post press

to printing. WB 2000, India's largest selling multi clamp perfect binder was demonstrated with 2 variants (a) Hot Melt and (b) Cold Glue. TRIDENT three knife trimmer also attracted a lot of attention this year; the market has started distinguishing between the TKT and a guillotine.

Exercise Note books were produced live at the stand, using the various book binding equipment. The underlying theme of this show was "Pinfree Books for children". Unlike the developed countries, the books for children in India are predominantly pinned / wire stitched. It is well known that threads are very safe and the binding can be made stronger by cover pasting the book blocks on a machine. The books produced at the stand were carrying this message.



Team Welbound at Printpack stand

PLANNING A "PERFECT" BINDING JOB

P. Sajith

(This is the first part of a series of articles on this subject)

We have often encountered problems at the binding stage, because the production of book wasn't planned well. By the time it comes to a binding machine, it is too late and little can be done to control the damage.

In any process of manufacturing, the end product determines the overall process. That way, printing should begin with "finishing". The perfect binding can be "perfect" only if proper planning is done from the very beginning. So before the work starts at the prepress, it should be clear how the book is going to look like.

The variables involved in book binding are cover and text paper (whether coated or uncoated, grain direction etc), ink, fly sheets (Single leaves), adhesive used, post production packaging etc. Many a cases most of these are predetermined and bindery has no say in this. Preproduction samples or Dummy would solve a lot of issues; but in many cases the print buyer has no time for such things. A Dummy would help one give attention to spine printing, borders and milling (Back cutting) margins.

More and more publishers, printers and book binders are becoming aware of these issues thanks to failures in the past. I thought, listing a few of these Do's and Don'ts would help.

In the first part, we will discuss the paper stock and cover planning.

Paper:

Perfect Binding or Un-sewn Binding as its popularly known in the west, is limited by the fact that bonding between the sheets/signatures and cover is superficial. The Hot Melt Adhesive does not penetrate the paper and the adhesive strength is derived out of surface to surface bonding. This means that the more the surface area the better the bonding. The more the paper fiber exposed (by Milling), the better the bond strength. One should take extra care while binding coated stock (Art Paper). High GSM (above 130-140) coated paper is best avoided. (Or such books should be thread sewn and then cover pasted). Special type adhesives are available for binding coated paper; advance information on the paper stock should be given to the Bindery so that the adhesive would be kept ready. The Milling Cutter (Roughening Device) and the notching tools of the Perfect Binder should be sharp enough.

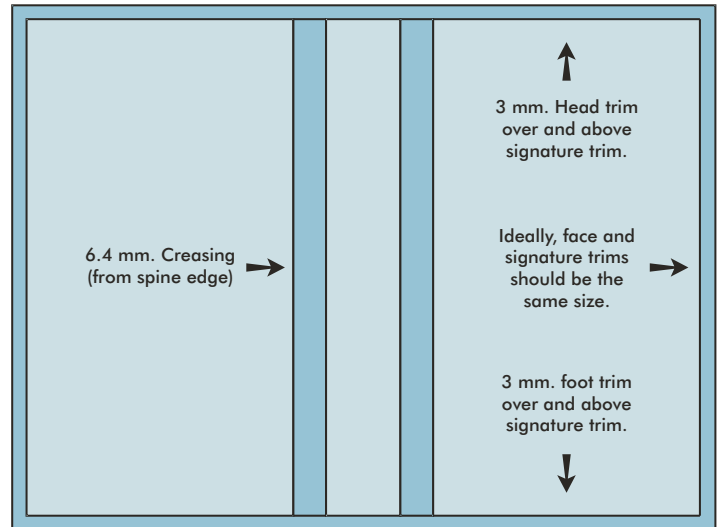
Grain direction:

Ideally the text and cover paper should have long grain (i.e., the grain direction of the paper should be parallel to the Book spine). In many cases the printer-binder has no control on this, but it would help in educating the publisher or paper supplier on this issue. There are simple tests to know the grain direction or you can ask your supplier to mark the same on the first sheet / ream cover. In the case of covers, if the grain direction is wrong, they crack easily near the spine edges. Even if we use a flexible HMA the covers will not permit flexibility in opening. As for the inside pages, the wrong grain direction would mean poor page pull strength and short shelf life. As the results of wrong grain direction can spell disaster, it is very important that we make enough noise about it.

Cover Planning:

In many situations the covers get printed at one place, the text at another and the binding at a third place. Unless there is good co-ordination between these processes, there could be chaos. If care is taken at the layout stage itself, most of the problems can be avoided.

Given below is a figure of a cover (layout) .



