



COTTON FIBER MATURITY As a result of the announcement made in last month's issue of *Textile Topics* about our plans to obtain and evaluate a new instrument for measuring cotton fiber maturity, we have had a number of inquiries asking for additional information. In view of this interest, we would like to report the current status of the program.

We met recently with representatives of Technicon Industrial Systems, a division of Technicon Instruments Corporation, and plan to install their maturity tester and accompanying computer at the Textile Research Center during November 1985. Already a number of projects have been suggested for inclusion in our evaluation, and it appears we will be busy making maturity measurements for some time to come. We are quite interested in determining the value of the Technicon instrument for accurately and rapidly making maturity measurements, and apparently our readers are, also. We will give additional information on our research and report testing results as these become available.

COTTON FIBER STRENGTH We occasionally receive inquiries about our method of reporting cotton fiber strength, and we believe it might be helpful to give some information on this. We realize that a good portion of the textile industry throughout the world still uses the Pressley zero-gauge measurement, while here in the United States we have almost completely changed to grams/tex. This is obtained by using a 1/8-inch gauge (3.2 mm) measurement on the Stelometer, Motion Control HVI System, and Spinlab High Volume Series. We have found grams/tex to be more accurate and to give a better correlation with yarn strength than the Pressley zero measurement. It may be of interest to our readers to know that the United States Department of Agriculture no longer includes the Pressley designation in its bulletin, "Summary of Cotton Fiber and Processing Results."

Although we have seen formulas that attempt a conversion from zero-gauge to grams/tex, we have never found any means of converting accurately from one measurement to the other. Therefore, we do not use a conversion method, and whenever we are asked about this we simply furnish the information given below. We have found this useful in our research and in dealing with textile manufacturers in the United States and other countries.

The inquiries we have had about this have come from several locations in Europe, South America and South Africa. We hope the information we are giving will be helpful.

COTTON FIBER STRENGTH

Designation	Grams/tex (1/8-Inch Gauge)	Pressley PSI (Zero-gauge)
Very Weak	Below 17	Below 71,000
Weak	18 - 21	72,000 - 79,000
Average	22 - 25	80,000 - 87,000
Strong	26 - 29	88,000 - 96,000
Very Strong	30 and Above	97,000 and Above

WHITIN ROBERTS DONATES CARD We are very pleased to announce that the Whitin Roberts Company of Charlotte, North Carolina recently donated a revolving-flat cotton card to the Textile Research Center. The machine will be used in conjunction with the cards already operating here and will be fed by our existing chute feed system. We anticipate the new card will make significant contributions to our research on the three natural fibers produced in Texas (cotton, wool and mohair) and a variety of man-made fibers. We feel this addition is most timely, for current plans are to move the Textile Research Center to a new and much larger building in 1986. When we are settled in our new facility we expect to increase the volume of our research, and the new card will be very useful in the expansion of our activities.

This donation was initiated by Mr. Joseph C. Hurteau, Senior Vice President of Whitin Roberts. His consideration of our needs is greatly appreciated.

TEXTUBE CORPORATION DONATES SUPPLIES Earlier this year when a new Schlafhorst AUTOCORO open-end spinning machine was installed at the Textile Research Center, we quickly realized that we would need a durable take-up cone in order to withstand frequent re-use that is necessary in our research. In most cases only partial packages of yarn are produced in our studies rather than full packages, and we use the same cones several times within a relatively short period.

We learned that the Textube Corporation of Greer, South Carolina produces the type of cone we needed. Upon discussing this matter with Mr. Hans Freytag, he offered to donate two boxes of cones to us. We found there were 833 in each box, and we were delighted to have a gift of almost 1700. Our experience with these cones has revealed that they are very durable and serve us remarkably well. We are grateful to Mr. Freytag and the Textube Corporation for making these available.

TRC STAFF ACTIVITIES Dr. R. D. Mehta has been on the staff of the Textile Research Center since September 1969. He has conducted research on various finishes for fabrics made of a variety of fiber blends, and has concentrated on the development of flame retardant finishes. As a result of his work, he was invited to participate in the 7th International Wool Textile Research Conference that was held in Tokyo, Japan, August 28 to September 3, 1985. He presented a paper on his findings from research conducted for the Natural Fibers & Food Protein Commission of Texas (NFFPC). The title of his presentation was "Shrinkproofing of Wool Using a Low Energy Cure Acrylic Polymer." In addition, Dr. Mehta served as chairman of a session on chemical processing that dealt with the practical and theoretical aspects for improving the quality of fabrics made from wool.

