

ELECTRONIC INSPECTION BOARD with ACCU-COUNT ENTANGLEMENT

LH-482 EIB-E



The entanglements in the yarn are responsible for holding the filaments together during the fabric formation so we can work with the yarn. Consistent entanglement-count and entanglement-uniformity are the most important characteristics of an entangled yarn.

The Electronic Inspection Board, EIB-E offers entanglement analysis based on the dynamic yarn diameter measurements. A CCD camera is used to measure the diameter values with 3.5micron precision when the yarn is moving at test speeds up to 300m/min.

As the yarn passes in front of the camera, the Accu-Count Entanglement Software, ACE counts the entanglements and searches for the missing ones in the yarn. The ACE report includes the number of entanglements per meter, standard variation, coefficient of variation, the maximum skip (no show length) and the skip count. The software can mark the good and the bad packages based on the Accept/Reject limits.

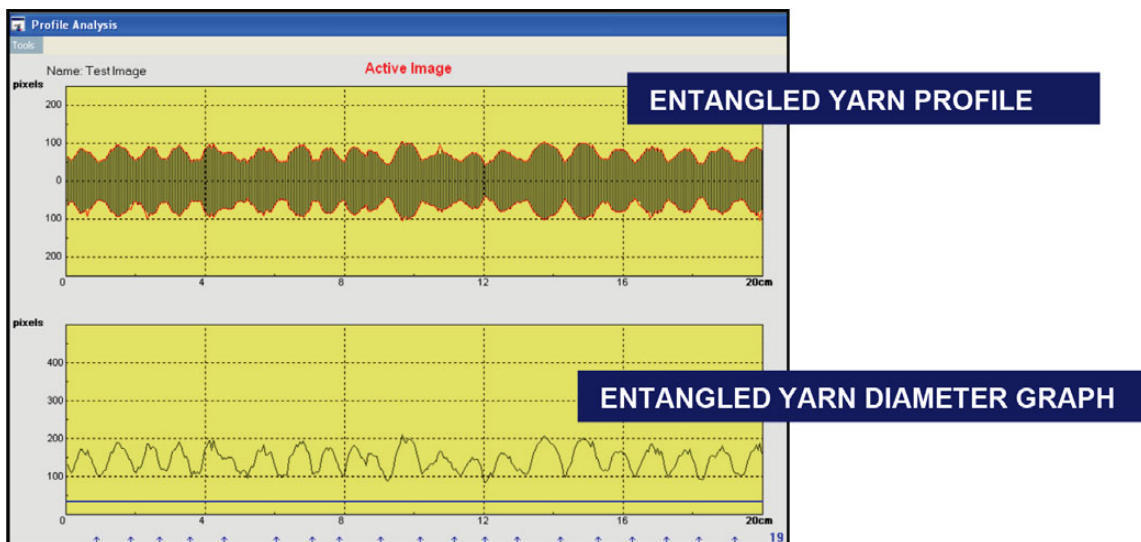
The test results and the diameter graphs are saved in common file formats. The profile of any individual package or the entire test can be viewed at any time. This unique feature provides the ability to look at the entanglements and verify how the entanglements are counted, which is not possible with any other entanglement counting systems in the market.

FEATURES

- Dynamic test instrument for Entanglement Analysis based on yarn diameter measurement
- Ability to measure every 0.5mm of the yarn with 3.5micron precision
- Variable yarn speed from 20-300m/min
- Maintains constant Input Tension up to 30g on the running yarn
- Windows based, easy to use Accu-Count Entanglement (ACE) software to analyze the entanglements
- Can be equipped with a Package changer for continuous operation

ADVANTAGES

- Constant monitoring and detection of yarn sections that are entangled and missing entanglements
- Automatic test parameter setup
- Entanglement statistics for average, min and max entanglement/meter, standard deviation, CV% and maximum skip (no show) length
- Accept/reject limits to identify good and bad packages
- Ability to view the diameter profile and test data of multiple or single packages
- Automatic saving of the test settings, results and diameter graphs
- Easy to share test reports in common file formats



ACCU-COUNT ENTANGLEMENT SOFTWARE (ACE)

This software is Windows based and it is very easy to use. At the end of the test, it displays the statistics for individual test packages and the summary for the entire test.

