



## INSTALLATION OF NEW EQUIPMENT

In order to conduct research that may be useful to fiber producers and textile manufacturers, the International Center is constantly striving to update its laboratories with the latest equipment. Within the last few months, we have installed a number of new machines and state-of-the-art fiber testing instruments. In this issue of *Textile Topics* we would like to review these installations and our plans for utilizing them in the future.

### Rieter Opening and Carding Equipment

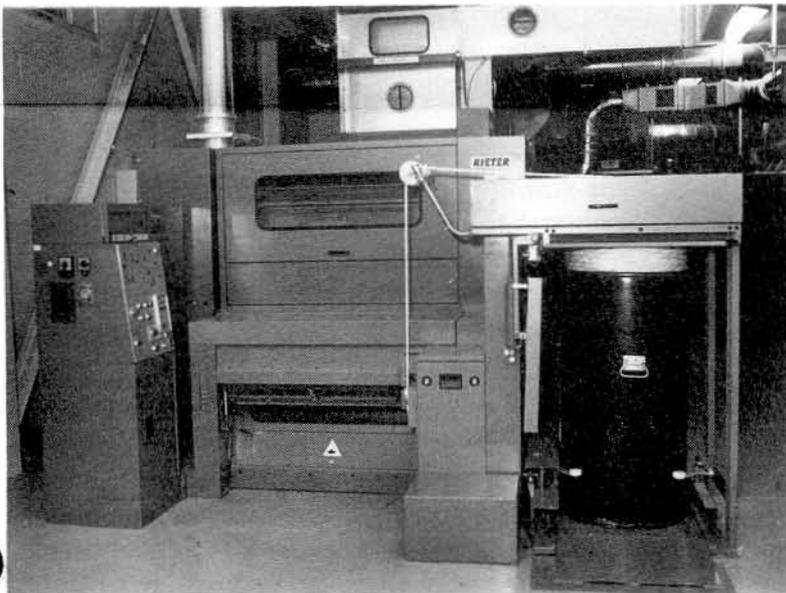
The opening and cleaning machines we have used for many years have been adequate only for basic studies and have not provided the flexibility required for detailed investigations of various qualities of cotton. Therefore, we recently installed the latest equipment offered by the Rieter Corporation of Winterthur, Switzerland and Spartanburg, South Carolina. Included are a Monocylinder Cleaner, two ERM Cleaners, one Metal Extractor, an Aerofeed-U Chute and a Rieter C-4 Card. We are very pleased to have these new machines, as preliminary testing

has shown they provide excellent flexibility and performance.

After a normal run-in period, we are using this equipment in an extensive program to evaluate ginning procedures affecting cotton quality along with the optimum cleaning arrangement at textile manufacturing to produce high quality yarns and fabrics. Many of our readers are aware that gins are often accused of over-heating and over-cleaning cotton in order to get a high grade for the farmer. Whether or not this is true, most anyone who has studied this in even a cursory manner believes that over-working cotton can break fibers and reduce length uniformity. This seems more likely if the cotton is subjected to excessive heat during the ginning process.

The study we have begun is designed to establish optimum cleaning procedures at the gin and in textile manufacturing. This will involve 32 bales of one variety that have been acquired from a local producer. Because of the extent of this research, we are especially pleased to have the cooperation of the USDA Ginning Research Laboratory located here in Lubbock. The proximity of the farm, the Ginning Lab and the Center will simplify problems often encountered in carrying cotton from the farm to the gin to textile manufacturing, monitoring each arrangement at ginning, and making sure all cleaning and carding details are accurate during processing.

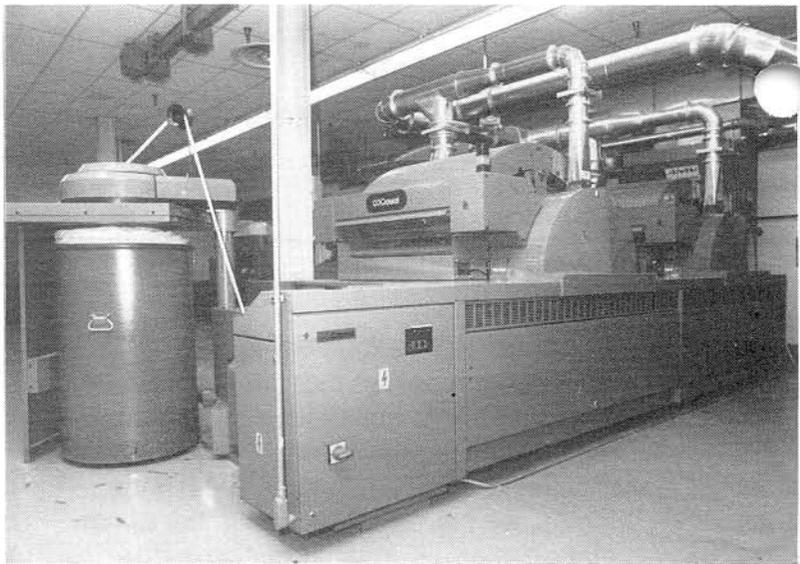
Inasmuch as a considerable amount of cotton is involved and numerous cleaning procedures are to be examined, the results of this program will not be available for several months. We feel the recently installed machinery can be utilized to give useful information to the cotton producing and textile industries. A report will be issued upon completion of this study.



