



## International Committee on Cotton Testing Methods (ICCTM)

### Proceedings of the ICCTM Meeting in Bremen, March 21 - 22, 2006

Chairman            Prof. Dr.-Ing. Anton Schenek, Reutlingen University, Germany

Vice Chairman    Prof. Dr.-Ing. Thomas Schneider, Faserinstitut Bremen / FHTW Berlin, Germany

#### Preface

The **International Textile Manufacturers Federation (ITMF)** is an international association for the world's textile industries, dedicated to keeping its world-wide membership constantly informed through surveys, studies and publications and through the organisation of annual conferences, participating in the evolution of the industries basic raw materials and their application, through specialised committees, with the overall objective of creating growth and prosperity in all aspects of the industry.

The **International Committee on Cotton Testing Methods (ICCTM)** is a non-profit technical subcommittee of ITMF. At the 2006 Bremen meeting the functions of the Committee have been revised. The essential new definitions are as follows:

**“The main function of the Committee is to critically examine and discuss existing and new cotton testing methods and instrumentation and to provide guidelines and make recommendations to the ITMF in this regard. The Committee should also recommend research priorities and tasks to be undertaken, based upon the perceived needs of the international textile community.”**

The work of the Committee is organised and supported by its officers. These comprise the Committee Chairman and Vice Chairman, a Steering Committee, Coordinators of Task Forces and Sub-Committees and the ITMF Secretariat in Zürich, Switzerland.

The membership of the Committee consists of invited experts of cotton fibre testing, drawn from all sectors of the industry from cotton production, including harvesting, ginning and cotton trade, through cotton fibre and textile processing, including research institutions, machinery manufacturers as well as testing instrument manufacturers.

The Committee holds its general assembly every two years in Bremen in coincidence with the International Bremen Cotton Conferences in cooperation with the Bremen Cotton Exchange and the Bremen Fibre Institute (Faserinstitut Bremen e.V.).

***Appendix I: Revised New Statutes of the Committee***

## **1. Bremen Meeting 2006**

Members, invited guests and observers, in total 55 participants coming from 18 countries and several organisations, ICAC, CSITC, USDA, UNIDO, ACSA, Bremen Cotton Exchange, Gdynia Cotton Exchange, International Cotton Exchange (Liverpool), Tanzania Bureau of Standards, Cotton South Africa and Cotton Incorporated, USA met in Bremen March 21 to 22. The Director of ITMF, Dr. Christian Schindler, welcomed the participants hosted by the Bremen Cotton Exchange and the Bremen Fibre Institute in the Bremen Chamber of Commerce ("Haus Schütting"). The Director General of ITMF, Dr. Herwig Strolz, who was not able to participate in the Bremen Meeting, as he had recently an accident from which he is actually recovering, had sent his personal greetings to the Committee. After a welcome from the Director of the Bremen Cotton Exchange, Mr. Jan B. Wellmann, the Chairman, Prof. Dr. Anton Schenek opened the General Assembly.

## **2. Opening Plenary Meeting / General Assembly**

### ***Appendix II: List of Participants of the Bremen Meeting 2006***

#### **2.1 Welcome by the ITMF Director Dr. Christian Schindler**

Dr. Schindler introduced himself as new Director of ITMF Zürich and welcomed all Committee members, especially those who had a long journey to come to Bremen. He gave special thanks to the Bremen Fibre Institute and its Director, Prof. Dr. Axel Herrmann and to the Bremen Cotton Exchange, its President D. Trede, and the Director General, Jan B. Wellmann for preparing the ITMF Meeting in the traditional "Haus Schütting" of the Bremen Chamber of Commerce, where the meeting took place for the first time.

#### **2.1.1 Welcome by Mr. Wellmann, Director General of the Bremen Cotton Exchange**

Mr. Wellmann also welcomed all members and promised the continued support of the Committee which he called a Bremen institution and wished a successful meeting.

