



MORE NEW EQUIPMENT

In last month's *Textile Topics* we reviewed part of the new equipment that has recently been installed at the International Center. We mentioned that new opening and cleaning machines and a C-4 Card from the Rieter Corporation had been placed in our laboratories, but we did not have space to tell of other additions. We would like to use this issue of *Topics* to continue our review of new equipment intended to give us the best possible arrangement for conducting research on cotton and other fibers.

At the same time the Rieter equipment was being installed, we connected all opening, cleaning and carding machines to an Abington Air Filtration System. This system was chosen because of its performance record in helping maintain a clean environment throughout processing. The Abington Automatic Filter Bag Collection System uses conveying duct lines supplied by Custom Metal Fabrications of Kings Mountain, North Carolina. The filter bags are installed under a manifold which is connected by ducts to production machinery. The bags are sized to fit the amount of air flow that carries waste, fiber and dust. During the four months the system has been in use, we have been well satisfied with its performance while processing a variety of cottons of different qualities.

This installation completes the renovation of our opening laboratory and greatly improves the working environment in the early stages of processing. We are grateful to Abington for cooperating with us and making this equipment available.

TEXAS INTERNATIONAL COTTON SCHOOL

As we have mentioned in previous issues of *Topics*, the first Texas International Cotton School was held at the International Textile Research Center during October. This started on October 9 and continued through the 27th. We are pleased to report that this seemed to be a complete success and that both the students and lecturers enthusiastically endorsed the subject matter presented and the overall concept of the school.

Twenty-seven students from eleven countries participated. Listed by country, name and company,

they were:

- from *Australia* Robert Baird, Queensland Cotton;
- from *Costa Rica* Daira Gomez Mora, CIA Textile Centroamericana SA;
- from *England* Mark English, A. Meredith Jones & Company;
- from *Greece* Nickolas Mitritsas, Volos Cotton Manufacturing Co.;
- from *Korea* Taek Kyun Lee and Jae Whan Park, Ilshin Spinning Company;
- from *Pakistan* Miss Rabeea Farhat, Miss Momin A. Razzak, Nasir Sultan Zuberi, Sohail Habib Ahmed, Syed Faiz Alam, Syed Tasneem Ali, Abdul Hafeez, Syed Khalid Hasan, Syed Tahawwur Hussain, Shahid Nadeem, and Mahmood Alam Siddiqui;
- from *Portugal* Jose Manuel Pinto Maia, Jose Machado de Almeida;
- from *Taiwan* Hong Wen Hsiung and Hong Cheng Jen, Yue-Fong Ind. Company;
- from *Thailand* Kamales Dabbaransi, Union Textile Ind. Corporation, and Niwat Pongsak, Suwan Spinning Company;
- from *Yugoslavia* Zoran Azmanov, Intex-Export-Skopje;
- from the *U.S.* Robin Baldwin, the Jernigan Group; Bob Hayes, Arkwright Mills; Robert Patrick Murchison, Garner Cotton Co.; and Don A. Smith, QuadSupport Group.

The second school will begin on January 15, 1990 and will continue through February 2. The Lubbock Cotton Exchange sponsors this program, and we have been told by that organization that 24 persons already have registered for the January school. We are pleased the International Center can be involved

in this by offering our laboratory facilities and the lecturers for the technology portion. We are enjoying this new relationship with members of the Lubbock Cotton Exchange and appreciate the opportunity to work with them.

THE GREAT WEST TEXAS CRICKET MATCH

At one point during the first Texas International Cotton School, there was a break in the classroom studies and the participants decided they would like to use the time for settling an argument about which country had the best cricket team, Pakistan or Australia. Eleven students in the class were from Pakistan, while only one was from Australia. Undaunted, however, the lone Australian challenged the Pakistanis to a cricket match and stated confidently that he could pick up players from other countries and easily show who was the best cricketer.

With that arrangement, the game began. The



A classroom scene from the first Texas International Cotton School

had the best cricket team, but the match definitely was great fun for everyone.

(Maybe we should teach the students to play baseball next time?)



"Batter Up"?, "Play Ball"?, or Whatever

participants seemed to know what they were doing, but the West Texas observers were not sure whether the game was really cricket. (For most West Texans, this was the first cricket match they had ever seen.)

Participants and observers seemed to have a great time, although there appeared to be some confusion in accurately keeping score. We were told that the match ended in a tie. That may well have been the case, for none of the local residents know enough about the game to know how to keep score. We were not sure which country -- Pakistan or Australia --

COTTON FIBER STRENGTH

The participants in the Texas International Cotton School and many other visitors from outside the United States have reminded us that a good part of the textile industry throughout the world still relies on the Pressley value to designate strength of the cotton fiber. Here in the US, the cotton producing and textile industries have gone almost completely to the grams per tex (g/tex) measurement that is obtained from the Stelometer and high volume instrument testing. The reason for shifting to this newer system is that it has been found more accurate and better correlates with yarn strength. It should also be noted that the United States Department of Agriculture no longer reports Pressley test results.

We recently had a visitor from Thailand who did not understand the grams/tex value and was far more interested in cottons that have high Pressley strength. We have had similar experiences with friends from all over the world, which has emphasized once again the continuing use of Pressley values. Therefore, we thought it would be worthwhile to go back in our records and repeat an article that was carried in *Textile Topics* in November 1980. We published that information in an attempt to explain why the US textile

industry was changing from Pressley to grams/tex.