A synopsis of the paper presented by Dr. Mehta follows:

"A low energy cure acrylic polymer was applied to wool fabrics and its effect on shrinkage control in repeated home launderings was investigated. The finished wool fabrics had acceptable hand and exhibited $5 \pm 2\%$ area shrinkage after 50 washing and tumble drying (WTD) cycles at the knit setting or 25 WTD cycles at the normal setting in a (home) washer.

"The salient feature of this finish was that even though the finish was applied from an aqueous emulsion, the wool fabric did not require any pretreatment to facilitate polymer adhesion. Since the finish was cationic, the finished wool fabric could be union-dyed with acid and reactive dyes. The finish had no adverse effect on lightfastness or washfastness of wool dyed with acid, reactive and chrome dyes."

We have already mentioned that the research reported by Dr. Mehta was done for NFFPC. We would like to point out that a complete report of this was published in the Textile Research Center's Annual Progress Report to the Natural Fibers & Food Protein Commission of Texas, 1983-84, Vol. I. Anyone wishing to have a copy of Dr. Mehta's paper can write to him at the address shown on the back page of *Textile Topics*.

STUDENT ACTIVITIES: SCHOLARSHIPS AWARDED We are pleased to announce that a number of students studying Textile Technology in the Department of Textile Engineering have been awarded scholarships for the fall semester of 1985. These scholarships are in the amount of \$300 per semester, and are given by the Textile Research and Scholarship Foundation. This Foundation is supported by cotton producers, ranchers, marketing firms, bankers, and a number of leading business men in the Lubbock area.

Recipients of scholarships for the coming semester are Lori Alread Katt, Elizabeth McIntyre, Gena Ford, Julie Jennings, Cecilia Martinez, Susan McDaniel, Andrew Talbott and Tirso Pena. All are undergraduates except Pena who is completing his work for a master's degree in Textile Engineering.

It is interesting to note that most of the recipients are women, but we do not take this to mean that our girls are more intelligent or better qualified for scholarships than the boys. Several of the male students are on scholarship from other sources. It is the intent of the Textile Research and Scholarship Foundation to make awards to qualified and deserving students who are not receiving assistance from any other source.

CONGRESSMAN STENHOLM VISITS CENTER United States Representative Charles Stenholm of the 17th Congressional District of Texas visited the Textile Research Center on August 30. He toured the entire facility and inquired about the various research programs conducted here. His main interest was in the results of a TRC investigation on barky cotton which show that a small amount of bark does not appreciably impair spinning performance or yarn quality. His concern was that, due to established discounts in the classing structure, many Texas farmers may be receiving less money for their cotton than a small amount of bark justifies. It was pointed out to him, however, that heavy bark in cotton certainly does impair spinning performance, and some discount in the value of the fiber seems in order.

We are always honored to have Congressional members tour the Research Center. We were especially pleased to have Representative Stenholm visit with us, for our association with him began more than twenty years ago.

VISITORS Other visitors in August included Dave Hill, Agricultural Assistant to U. S. Senator Phil Gramm, Washington, DC; Jerry Harris, Mesa Gin, Lamesa, TX; Preston Sasser and Michele Woodruff, Cotton Incorporated, Raleigh, NC; Scott Gessner, John Bieser and Z. Jezic, Dow Chemical USA, Freeport, TX; Stewart Dyer, John D. Hollingsworth on Wheels, Greenville, SC; Diana Schexnagden, Bureau of Business Research, University of Texas, Austin, TX; H. Keith Hutson, Advanced Textiles, Inc., Seguin, TX, Merrill Q. Garvin, Western Electric Products, Norcross, GA; and Mark W. Lundgren, Rolling Plains Cotton Growers, Inc., Stamford, TX.

In addition, several groups toured the Center during August, including 60 members of the Alabama Farm Bureau Federation, 45 members of the Texas Farm Bureau, and 20 visitors from Senegal, who were attending a short course at the Center for International Studies at Texas Tech University.