#### **2.2 Opening of the Meeting by the Chairman, Prof. Dr.-Ing. Anton Schenek**

The Chairman focussed in his introduction on the need for restructuring the Committee's organisation based on the results of a questionnaire, which was distributed to all Committee members in 2005 and based on discussions at the 2005 Chairmen Meeting in Zürich. A proposition for changes was presented by Dr. Thomas Schneider, the Vice Chairman. In addition, the American members of the Committee had prepared a written proposition for possible changes, which was sent to the Chairmen and was presented to the Committee in Bremen. Dr. Devron Thibodeaux of USDA presented and explained the US-proposals for a new structure of the Committee. This proposal was also supported by the National Cotton Council of America, which has been a member of the Committee from its beginning and has supported the Committee's work over the years.

### ***Appendix III: Results of the questionnaire***

#### **2.3 Approval of the Agenda**

The agenda was approved by the Committee.

## 2.4 Committee Membership

The list of membership was checked and adapted. Those members present in Bremen, who indicated interest in continued membership were included into the new membership list (additional second adaptation of the membership list after the meeting by questionnaire).

### *Appendix IV: New membership list 2006*

## 2.5 Report on the Working Group Chairmen Meeting Zürich 2005

Dr. Schenek reported briefly on the results of the Chairmen Meeting in Zürich. Since 1989 the Chairmen and the Director General of ITMF, Dr. Strolz, had organised a Chairmen meeting in the years between the Bremen Meetings of the Committee. The Meetings took place in Zürich (1989, 1991, 1993 and 1995), in New Orleans (1997), Orlando (1999), Anaheim (2001) and again in Zürich 2003 and 2005. The reports are included in the ITMF-Committee reports available as CD-ROM. Discussions concentrated on membership, sponsorship and financing, Working Group progress reports, ICAC-Expert panel on the Commercial Standardization of Instrument Testing of Cotton (CSITC), possible changes of Chairmanship and suggestions for a new structure of the Committee. Prof. Dr. Schenek presented a proposal of a new structure of the Committee, which had been prepared together with the Vice Chairman, Dr. Schneider. It was decided not to change the structure of the conference as it was in the past until the next Bremen Meeting 2006 and to present there the new propositions to the Committee members for discussion. The nomination and election of possible new Chairmen was scheduled for the Closing Plenary Session in Bremen 2006. The proposed scheme for evaluation of test methods and a scheduled HVI round trial with HVI instruments from Premier was presented by Dr. Hunter and discussed. Finally the 2006 meeting in Bremen was prepared.

### *Appendix V: Proceedings of the Zürich Meeting 2005*

## 2.6 Proceedings of the 2004 Bremen Meeting

At the Opening Plenary Meeting, the General Assembly of the Committee, the Proceedings 2004 were presented (CD-ROM available from the ITMF Secretariat Zurich, Switzerland), which was prepared by the former Rapporteur Allan S. Heap and the Vice Rapporteur Jill Stevens-Heap with support of ITMF and Cotton Inc., USA and the other sponsors of the Committee. The proceedings include the full reports of the Committees Meetings from 1998 through 2004 including all presentations, discussions, the Committee's background-information, HVI-guidelines and recommendations. Also included are all progress reports and summaries starting with the first constituting meeting of the International Committee on Cotton Testing Methods held in Bremen, January 29 and 30, 1980. The workload for preparation of the proceedings was huge and therefore the Committee expressed its thanks to the rapporteurs for their excellent work, which was done in spite of a severe heart illness and by-pass operation of Allan Heap. To honour all the work done for the Committee, the Chairman proposed to offer to Allan Heap the position of "**Honorary Life Member of the ICCTM**", which was accepted by the Committee unanimously.

## 2.7 New Structure of the Committee - Propositions and Discussion

The Chairman presented the results of the survey conducted prior to the meeting. The Vice Chairman, Dr. Schneider, presented the proposal for a new structure of the Committee discussed during the Zürich meeting in 2005.

Mr. Macdonald pointed out the difference between the ICCTM and the CSITC. The ICCTM should be seen as a scientific basis of cotton testing methods whereas the CSITC concentrates on the commercial usage of cotton testing instruments for cotton trading.

Mr. Kugler proposed that more Working Groups should be established, for example for elongation measurement.

