

Sappi Fine Paper North America and Technidyne

Sappi Fine Paper North America's Technology Center, located in Westbrook Maine, carries out extensive research into the complexities of paper and ink interaction. It is staffed by R&D specialists who rely upon sophisticated equipment to unlock the secrets to producing some of the best paper in the world. Sappi is committed to long-term product and process improvements, as well as fundamental day to day troubleshooting of its production lines.



In order to be able to fully comprehend the processes that are affected, the technicians and researchers at Sappi rely on a vast array of advanced devices for analyzing all aspects of papermaking and converting. Understanding the physical and optical properties of the paper being produced are key elements in their quest to produce a higher quality product.

Many of the instruments that are used here on a daily basis are manufactured by Technidyne Corporation, based in New Albany, Indiana, USA. The Technidyne ColorTouch™ instruments provide all the brightness and color information that is needed and according to industry standard. The Technidyne BNL-3 Opacimeter and the T-480 Gloss instruments also play their part in the Sappi testing scheme.

The center piece of Sappi's Technology Center testing lab is the Technidyne PROFILE/Plus™, an automated paper testing system, which is currently configured with the following instruments:

PROFILE/Plus™ System:

- Opacity
- Roughness (Sheffield) (2 sided)
- Porosity
- Gloss (2 sided)
- Caliper
- PPS (2 sided)
- Grammage



Senior Technician John Delcourt and Dr. JM Rodier beside the PROFILE/Plus™

Additional Standalone PROFILE/Plus™ instruments in the laboratory:

TAPPI Brightness (2 Sided)

Tensile (MD/CD)

Dr. Jon-Marc (JM) Rodier is the Manager – Analytical, Print Test, and Safety at Sappi's Technology Center. It is up to Dr. Rodier to decide upon the most cost effective way to support the many Sappi manufacturing locations. Asked why he chose Technidyne instruments, the answer was simple: "When we looked at automated paper testing, the Technidyne PROFILE/Plus™ was the clear winner. It provided the best return on investment of any of the competitive systems."

PROFILE/Plus™ was designed around a unique building block approach to automated testing. Each unit can be used as a standalone instrument, or can be easily placed in line with other PROFILE/Plus™ instruments to operate as a complete automated testing system. This one of a kind versatility was very attractive to Dr. Rodier. As Dr. Rodier stated, "The flexibility of 'choosing' which modules go into the system as well as pulling modules out for different applications, and still having the system operate normally, also helps with efficiency. We are able to collect data no matter what the configuration."

A good example of this uniquely flexible configuration is the recent addition of a PROFILE/Plus™ Tensile Tester to the lab. This fully automated instrument provides MD and CD tensile results in a fraction of the time required for manual testing. For the first few months the Tensile Tester was being used only as a standalone unit in order to perform efficiency studies and time sensitive tensile work. Now that this phase is complete, the Tensile instrument has been placed in line with the other instruments to become part of the automated PROFILE/Plus™ test system.



PROFILE/Plus™ Tensile Tester

According to Dr. Rodier; “The PROFILE/Plus™ was acquired to improve testing efficiency at the Sappi Technology Center. It is a set it and forget it system.” Operators can initiate a testing sequence and have the confidence to leave the instruments to complete the testing without any further intervention. This allows personnel to carry on with other tasks, thus greatly improving productivity.

A recent study was commissioned by Sappi to quantify this improvement. Dr. Rodier reported that “The time savings works out to be one hour of testing on the PROFILE/Plus™ is equivalent to ten hours on the stand alone units (roughly 1.5 labor days).” In other words the PROFILE/Plus™ provides a tenfold savings over traditional stand-alone testing.

Some of the programs and benefits Technidyne has implemented for customers are: Training programs, seminars, calibration standards program, and a top level Preventative Maintenance program. For Technidyne there is a free flow of feedback information which promotes the constant improvement of products and service. Customers like Sappi, from around the world, have commented on the outstanding level of support and satisfaction they get while working with Technidyne.

Sappi is justifiably proud of its Technology Center, as this excerpt from their website attests: “In operation since 1926, Sappi's history of innovation runs deep at Westbrook with many industry technical–firsts' originating from our Technology Center. This facility is equipped with two state-of-the-art pilot coaters that enable prototype development for both our coated fine papers and our specialty release paper business. Past and present employees of the Technology Center are the proud developers of over 200 patents that have helped Sappi and the customers we serve maintain a competitive edge for years.”

Dr. JM Rodier sums it up best when he says “Thanks to the Technidyne PROFILE/Plus™ we are able to handle more project work, with a better application of resources, at less than ½ the cost of doing manual testing. This represents a huge savings in time and money.” Truly a success story for both companies!