The Rieter C-4 Card gives additional capability for our many research programs

### New Crosrol Mark 4 Tandem Card

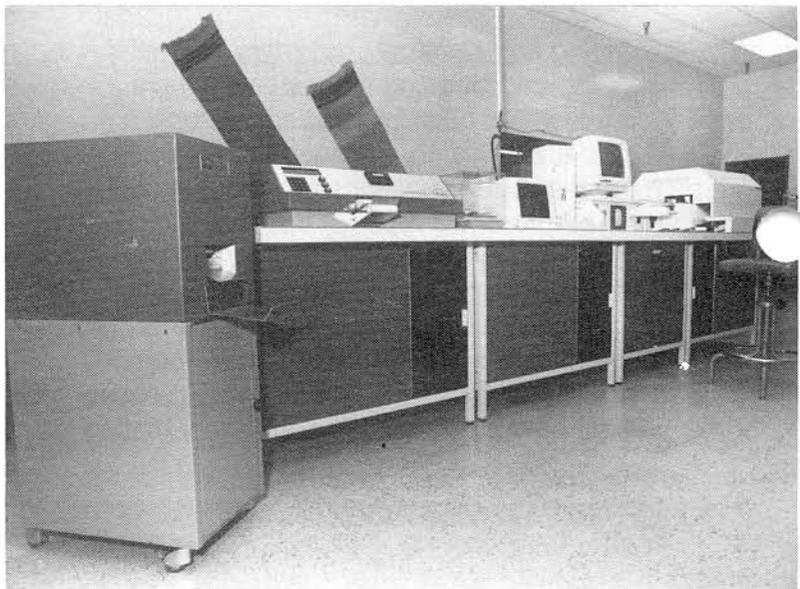
At almost the same time the Rieter Corporation was installing their equipment, the Crosrol Company of Greenville, South Carolina was placing a new Mark 4 Tandem Card in our laboratory. Our readers may remember that we conducted a study on carding some months ago that compared the quality and cleanliness of cotton processed through a single card, a Mark 1 Tandem Card, and a Mark 4 Tandem Card. That program seems to have created considerable interest. Current plans are to include the Mark 4 in future studies of the cleaning ability of the newer-type cards.



The Crosrol Mark 4 Tandem Card (above) has been valuable in our research on cotton cleaning

### New HVI and FMT Instruments

Within the past two months we have installed and put into operation a new Motion Control HVI 4000 Fiber Information System and the latest Spinlab HVI 900 System. In addition, we have been fortunate to receive the cooperation of Shirley Developments Limited of Stockport, England to integrate FMT 3 Fineness/Maturity Testers with both of these high volume instrument systems. This arrangement will provide a means of obtaining fineness in millitex and percent maturity on all cotton samples along with the already established HVI measurements. We would like to express our appreciation to Spinlab, Inc., Shirley Developments Limited, and Motion Control, Inc., for their cooperation in placing these instruments in our laboratory.



Shown above is the Shirley Developments FMT 3 (at left in photo) integrated with the Motion Control HVI 4000 Fiber Information System



The Shirley FMT 3 has also been integrated with the Spinlab 900 HVI System, as seen in the photo at left

## **DYEING NEPS AND IMMATURE COTTON FIBERS**

In the September 1988 issue of *Textile Topics* we carried an article on the development of a procedure for dyeing neps. This received a good bit of attention, and since that time we have worked with a number of textile manufacturers to determine whether the procedure would fit various operations. In some cases where a company uses continuous dyeing, our procedure may not be applicable. It cannot be applied by the exhaust method. An extra operation of padding and drying is needed prior to dyeing. However, some textile companies have found that our nep dyeing technique is useful, and apparently this is being used at some locations.