The Chairman emphasised that the commercial usage of cotton testing instruments needs reliable results that are also reproducible.

Dr. Hunter suggested that the Working Group Chairmen should present their respective reports during the meeting of the HVI Working Group, which was accepted. The Chairman reminded, that the different Chairmen of the Working Groups have to prepare short reports which should also be presented to the auditorium of the International Bremen Cotton Conference 2006 on Friday.

Dr. Thibodeaux presented the US-proposal for a new structure of the Committee. He stated that more discussions and less presentations should take place during the meetings of the Committee. The members should decide (vote on) which issues are currently of interest. Additionally, the respective issues should be worked on for a limited time.

Dr. Hunter noticed that there are no major differences between the two concepts. The main objective of the ICCTM should be to address issues that are of relevance to the industry.

The Chairman proposed to give to the participants present in Bremen the possibility to discuss and re-think the propositions over night and to continue the further discussion on Wednesday morning after the sessions of the Working Groups. This proposal was accepted.

### **3. Reports on the Working Groups**

#### **3.1 Report on the Working Group "Fineness and Maturity"**

**Chairman**                      **Dr. Devron Thibodeaux, USDA-ARS Clemson, SC, USA**  
**Vice Chairman**              **Dr. Eric Hequet, International Textile Center, Lubbock, TX, USA**

The Chairman, Dr. Devron Thibodeaux of USDA (USA) gave a brief report on the status of the cotton research laboratory in New Orleans after hurricane "Katrina". The set of 104 cottons calibrated on maturity by Dr. Hequet are completed and maintained at the International Textile Center in Lubbock, Texas. Mr. Mike Watson of Cotton Inc. will consider any proposal as to how small quantities could be utilized to calibrate or standardize instruments for maturity measurement.

Dr. Stuart Gordon of CSIRO (Australia) gave a report on a survey to determine interest in fibre fineness and maturity measurements. This was conducted in association with the Faserinstitut Bremen (Bremen Fibre Institute) and Bremen round trials. He received 56 responses from 150 laboratories questioned. These included spinning mills, research institutes and merchants. Of those responding, about 20% use FMT and 20% AFIS. Most said they use only micronaire as a measure of fineness and maturity, but would prefer a more direct measurements. However they did not indicate they would be willing to pay for such additional information.

Dr. Gordon then reported on progress with the SIRO-Scan, an automated method to directly measure the distribution of maturity based on ASTM 1442 using polarized light microscopy. This is based on the transmission of interference colours by individual fibers dispersed on a microscope slide. With development of improved algorithms results now show good

agreement with the FMT and improved between instrument agreement and a reduction of analysis time from 50 down to 2.5 minutes.

Dr. Geoffry Naylor of CSIRO (Australia) gave an update on the development of the Cotton Scan that directly measures cotton fineness (mass per length). The operation has been enhanced by the development of an automatic sample preparation system. Either raw cotton or sliver may be used with the sample preparation system. Three instruments are currently in use and they show reasonable agreement between samples. The 95% confidence limits with raw stock are 10 mtex and with aligned sliver fed to the sample preparation machine they decrease to 6.5 mtex. It is hoped that interlaboratory testing will begin in a few months.

It was decided by voting that the WG Fineness and Maturity should continue its work with a focus on maturity calibration (WG member votes 26:0 in favour).

### **3.2 Report on the Working Group “Stickiness”**

**Chairman**                    **Michael D. Watson, Cotton Incorporated, Cary, NC, USA**  
**Vice Chairman**           **Dr. Gary Robert Gamble, USDA - Cotton Quality Research, Clemson, SC, USA**

The Chairman, Mike Watson of Cotton Inc., Cary, NC, gave a short report on the activities and results of stickiness and stated that stickiness is still an important issue but that there are no real new methods of measurement available. Therefore he proposed that the Committee's work on stickiness should rather be focused on prevention than on measurement. He then added, that the prevention work at Cotton Inc. USA is based on non disclosure agreements, so he could not report on that part of research work.

He reported, that about 15,000 stickiness tests have been executed for breeders.