The screenshot displays the main interface of the ACCU-COUNT ENTANGLEMENT software. It includes a menu bar (File, System, Tools, Help), a toolbar, and a status bar (File Name: Fine80_Cones, 17:14). The interface is divided into several sections:

- Test Parameters:** Test Speed (m/m), Input Tension (g), Test Mode (Production), Sample Length (m), Sample / Test (10), Total Tests (1), Test Length (m), and Waste Length (m).
- Test Results Table:** A table with columns: Pkg. #, Avg. Ent/m, SD, CV%, Min, Max, Max Skip, and SOL#. Several rows are highlighted in yellow, indicating out-of-limit results.
- Summary Data:** A table with columns: #, Avg. Ent/m, SD, CV%, and Min. It shows statistics for 'GOOD' (2 packages, Avg. Ent/m: 28.0, SD: 0.85, CV%: 3.04, Min: 27.4) and 'ALL' (10 packages, Avg. Ent/m: 27.0, SD: 0.78, CV%: 2.89, Min: 25.9).
- Test Graph:** A line graph showing the average entanglement rate over 10 packages.
- Histogram:** A histogram showing the distribution of entanglement rates.
- Test Sequence:** A list of package numbers (80#1, 80#2) with buttons for Reset, Fill, Delete, Insert, and Enter. A speed indicator shows 100.
- Control Buttons:** START (F1) and STOP (F4) buttons.

Annotations in the image highlight specific features:

- Entanglement test results for individual packages:** Points to the test results table.
- Out-of-limit test results are highlighted:** Points to the yellow-highlighted rows in the test results table.
- Test Summary with Statistical Analysis:** Points to the Summary Data table.
- Entanglement Results with Accept/Reject Limits:** Points to the Test Graph and Histogram.

This screenshot shows the 'Include in PrintOut' and 'Data Transfer' settings in the software. The 'Include in PrintOut' section has checkboxes for: Heading, Good Tests, Reject Tests, Data Graphs, and Sigma Control Limits. The 'Data Transfer' section has a checkbox for 'Automatic' and a 'File Name(.csv):' field containing 'test2 limits_0915061137'. An 'Advanced' button is visible next to the 'Sigma Control Limits' checkbox.

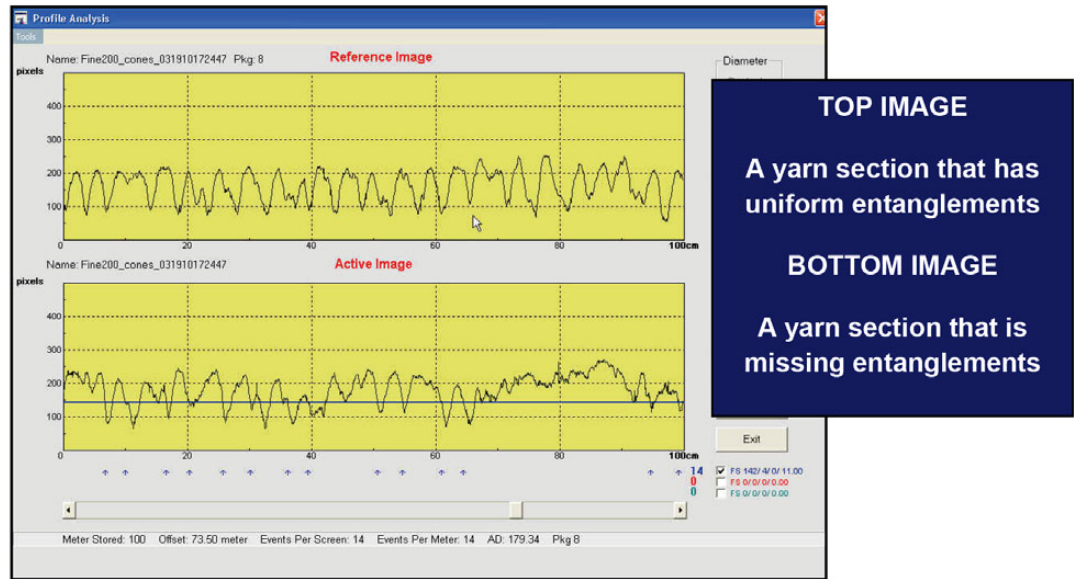
The 'Sigma Control Limits' dialog box is also shown, featuring a normal distribution curve with shaded regions labeled A, B, and C. The regions are defined by standard deviations from the mean (0):

- Region A: Between -1 and 1 standard deviation (green).
- Region B: Between -2 and -1, and between 1 and 2 standard deviations (yellow).
- Region C: Beyond -2 and 2 standard deviations (red).

Annotations in the image highlight specific settings:

- Automatic Test Results Transfer:** Points to the 'Automatic' checkbox in the Data Transfer section.
- Sigma Control Limit Setup:** Points to the 'Sigma Control Limits' checkbox in the Include in PrintOut section.

ACE is the only software that can show you the entanglements that get counted. It will also allow you to compare different packages or the good/bad sections of the same package on the same graph.



ACE SHOW AND COMPARE THE ENTANGLEMENTS

MODEL

LH-482 EIB-E Electronic Inspection Board with Accu-Count Entanglement

Electrical	115/220 VAC 50/60Hz (consult LH for other power supply)
Air	60 psi-clean air required
Dimensions	119 x 76 x 160cm (47 x 30 x 63 inches)
Weight	220kg (485 lbs)

**All specifications are subject to change.*

Contact us today for more information on any Lawson-Hemphill product!

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