AUTOMATIC SPINNERETTE INSPECTION SYSTEM – FEATURES

No.	Feature	SpinTrak
A	INSPECTION SYSTEM FEATURES	
1	Automatic Front light inspection followed by Back light inspection determines polymer wear of capillary exit (subject to spinnerette surface).	Yes
2	**Variable zoom microscope** gives accurate and consistent results for any size capillary. Also allows adjustment of system to optimize inspection accuracy, dirt detection as desired.	Yes
3	**Automatic calibration**, prior to inspection, gives repeatable and accurate measurements. Measurements obtained are traceable to government metrology stds.Calibration-free system can not provide repeatable and accurate readings.	Yes
4	Uses focus map: False measurements are prevented due to image size changes resulting from warped spinnerette's. Microscope automatically moves to keep a constant distance from the capillary exit. Especially useful for smaller diameter capillaries.	Yes
5	Operating environment: **Does not require temperature stabilized room** for accurate measurements (i.e. 20°C + or -1°). Accurate inspection measurements are obtained throughout the operating temperature range of the system.	Yes
6	For new spinnerette designs, system can do **"automatically learning"** to find where the capillaries are located. This makes setting the system up to inspect new types of spinnerette's easy and fast.	Yes
7	Automatic location error correction: during inspection system automatically finds and centers capillaries that are out of position due to manufacturing defects or poor placement of the spinnerette on the spinnerette holding jig.	Yes

SPINTRAK INSPECTION SYSTEM – FEATURES

No.	Feature	SpinTrak
A	INSPECTION SYSTEM FEATURES	
8	Uses sophisticated dirt only finding algorithm. Traditional inspection methods using area, perimeter, leg width, lobe length etc. fail to detect dirt in complex capillaries due to the manufacturer's inability to maintain tight manufacturing tolerances.	Yes
9	System can automatically keep a record of intentionally plugged holes by each ID no. Will alert operator if total number of plugged holes exceeds limit. Very good for PSF spinnerettes.	Yes
10	Out of spec (failed) capillaries are marked by a user defined pass-fail criteria.	Yes
11	**Area, perimeter, profile, minimum & maximum diameter is measured INDIVIDUALLY for round capillaries.** For trilobal capillaries, lobe length, lobe width, lobe radius, area and perimeter are measured in a single pass. Secondary follow-up inspection is not required.	Yes
12	Has built in self-test capability. Results can be used to print out a record for ISO 9000 requirements.	Yes
13	Allows operator to make manual measurements of any object placed on inspection table	Yes
14	Historical record of each inspection result are kept by ID no. time and date.	Yes
16	Video monitor shows each capillary individually. **Capillary fills at least 50% of screen, achieved by variable zoom microscope.**	Yes
17	**Scrolling Inspection:** allows microscope to go further down inside of capillary to detect deep dirt inside the capillary.	Yes

SPINTRAK INSPECTION SYSTEM – FEATURES

No.	Feature	SpinTrak
A	INSPECTION SYSTEM FEATURES	
18	No preventive / regular maintainance is required for complete system. The spares consumption is nil.	Yes
19	Long history of successful operation. (22 year old system is still running well.	Yes
20	Safer and efficient air purge. Non-contact air purge is used to remove dirt/dust (not possible to see by eye) which is in capillary and on spinnerette. No air purge mechanism can remove any burned polymer which is sticked inside the capillary like "paint". 6-8 bar pressure is more than sufficient to remove any dust.	Yes

SPINTRAK INSPECTION SYSTEM – FEATURES

No.	Feature	SpinTrak
B	SOFTWARE FEATURES	
21	**Software designed specifically for inspecting spinnerettes**	Yes
22	Can automatically export data to other popular windows applications (like in Excel format)	Yes
23	Provides telephone based remote control. If problem exist, allows problem to be diagnosed or system software can be upgraded.	Yes
24	Automatically measures minimum & maximum diameter, area and perimeter for each round capillary.	Yes
25	**Automatically measures roundness of circular capillaries.**	Yes
26	Fully graphic, data analysis tools provide side-by-side comparisons of multiple sets of stored data.	Yes
27	Data displayed in many ways including statistical summary, color coded graphic displays, bar charts etc.	Yes
28	System provides daily, weekly, and monthly usage reports	Yes
29	User can easily set pass-fail measurement criteria. User- friendly for operator and system administrator.	Yes
30	Data analysis tool helps to answer the following questions. •Is there a particular spinnerette/date that is repeatable failing? •Is there a particular operator that does not try to clean the failed capillaries manually? • Does the cleaning method fail for capillaries of certain size range? • Is there a problem with the cleaning equipment / process	Yes