Norma Keyes of Cotton Inc. (USA) reported that three approved European CEN-Standards for Stickiness have been established based on the work of the ITMF Stickiness Working Group. They are undergoing now the process of acceptance for ISO, which was supported by Japan and India. Cotton Inc. has taken over the ISO Secretariat for TC 38 Textiles and discussed stickiness standardization at a meeting in Sao Paulo, Brazil.

Andrew Macdonald (Brazil) commented as Chairman of the ITMF Spinners Committee, that stickiness was and will be a major issue of concern for cotton spinners world-wide.

Ralph Schulze from Australia suggested to keep an eye on stickiness and to inform the Committee on important changes and developments.

G. Gamble of USDA and E. Hequet of International Textile Center in Lubbock, USA, both stated that stickiness is not an important issue at the moment as there are no new developments in this field of research.

Dr. A. Latif, cotton researcher from Sudan, expressed his opinion, that stickiness is of importance and that the Thermodetector method is important. Efforts should be increased to develop new and better methods to measure stickiness of cotton. He also asked for calibration cottons for stickiness. He was seconded in his opinion by Mr. Macdonald.

Dr. Andrew Jordan of the National Cotton Council of America argued that stickiness is important for spinners but that research at the moment is on hold. The Committee should therefore follow up further developments in this field of research and mentioned the ITMF stickiness report published by the Secretariat.

Eric Hequet mentioned, that stickiness is an important issue and helps to get funding, but that there is at the moment no solution for problems and nothing to talk about. He asked for more practical solutions.

Axel Drieling of Bremen Fibre Institute commented, that stickiness is not homogeneous distributed in cotton and that consequently methods of on-line testing in the mill should be developed.

M. Watson explained, that he enjoyed the activities in the Working Group during his Chairmanship, which started 1992 after the retirement of Mr. Henry Perkins from USDA ARS Clemson, but because of research work at Cotton Inc. he would pass the Chair back to the group.

The Committee Chairman expressed his personal thanks to Mike Watson and to Cotton Incorporated as supporting institution for his very active and successful work as Chairman during the past 14 years and wished him the best for his future activities and his personal health.

Finally, Dr. Schenek asked for a vote of the members whether the Stickiness activities should be continued or not. The personal voting of the WG members resulted in the decision of a majority, to continue the stickiness activities for the next two years. At the Working Group meeting there was no proposition for a new Chairman (At the closing plenary session of the meeting it was decided to continue the work in a Task Force for stickiness.).

### **3.3 Report on the Working Group “Neps and Trash”**

**Chairman**                      **N.N. / Dr. Anton Schenek**

In due time before the Bremen meeting, both, Chairman and Vice Chairman, Norbert Stuhlfauth and David McAllister had declared their retreatment from Chairmanship.

Therefore the Committee Chairman, Dr. Anton Schenek took over the Working Group Chairmanship for the Bremen Meeting.

John Foulk of USDA (USA) reported on image processing and comparison of AFIS and HVI results. He mentioned also, that an extended database on trash differentiation in US-cotton is already available at USDA research stations and will be used for further research. Another short report was given on the usage of different techniques (e.g. FTR, HPLC) to identify different trash particles in cotton.

The Chairman announced a further report which was to be given later at Wednesday morning by Mr. Dejan Lalevic of Mesdan SpA, Raffa di Puegnago, Italy, on a new testing instrument for neps and trash measurement, called NATI. The instrument uses optical principles to measure neps of different diameters separately, namely 0.5 mm, 0.7 mm and 1.0 mm as well as trash diameters of 0.5 mm and dust particles of 0.25 mm diameters according to ITMF trash and dust definitions.

After some discussion on the importance of the neps and trash activities, it was decided by personal voting of the Working Group members, that a small group of two to three members should check what further work would be necessary and which contributions to the work can be expected (At the next day's closing plenary session it was consequently decided, to establish a Task Force on neps and trash.).

The Chairman opened a discussion on the subject of colour measurement, as there was a proposition from Committee members from Poland to establish such a Working Group.

Dr. M. Matusiak of the Institute for Textile Architecture, Lodz (Poland) explained her proposition and reported on colour problems of blends in cotton yarns and fabrics after dyeing and problems of colour measurements by HVI instruments.