Please follow these guidelines:

1. Keep the cover grain direction parallel to the spine (as discussed earlier)
2. Crease your covers (A Few binders have on line creasing facility; otherwise create the marks using a die cutter.)
3. Ink, Varnish, UV Coating, or Lamination (if any) on the inside cover should not enter the "side and spine gluing" area.
4. That means "No Printing" in this area (This is also true for the inside signatures which get exposed to the hot melt).
5. Do not use thick covers for a thin book
6. The width of cover should be more than the signature spine length. (At least by 3 mm on both sides). If they are not, you will require a Adhesive Head and Tail End Cut off system on your Perfect Binder (particularly where covers are auto fed)

Binding books with fold out or gate fold covers need special planning.

This and more tips on the planning , on our next issue.



Book Binding - Trouble Shooting

M . Suresh

We will discuss a few real life instances of binding issues. Our readers also can send in reports on such issues so that the same could be analyzed and discussed.

Any failure of binding is normally attributed to either book binding machine or the adhesive. But the truth is not always so. One classic example is discussed below:

A Commercial Printer used a Multi Clamp Perfect Binder to run a job of School Diaries. The printer took the advice of the Adhesive supplier and ordered for the Hot Melt suitable for the job. The Cover used was Art Card. As the book block was thread sewn there was no necessity for using an Art Paper Grade Adhesive. The only advise given to the Printer was to leave the spine area and the part up to the creases, of the inside cover, blank.

A few advance copies were made and they where found ok. The client wanted delivery of 1000 books immediately and the rest, around 2000 books later.

The Printer gets a call from his client, a month after the second lot was delivered.

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The covers had come off most of the books. This was mainly on the second lot of books; the books from the first lot were found intact. The hot melt had become pulpy. There were definitely some chemical reactions which lead to failure. This needed thorough investigation.

The first and second lot were printed and bound in identical conditions, as per the printer. The "spine-side glue" areas of the (inside) cover had no printing.

The chemical reaction could have happened (definitely) due to Solvent attack. The Solvent comes from the Printing Ink used in printing the cover or the inside pages. But then, why didn't it fail at the first instance??

The variation in process between the 2 lots were looked at. The only difference turned out to be that in the 2nd case, the books were shrink wrapped.

Now things became clearer. The solvents in the first lot had evaporated/escaped before they were bound using hot melt. In

the second case the binding would have been done without giving much time for solvent evaporation (which turned out to be the case). The sheets were folded, sewn and bound, immediately after printing. To add to this, the shrink wrapping operation, at higher temperatures, helped solvent evaporation in an entrapped situation. Inside the plastic trap, the solvent went on attacking the hot melt.

We have many things to learn from this example. They are:

1. Avoid printing at the Gluing area of a book, be on (inside) the cover or on the signatures.
2. In cases where such operations cannot be avoided, give a day or two for solvent escape (May be the ink supplier can suggest more accurate time frames) before binding.
3. Avoid laminating the inside of the cover.
4. Be careful about these aspects while shrink wrapping the book.



NOTES ON PRINT PACK 05

WELBOUND 720 S

WB Green 720 S had a successful launch at Print Pack 05. This is a single clamp machine with all the necessary features required for quality book binding. Like its predecessor WB Green, this supports Automatic Clamping, Strip Milling and 3 Roller Gluing.

720 S, along with 750C belong to the Generation 7 Series binders from Welbound which conform to the 7 cardinal requirements of Perfect Binding. (1) Auto Clamping (2) Strip Milling (3) Brushing (4) 3 Roller Spine Gluing (5) Separate Side gluing (6) Nipping with duration controls and (7) Vertical Stack delivery.

The same model was displayed at the stands of XEROX too.

The first 720 S (prior to Print Pack 2005) was supplied to JAK Printers Mumbai, a leading quality printer in the country. Jak has won many Asian awards in the past for their outstanding work in Calendars.

Nutech Photo Lithographers, a well known printing house based at Delhi, picked up the WB green 720 S displayed at the stands of Welbound. Nutech is known as a complete print solution provider and counts On Demand Print as one of their USP. They have the complete prepress systems including a recently acquired CTP. Nutech boasts of an array of sheet fed and Heat Set web offset machines and many post print equipment hand picked and imported by Mr. Ravi Shorff, Director Nutech. He is "hands on" when it comes to the quality requirements of his buyers. He has picked his machines from the International market so as to suit his specific requirements. He has Sulby and MM Panda multi clamp binders at his Noida unit. The first Welbound (Cream) single

clamp was bought couple of years back and since then he has not looked elsewhere for perfect binders.

Pace Printers New Mumbai and Jasmine Art Mumbai are few of other "known names" to have placed orders for 720.



Mr Bipin Gala, President - Navneet Publication India Ltd at the Welbound Stand. Also seen are Sanjeev, Mr Bhiwankar and Sajith

The publishers demand the same quality from a single clamp binder as that is produced by a top of the line perfect binder. The printing houses who have invested in high speed binders would need a 720 S for advance copies, short run jobs and repairs.