SPINTRAK INSPECTION SYSTEM – FEATURES

No.	Feature	SpinTrak
B	SOFTWARE FEATURES	
31	Reports: Daily and shift reports are automatically generated to allow management to track which spinnerette's were inspected each day/shift , the operator and the number passing and failing.	Yes
32	Inspection documentation allows capillary images to be printed out or saved to disk for creating reports.	Yes
33	Inspection documentation allows a statistical analysis summary screen to be displayed. This summary allows comparisons between different inspection results	Yes
34	On the fly changing of the Pass/Fail criteria allows what-if" experimentation to be made. This provides a powerful tool to assess the effects of changing the pass/fail criteria	Yes
35	Multi level security allows 3 levels of system access. The permissions granted are created/edited to fit your needs.	Yes
36	Data import allows systems to easily share test data and spinnerette masters	Yes
37	Software monitoring of all power supply voltages and fan speeds assures stable and reliable operation. All are subject to pass-fail criteria.	Yes
38	A series of automatic "reminders" are displayed on the screen to prompt Operators to perform routine system maintainence (such as backing up the software)	Yes
39	In the case of problems, built in system diagnostics allow easy in-plant determination of the problem.	Yes

SPINTRAK INSPECTION SYSTEM – FEATURES

No.	Feature	SpinTrak
C	INSPECTION TABLE FEATURES	
40	Inspection table is operated by **motors with lead screw mechanism** which provide more accurate results than belt drive mechanism.	Yes
41	Large Z axis Travel (75 to 150 mm) allows of a wide range of spinnerettes.	Yes
42	Inspection microscope has a continuously variable 7:1 zoom.	Yes
43	**During inspection, spinnerettes do not move. Only microscope moves.** Less weight allows system to be faster and more reliable. Less wear and tear.	Yes
44	Capillary illuminator to point out defective capillaries to operator. This feature saves time to find failed capillary during manual cleaning.	Yes
45	Air purging of defective capillaries is based on user established criteria.	Yes
46	Illumination is provided by long life, **high intensity LEDS**. Allows many years between replacements (if ever).	Yes
47	All different complex capillary shapes can be also inspected.	Yes
48	Emergency stop cable on all sides of inspection table.	Yes
49	System uses high accuracy monochrome camera. 10 year old cameras are still functioning well in your plant.	Yes

SPINTRAK INSPECTION SYSTEM – FEATURES

No.	Feature	SpinTrak
C	INSPECTION TABLE FEATURES	
50	System uses high quality and reliable hardware (like stepper motors, couplings bearings). 2o years old hardware (wear-tear type) is in function in your plant with lubrication only maintenance.	Yes
51	Built in calibration reticle, mounted in sturdy protective holder	Yes
52	Uses air/dust sealed, gold plated limit switches for high reliability.	Yes
53	Remote key pad allows operator easily to review inspected spinnerettes.	Yes
54	Tailor made jigs holds spinnerettes firmly which helps to give accurate and faster inspection.	Yes

SPINTRAK INSPECTION SYSTEM – FEATURES

No.	Feature	SpinTrak
D	COMPUTER SYSTEM FEATURES	
55	Uses industry standard PC computer hardware	Yes
56	Uses reliable Windows 7 operating system.	Yes
57	Provides on line, redundant second drive for emergency use.	Yes
58	Single click feature saves software backup onto recordable CD	Yes
59	Allows system to connect to plant LAN.	Yes
60	Rugged enclosure provides filtered air for cooling. Fan speeds and exit air temperature are monitored for safe limit operation.	Yes
61	System access is restricted by key lock. Prevents idle time tampering	Yes
62	Power and X,Y,Z axis motor drivers indicator lights display system status.	Yes
63	Single high reliability power supply powers entire system	Yes
64	Provides strong system security through use of Administrator and Operator user codes	Yes

Aspex sold more than 500 SpinTrak machines in more than 35 countries. We are sharing more than 95% market share world-wide for Automatic Spinnerette Inspection System.