Mr. T. Pearson from Santista Textiles, Brazil, said that improvement of colour measurement of raw cotton is absolutely necessary to get an agreement of HVI-measurement and cotton classing in future.

Dr. Fred Shofner referred to basic research of Schaffner Technologies International (STI) on true cotton colour measurements and cotton colour references to photometric measurements. He explained that the degrading effects of trash in cotton due to unacceptable HVI measurements have to be eliminated, if instruments are used to replace traditional classing of cotton. He then supported the idea of a new Colour Working Group.

Mr. Axel Drieling from the Bremen Fibre Institute said that cotton colour measurement is an important topic for instrument classing of cotton and that a target group of selected members should define the problems (At the closing plenary session of the Committee it was decided to establish a Task Force for colour measurement.).

### **3.4 Report on the Working Group “Fibre Length”**

**Chairman**                    **Dr. Thomas Schneider, Faserinstitut Bremen e.V., Bremen, Germany**

**Vice Chairman**           **Axel Drieling, Faserinstitut Bremen e.V., Bremen, Germany**

Dr. Thomas Schneider of the Bremen Fibre Institute (D) explained, that regarding the different length measurement methods there is at the moment no work necessary except the work on short fiber measurement and short fiber definitions. Referring to the Bremen Round Trials there was no observation of significant changes of UHM and Mean Length data. Research has to be concentrated on reliable measurements of short fibre content. No real progress could be observed in this field of research.

Another big topic to talk about is the reliability of instruments for length measurement.

Based on ISO 17025 an international accreditation system was introduced world-wide for measurement systems. Referring to this issue there is a vital need for detecting traceability and reproducibility of measurements. This means that in daily lab procedures we have to prove which source of calculation was used to calibrate the testing equipment itself. From this point of view it is not sufficient to trust in a standard if we do not know where that standard is based on. It was recommended that a traceable calibration procedure has to be fixed especially regarding to the level of the evaluated results.

It was agreed that considering for example the AFIS or the AQURA systems, additional assistance from the manufacturers of these systems is necessary.

The vision of an international harmonised measuring system needs this reliability which up to now is estimated by several round trials, e.g. the quarterly Bremen Cotton Round Trials.

To give an example Mr. Srinivasan of Premier Evolvics (India) explained the traceability and reproducibility of the AQURA-System.

In summary repeatability and traceability are necessary issues for world-wide accepted reliable testing methods. Valid test data have to be produced, a world-wide comparability has to be guaranteed and, of course, there is a need for international acceptance especially by the cotton trade partners. An adequate measurement (accuracy) is certainly self evident.

This means that trust into the laboratories' competence by means of accreditation is the basis for length measurement.

Possible future tasks referring to fibre length are introduction of image analysis based testing methods and an accepted reference method for fibre length.

The second issue is short fibre content. The determination of short fibre content of cotton is up to now not as reproducible as the general length measurement. Additional research is needed. May be there is an opportunity to develop a simple mechanical method to measure just the short fibre content instead of the measurement of the complete fibre length distribution of a sample.

Another topic presented by Axel Drieling of the Bremen Fibre Institute is to define a parameter which describes at its best the relative short fibre content. Reference is the presentation given by Allan Heap at the ITMF Meeting in Bremen 2004.

During the session of the Working Group "Fibre Length" the Members of the Committee had decided to continue the activities for the next two years (At the HVI Working Group session and at the closing plenary meeting it was decided to include the work on Length and Strength in the HVI Group.).

### **3.5 Working Group "HVI"**

**Chairman**                      **Dr. Lawrence Hunter, CSIR, Port Elizabeth, South Africa**  
**Vice Chair**                     **Mrs. Mona Qaud, Rieter AG, Winterthur, Switzerland**

First, the name of the Working Group HVI was discussed, as HVI is a registered trademark of Uster Technologies. High Volume Testing could be the alternative (HVT). However, Uster's opinion was that as there are some 1969 HVI units in 70 countries in the market, the name goes beyond trademark and therefore would not infringe their trademark. The meeting decided to retain the name HVI for the Working Group.