Please note that the article quoted below was first printed in 1980 and refers to cotton being produced at that time.

"For many years, cotton fiber technologists and textile manufacturers have realized that certain varieties of cotton have greater strength than others. Most have known that fiber strength can be related to yarn and fabric strength. An early method of measuring cotton fiber strength, still used to a great extent, was by use of the balance-type Pressley Strength Tester developed by E. H. Pressley of the University of Arizona and first described in the ASTM Bulletin 118, October 1942. Since that time, Pressley strength values have become familiar to cotton breeders, producers, merchants and textile manufacturers. It is such an accepted part of cotton fiber description that a newer instrument -- the Stelometer, measuring strength in different units -- is not fully understood.

"The Pressley Tester can measure the strength of cotton fiber at zero gauge or at 1/8-inch gauge. (At zero gauge the clamps holding the fiber are placed flush together; at 1/8-inch gauge the clamps are spaced 1/8 inch apart.) Zero gauge Pressley measurements are reported in terms of thousands of pounds per square inch (Mpsi). At 1/8-inch gauge the units are grams per tex (g/tex). The Stelometer, developed by Dr. Kenneth Hertel at the University of Tennessee, utilizes Pressley clamps at 1/8-inch gauge and employs a pendulum-lever arrangement for obtaining strength values."

Note: Today's high volume instrument (HVI) systems utilize the 1/8-inch gauge and give strength values in g/tex.

"Many textile technologists are aware that the 1/8-inch gauge setting produces a better correlation with yarn strength than does the zero gauge. For example, the USDA Cotton Fiber and Processing Test Results (AMS) for the 1979-80 crop gave a coefficient of correlation (r value) of 0.78 between 1/8-inch fiber strength and the count-strength-product of a 22/1 ring-spun yarn. The coefficient of correlation between the zero gauge fiber strength and a 22/1 ring-spun yarn was 0.61. In a "t" test, the odds are greater than 1,000 to one that the 1/8-inch gauge fiber strength value is better than the zero gauge measurement when predicting yarn strength from fiber strength.

"It is not possible to convert the results obtained by 1/8-inch gauge to zero gauge Pressley values with confidence. A regression equation available from data at the Textile Research Center gives a coefficient of determination of 0.46, which means that this equation for converting from one value to the other will give satisfactory results less than half the time. It

should not be assumed that strength values from zero gauge and those obtained from 1/8-inch gauge testing are interchangeable."

We hope this reprint will be useful to our readers. We have additional information that also was printed in *Topics* a number of years ago concerning attempts to convert from one fiber strength measuring system to another. If anyone is interested in that, we can reproduce it in a future issue.

VISITORS

On October 17, twenty-seven participants in the Cotton Orientation Tour sponsored by Cotton Council International, National Cotton Council and the USDA Foreign Agricultural Service visited the International Center. Included in the group were textile executives from Bangladesh, Belgium, Greece, Indonesia, Ireland, Japan, Korea, Malaysia, the Philippines, Spain, Switzerland, Taiwan, Thailand, and England. They were accompanied by Bill Brant, Brian Gogguin, Ted Horoschak and Pat Sheikh, USDA/FAS; Leslie Meyer and Scott O. Sanford, USDA/ERS; Minnie Tom Meyer, USDA/ASC; Vaughn Jordan and Buxton Midyette, Cotton Council International, Washington, DC; and Frank Waddle, Cotton Council International, Hong Kong.

Other October visitors included Don A. Schiffler, Jr. and John Nash, E. I. Du Pont de Nemours & Co. (Inc.), Kinston, SC; Frank S. Looney, Wilmington, DE; Sally Fox, Fox Fibers, Wasco, CA; Joe Nick Patoski, Texas Monthly, Fort Worth, TX; Roger Bolick, Allied Fibers, Hopewell, VA; Seburn Crocker, Kenny Messer and Charles G. Dewitt, Henkel Chemical Co., Charlotte, NC; Siegfried Prueckel, Schlafhorst Inc., Charlotte, NC; John Schmedes, A. Lassberg & Co., Austin, TX; Charles Denton, Fisher County Economic Development Council, Rotan, TX; Tracy Smith, USDA, Washington, DC; Albert A. Smith and Ken Lindemann, Utility Engineering Corp., Amarillo, TX; Patty and Walter Merchant, Ruidoso, NM; Brant Brooskby, Alamo, CA; Wade Brooksby, Littleton, CO; Jerry Bergthold, Plano, TX; Robert Donnelly, Taos Mountain Wool Works, Arroyo Hondo, NM; John E. Eckert, Wool Bureau, Woodbury, NY; and Percy Lee, International Wool Secretariat, Ilkley, England.

Groups, in addition to the Cotton Orientation Tour, included 42 members of the Lubbock Chamber of Commerce Women's Division; 70 Clothing & Textiles students from Texas Tech University's College of Home Economics; 35 Agricultural Economics students from TTU; and 70 elementary students from area schools.

HOLIDAY ANNOUNCEMENT

It seems each year at this time we find ourselves behind with issuing *Topics*. Actually, our fiber testing and processing research intensify with the cotton harvesting season, and this always seems to throw some of our activities off schedule.

Because this issue of *Textile Topics* will not reach recipients until mid-December, we would like to

announce our closing dates for the Christmas and New Year holidays. We will continue our normal operation through the afternoon of December 22, 1989, but we will then be closed until January 2, 1990.

If someone tries to contact us during our holiday period, we hope you will call again on January 2, or soon afterward.