We have had a number of inquiries about the possibility of using this procedure to dye yarn prior to knitting, and we have been researching that possibility. At this point, however, it does not appear to be practical.

Because of the publicity coming from this development, Dr. R. D. Mehta of our staff was invited to present a paper at the Symposium on Coloration of Fibrous Materials at the national meeting of the American Chemical Society held in Miami Beach, Florida from September 10-15, 1989. Copies of Dr. Mehta's presentation are available here at the International Center and we will be pleased to send one to anyone requesting it. We have found this investigation to hold considerable potential, and we are continuing with the hope of developing a more applicable procedure for all textile companies.

Dr. Mehta has been assisted in this research by Richard N. Combs, head of our Dyeing and Finishing Department, and P. Ali Salame, a technician in that department. This research has been sponsored by the Texas Food and Fiber Commission. We are grateful to that agency for its support.

## **SPECIAL CONFERENCE FOR CHEMBRED**

An intensive cotton training program was conducted for Chembred, Inc., a subsidiary of American Cyanamid Company, on September 7 and 8, 1989. Instruction offered by the staff of the International Center included the development of the cotton fiber, problems with sugar and foreign matter at textile processing, instrument testing of cotton, and manual versus instrument classing. Forty-seven Chembred representatives, involved in agricultural chemical sales and application, attended the conference. Mr. Wendell Wilbanks, head of the USDA Cotton Classing Office in Lubbock, presented a detailed description of classing and complemented his remarks with a videotape showing the use of HVI systems in the Lubbock Office.

We were pleased that we could offer this program to Chembred. We view this as a means of bringing the agricultural and manufacturing sectors of the cotton industry closer together.

## **TEXAS INTERNATIONAL COTTON SCHOOL**

We have mentioned in several issues of *Topics* that plans have been developed to conduct the first Texas International Cotton School during October. This will begin on October 9, 1989 and conclude on October 27. A second school will begin on January 15, 1990 and continue through February 2.

We have learned that 27 individuals from eleven countries have registered for the October school. They will come from a variety of backgrounds, including manufacturing, research and development, raw material purchasing, and management. The Lubbock Cotton Exchange is sponsoring this program and members of that organization are pleased to have such a large number registered for the first school. We understand a maximum enrollment of 30 has been established, and it appears the October class has nearly reached that level. We have been informed that eleven persons have already registered for the January session. We will give more details in future issues of *Textile Topics*.

## **MORE ABOUT TEXCELLANA**

Last month we carried an article in *Topics* expressing our desire to have some textile company produce commercially the cotton/wool blend fabric called TEXCELLANA. We mentioned there seems to be considerable interest in and demand for the fabric, but no one is producing it on a large scale.

It may be of interest to our readers to know that several companies have contacted us to obtain technical information about this fabric. We were pleased that some well-known U.S. companies expressed interest, and we have also had inquiries from companies in other countries. We truly hope that someone will begin producing TEXCELLANA in large quantities, for the requests for the fabric are far more than we can supply from our research and development center.

Perhaps we should remind our readers that the word TEXCELLANA came from blending Texas cotton and Texas wool. The first syllable stands for Texas, of course, while the "cel" represents cotton (a cellulosic fiber), and "lana" is the Spanish word for wool. Several have asked about the source of the name, and we think this brief explanation may be in order.

## THANKS FOR YOUR HELP

Also in last month's *Topics* we requested the help of our readers in up-dating our mailing list. It is virtually impossible to keep such a list 100 percent accurate, but we do like to keep ours in the best possible order.

In response to our request, we received letters from many of you stating that certain addresses should be changed, and names should be added to the list, or dropped from it. We appreciate your assistance, and we encourage you to keep us informed about changes in addresses and personnel.

## VISITORS

September visitors to the International Center included Roger L. Bessey, Southwest Research Institute, San Antonio, TX; Rip Johnston, Lindale Manufacturing, Inc., Lindale, GA; Gary N. Mock, North Carolina State University, Raleigh, NC; Barbara Shaeffer, Motion Control Inc., Dallas, TX; Randy Goldsmith, Texas Agricultural Experiment Station, College Station, TX; Rick Osburn, Levelland, TX; and John Arlett, Clark Cotton, Johannesburg, South Africa.

Groups coming to the Center (in addition to those attending the Chembred conference) included eighteen representatives of Northrup King Company, from various parts of the U.S.; eighty members of the Tom Green County (TX) Farm Bureau; seventeen representatives of Lubrizol Company, with headquarters in Wickliffe, OH; fifteen students from South Plains College, Levelland, TX; and nine students from a Lubbock junior high school.