#### **New developments**

Uster Technologies has delivered some 40 of HVI 1000 units to USDA, and also in China several Uster HVI classing units have been installed. A colour chart for the Chinese market has been developed. Work is continuing by Uster Technologies, Schaffner Technologies as well as Premier Evolvics for the further development of the measurement of trash and other fiber properties.

#### **ICAC Task Force on commercial standardization of instrument testing**

In December 2003 the ICAC Task Force was formed with the objective of facilitating the world-wide use of instrument testing systems for classing. Regional Test Centres are to be formed to introduce the HVI values for widespread trading. A United Nations fund has been approved to help African regions to establish their test centres, as well as the funding of a CSITC Round Trial, that will certify laboratories and test centres when they comply with the criteria for accuracy and precision. A second pilot Round Trial is planned for April 2006, the first regular Round Trial is planned for the second half of this year.

At first only the parameters strength, length, length uniformity, micronaire and colour are recommended for inclusion in an instrument testing system. Measurement of neps and short fiber content and stickiness should be included in such a testing system only after technical developments make their high volume testing possible.

#### **HVI evaluation**

Reference was made in the Chairman's report to the HVI evaluation. A request to evaluate the HVI System ART from Premier Evolvics was received in 2004, as Allan Heap in

cooperation with Eric Hequet suggested a scheme to evaluate testing systems for recommendation by the ITMF Working Groups. After considerable discussions, objections from US members and some Chairmen and long term correspondence it was decided to put the matter on hold, as it included many issues, such as terms of reference but also the general structure of the ITMF-ICCTM and its Working Groups. Also the activities of the ICAC-CSITC needed to be considered. The criteria for evaluating HVI systems originally suggested are very similar to those which have emerged from CSITC Task Force and pilot round trials.

At the Bremen meeting there was no decision on further steps of Premier Art evaluation by the WG HVI.

It was again recommended that consistency reasons only one Cotton Calibration level should be used - and that should be the USDA-HVI Calibration Cottons (HVI-CCSt.). There was the concern that in India calibration cottons at the ICC level (Stelometer-level) were being made available.

### **HVI presentations**

Anja Schleth of Uster Technologies (USA) presented a paper on the progress with the Short Fiber Index (SFI) Measurement on HVI Systems. The basis is the theory of the fibrograph, as first presented by K.L. Hertel in the 1940. Out of the measured fibrogram, the staple diagram can be derived, and therefrom by number as well as by weight the length distribution. This has been implemented in the HVI lines for the past seven years. The derived fiber length distributions of the HVI can well be compared with the distributions obtained by AFIS as end aligned single fibre measurement. Also good correlation was found between AFIS SFC and HVI SFI from the Bremen Round Trials by the Bremen Fibre Institute. For AFIS testing of short fibre content the users can select the value of importance to them.

Axel Drieling of the Bremen Fibre Institute (D) and James Knowlton of USDA-AMS (USA) presented results which illustrated the collaboration between their Round Trial Test Programs: Bremen Round Trial (Bremer Rundtest) and the USDA Check Test Program. The main aim of round trials is to check the accuracy of the equipment and their operation as well as to establish the interlaboratory variation. In the USDA Check Test Program there are between 50 and 80 participants per trial and in the Bremen Round Trial there are between 140 and 160 participants of which 90 to 110 use HVI systems. The results and variations of both trials were very similar. However, Bremen uses a wider variety range of cottons, and higher variations in some parameters can therefore be expected.

Another presentation by Axel Drieling of the Bremen Fibre Institute (D) compared the results of Premier and Uster High Volume Instruments generated out of the most recent Bremen Round Trials, during which 20 Premier units and 80 Uster units participated. Although some differences were observed, the CSITC selected parameters showed good conformity in the Round Trial. Some differences existed for Rd colour readings that should be investigated.

H. Ghorashi from Uster Technologies Inc. (USA) mentioned that they are looking into the mechanical calibration of elongation to solve the issue of lack of calibration cottons for elongation. Referring to the differing elongation results it was pointed out, however, that some of the Uster equipment involved in round tests was installed up to 25 years ago, whereas the Premier equipment was not older than 5 years.