For the book binder, who has little control on the quality of covers (in terms of the cover trimming, lamination etc), 720S is the ideal choice.

PRINTWEL - Narrow Width Book Printing Webs

Printwel is the first step in Welbound's foray into printing machines. The need for a book printing web has been there for a long time and Printwel plans to address this market.

The product is available both in Blanket-to-blanket and Unit to Unit (3 Cylinder Principle) "avatars". The machine is offered with various options in output like folded signatures or open sheet formats. Add on features like 'on line printing of Numbers, security printing' are also available. The machine is unitized in construction and hence addition of a specific feature at a later date is possible.

The machine will handle paper reel up to a maximum width of 62cms and shall have a fixed cut-off at 43cms or 44cms or to suit special customer requirement. The machine produces folded signatures in A4/A5 size or alternatively deliver the printed product as open sheets. The folder used is "Pin less" type and most suitable for book work.



Visitors discussing to the Welbound Book Stand

New Installations

WB 2000 6 Clamp binder broke the past records in the Oct-Dec quarter of 2004. 25 machines were installed at various part of the country during these 3 months.

A prominent few are:

- 1.Navneet Publications India Ltd** , Dantali Plant, Ahmedabad- One of the leading Educational Publishers and Stationary manufacturers in the country. They have a state of the art plant for book production in Dantali, Near Ahmedabad. WB 2000 is the latest equipment to be added to their excellent post printing facility which boasts of machines like Kolbus Perfect Binder.
- 2.MBD Books** , Gagred, HP - MBD books is another leading educational publisher head quartered in Jalandhar. A WB2000 was shipped to their book printing plant in Gagred in the month of November.
- 3.Shivlal Agrawal & Co** , Agra - has created a record of sorts by ordering the 7th machine from the Welbound Family. W2000, second of its kind, was installed in the month of October 2004
- 4.Paras Offset**, Naraina , New Delhi - A leading quality printer of the capital
- 5.Upkar Prakashan**, Agra - Publisher of "Pratiyogita Darpan", a magazine for competitive exams.

6.Repro India Ltd - the second WB2000 procured by them this year. Repro is a leading Printing house, based in Navi Mumbai.

7.Satyam Books - The second WB2000 procured by Satyam, one of the leading stationery manufacturers from the west.

8.Yuvraj Printers, Ahmedabad - The group concern of Chirag Offset, one of the leading quality printers in Ahmedabad. They have installed WB2000 in their new state of the art book printing unit in Changodar.

There are others like Pushp Print New Delhi, Mudra Bandhni Pune, Abi Print Mumbai etc who are significant players on their niche segment in respective locations. Post Print Pack 05, the sales have only climbed further and it looks like another record in the making (or breaking!)



Welbound 2000 at Printpack

Technology Updates:

Cover Pasting Exercise Note Books using Welbound 2000 C



WELBOUND 2000 C - 6 clamp binder is ideally suitable for cover pasting thread sewn exercise note books. As we understand, thread sewn books cover pasted using machines are the best form of children's exercise note books.

Pinfree Books are safe and strong.

A variant of Welbound 2000 was demonstrated running a water based adhesive (Bindflex). The side gluing in this case is a Hot Melt (Pressure sensitive) Adhesive. Unlike the regular model, the side gluing is done first and then the spine is coated with the cold glue.

The Advantage of the water based adhesives are

- (1) Enhanced durability
- (2) Consistency in multi climatic conditions and
- (3) Increased flexibility.

The earlier attempts by stationery manufacturers to use water based adhesive for (machine) cover pasting the note books were not very successful, because it was very difficult to handle the books with the "wet" glue. (The covers could shift from the spine).

This problem has been solved by the process (Patent Applied for) of **side gluing the covers first using a hot melt adhesive and then spine gluing the same by water based adhesive**. The side glue (as it dries fast) makes the cover instantly stick to the book block, while giving time for the cold glue to dry.

In the normal sequence of perfect binding the adhesive is applied first on the spine and then the book moves along for side gluing. If we run water based adhesive in these machines, the wet glue will fall into the side glue tank mixing two types of adhesives. Hence the WB2000 C has a system of first side gluing and then spine gluing the book.

QUADRA TRIMMER

Exercise Note book manufacturers usually bind books in 2 ups. In order to finish this traditionally guillotines are used. The productivity of paper cutting machines in such an application is very low. Quadra trimmer takes care of this by trimming the three sides of the book block in 2 stages and then splitting them into two.

It can also be used in the case of the double up text books.

Specification

Length of book	:440 mm (max) :200 mm (min)
Width of book	:300 mm (max) :150 mm (min)
Thickness of book	:20 mm (max)
Cycle speed	:3000

Electrical

Supply	:415V, 3phase
Power	:3 hp



Published by K.C. Sanjeev & printed at Malti Arts Pvt. Ltd., Mumbai • Editor: Sajith