Fred Shofner of Schaffner Technologies, Knoxville (USA) presented his ISO Tester. In this he implemented an image based method of evaluating the trash particles, such as leaf, bark and trash. One problem was that when the trash content of a particular sample increased, the leaf grade increases and the reflection value Rd decreases.

### **Final statement**

Together with the CSITC the role of the ITMF-ICCTM should be defined. The CSITC focuses more on the commercial side, the application of HVI for classing and cotton trade, whereas the technical side of cotton testing in general and future developments are covered by the ITMF Committee on Cotton Testing Methods. So the future ITMF Task Forces need to focus on the technical background as some parameters are not yet at the stage where they are ready for commercial implementation.

As Dr. Lawrence Hunter, from CSIR Port Elizabeth, (SA) retires this year, Ms. Mona Qaud from Rieter (CH) was elected for the next two years as Coordinator of HVI activities.

Special personal thanks to Dr. Hunter were given by the Committee Chairman, as Dr. Hunter had been in the Committee since its implementation in 1980 and chaired the Working Group HVI over many years very successfully to the benefit of all Committee members and the whole textile industry. The Chairmanship during the sessions and the reports were always excellent and can be seen as a very good example of correctness and fairness in research and industry. Dr. Hunter is well known in many different sectors of textile research and from his well known publications. It was a great benefit for the Committee to have Dr. Hunter as member, Chairman, colleague and friend. Therefore the Committee Chairman presented Dr. Hunter a special farewell gift and expressed their best wishes for the personal future of Lawrence Hunter and his wife Edna, who over many years had supported his work.

## **4. Closing Plenary Session**

The Chairmen of the former Working Groups presented a short summary of the WG meetings.

The Committee continued the discussion on the future structure of the Committee. After some discussion it was decided to prepare a written proposal for new statutes. It was agreed that a group of Chairmen and members should work out a first draft of the new statutes which should be presented to the Committee at the closing plenary session. As delegates were nominated Dr. Schenek, Dr. Schneider, Mr. Shofner, Dr. Jordan, Dr. Hunter, Mr. Kugler and Dr. Schindler.

The draft of the shortened and modified "New Constitution" of the ICCTM was discussed at the meeting. At the end of the procedure the new Committee statutes were accepted unanimously by the Committee members.

Basis of the Committee will be also in future the **General Assembly (Plenary Meeting)** of the Committee. The General Assembly decides by voting upon membership, organisational matters and nomination of officers, based on propositions of the Chairman.

It was decided by voting to replace the Working Groups by smaller, effective **Task Forces**, formed by active members of the Committee which will be headed by Task Force **Coordinators**, which have to be elected or re-elected every two years. Task Forces shall be task and outcome focussed and shall address issues considered of high priority by their own members with input from a Steering Committee and the General Assembly.

A new **Steering Committee** comprising the Chairman, Vice Chairman and members nominated by the Chairman will have to give guidelines for future Committee actions.

The Committee and its General Assembly will also in future be chaired by a **Chairman** and a **Vice Chairman**, which have to be elected or re-elected every two years.

#### 4.1 Elections of Committee Officers

The election 2006 in Bremen gave the following results for the period of the next two years:

##### Position of Chairman

Dr. Hunter proposed **Prof. Dr. Anton Schenek** as Chairman for the next two years. He was elected unanimously.

##### Position of Vice Chairman

Prof. Schenek proposed **Dr. Thomas Schneider** as Vice Chairman for the next two years. Dr. Schneider was elected unanimously.

##### Position of Task Force Coordinators:

1. **Task Force “Fineness and Maturity”**  
**Dr. Devron Thibodeaux**, USDA-ARS, Clemson, USA was elected as Coordinator for the next two years. Active membership was announced by Dr. E. Hequet, Dr. St. Gordon and Dr. G. Nailor.
2. **Task Force “Stickiness”**  
**Mr. Jean Paul Gourlot**, CIRAD, Montpellier, France, was elected as Coordinator for the next two years. Active membership was announced by Mr. G. Gamble, Mr. A. Latif and Ms. Louwagie. The Task Force was asked to monitor the research area of stickiness and to inform the Committee on new developments.
3. **Task Force “Neps and Trash”**  
**Dr. John Foulk**, USDA-ARS, Clemson, USA, was elected as Coordinator for the next two years. Active membership was announced by Mr. H. Haid. The Task Force was asked to monitor the research area of neps and trash and to inform the Committee on new developments.
4. **Task Force “HVI “**  
**Ms. Mona Qaud**, Rieter AG, Winterthur, Switzerland was elected as Coordinator for the next two years period. Active membership was announced by Mrs. A. Schleth, Dr. T. Schneider, Mr. A. Drieling, Mr. G. Kugler and Mr. H. Haid.
5. **Task Force “Colour”**  
**Dr. Malgorzata Matusiak**, Institute of Textile Architecture, Lodz, Poland was elected as Coordinator for the next two years.
6. **Sub- Task Force “Length and Strength“ (integrated into HVI Task Force)**  
Mr. Axel Drieling, Faserinstitut Bremen e.V., Bremen, Germany. He was nominated as Coordinator after the Bremen Meeting by the Committee Chairman for the next two years period. This decision shall support the cooperation of Bremen Fibre Institute, Bremen Cotton Exchange and the ICCTM.

#### Decisions and Recommendations

During the Bremen meeting 2006 there was no election for the sub-Task Force length and strength, which was integrated into the Task Force HVI. The subject needs special care and it was the decision of the Working Group members to continue the activities for length and strength. By decision of the Committee Chairman and in agreement with Ms. M. Qaud and the Bremen Fiber Institute, Mr. Axel Drieling from Bremen Fibre Institute will be acting as

Coordinator during the next two years period and shall present the results at the next Bremen Meeting.

The Committee Chairman, Dr. Schenek declared, that he will definitely resign from the Committee Chairmanship after the next two years period and will not be available for re-election at the next Bremen meeting.

The Vice Chairman, Dr. T. Schneider announced that he is going to leave the Bremen Fibre Institute and will become Professor for Textile Technology at the Fachhochschule für Technik und Wirtschaft (FHTW) in Berlin, Germany (University for Applied Sciences, Berlin). Nevertheless, in accordance with the director of the Fibre Institute Bremen, Prof. Dr. Axel Hermann, Dr. Thomas Schneider will represent the Bremen Fibre Institute together with Mr. Axel Drieling also in future in the International Committee on Cotton Testing Methods.

### **Steering Committee**

Members of the Steering Committee are according to the new statutes the Chairman and Vice Chairman. For the next two years period, further members are the elected Coordinators of the Task Forces: Dr. D. Thibodeaux, J.P. Gourlot, Dr. J. Foulk, M. Qaud and M. Matusiak. The Chairman nominated in addition A. Drieling as member of the Steering Committee.

### **Further Actions**

Reports of the Working Group Chairmen will be given at the International Bremen Cotton Conference.

Actual membership of the Committee and the Task Forces will be re-checked by a questionnaire, which will be sent to all members. This will be a review of addresses including e-mail addresses, as further communication will be mainly by internet.

ITMF Director Dr. C. Schindler announced the possibility of an internet platform provided by the ITMF Secretariat for the ICCTM members in the near future. A contact list of all members will be made available to all Task Force members by the Secretariat in Zürich.

The Committee's work was only possible because of substantial support by ITMF and its staff, its General Director, Dr. H. Strolz, who supported and promoted the Committee from its start in 1979 and Director Dr. C. Schindler.

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Finally the Chairman gave his thanks to all Committee members, officers and guest who could come to Bremen and who have contributed so much to a successful ITMF Meeting in Bremen. Special thanks were given to the leaving Chairmen, who have contributed in several cases for many years to a successful Committee work: **Dr. L. Hunter, M. Watson, G. Gamble, E. Hequet, D. McAllister and N. Stuhlfauth.**

Finally, the next ICCTM-meeting was scheduled for the week of the next International Cotton Conference in Bremen in 2008.