Shaoxing Riyue New Materials China

FilmPro™: Trouble-Free and Trustworthy On-Line Thickness Measurement for BOPET Production Line

“The stability and accuracy of the thickness measurement by FilmPro infrared sensor gives us great confidence to fulfill our production target and make our clients happy. Unlike Beta or X-ray gauges, the maintenance of FilmPro™ is an easy job and no special radiation licenses or protective guarding or interlocked safety gates are required, which saved huge troubles for us. Also, the opening between the two sensor heads is so large that film will not be in contact with them, which is vital to increase the bottom line of production.”

Mr Yin
Production Manager - Shaoxing Riyue New Materials Co., Ltd.

Results

► Enhanced measurement accuracy
► Improved product quality
► Increased productivity
► Lowered product change time

Shaoxing Riyue New Materials Co., Ltd.

Shaoxing Riyue New Materials Co., Ltd. is one of the largest manufacturers of polymer film in China. Benefiting from the strong local and nationwide demands, this company has been growing rapidly over the past few years.

With a total investment of RMB 900 million, this company has established three advanced BOPET film production lines with an annual production capacity of 90,000 tons of film. The film has a width of 8.7 m, thickness ranges from six microns to 100 microns, and maximum speed can be 460 m/min. All three production lines are equipped with NDC’s FilmPro infrared thickness measurement sensors. So far, their products have passed the inspection of SGS, meet the requirements of FDA and are identified as green and eco-friendly products without harmful substance. As a company with a belief in making high-quality products and following client’s demands, Riyue has already established extensive cooperation with domestic and foreign research institutes to adopt new materials and develop new products to meet clients’ demands.

NDC’s Contribution at Shaoxing Riyue

FilmPro is NDC’s most versatile infrared gauge to date. It can measure film and sheet. Perhaps FilmPro’s most novel innovation is how it can deal with measuring thin, clear films. These films generate reflected light which creates a phenomenon called Optical Interference (OI). OI can negatively affect the accuracy of infrared film measurement.
FilmPro has been designed with an optional Fringe Suppression Optics (FSO) module which is used for measuring thin films. The FSO module includes a new, more efficient optical system that is not affected by film thickness changes as well as scanner misalignment or run-out. The new FSO optics significantly improve measurement performance compared to our previous generation gauges.

By installing the FilmPro after tentering, it provides a unique direct thickness measurement of clear and thin film. Biax films can be controlled both in the machine direction and profile. Special algorithms are used to accurately map the finished film back through the tenter and to the casting die.

FilmPro™ Infrared Sensor
Like its predecessors, NDC’s FilmPro intelligent infrared gauge is designed to provide accurate, repeatable, high-resolution thickness measurement for film, sheet and coated products covering a wide range of applications and processes. FilmPro delivers optimum measurement performance through its patented infrared design and world-class optical components. FilmPro has been engineered to provide reliable measurements in varying process or ambient conditions, such as lighting fluctuation, temperature variation, humidity changes, barometric pressure drift, web flutter, scanner mechanical run-out and more.

Unlike Beta or X-ray gauges, FilmPro™ is easily maintained and does not require special radiation licenses, protective guarding or interlocked safety gates. FilmPro is easy to install and its measurement accuracy is assured with its straightforward calibration techniques. As a result, our worldwide customers benefit from the accuracy, reliability and performance that is the pedigree of NDC’s advanced infrared measurement technology solutions. FilmPro’s optical engine takes a significant step forward from our previous generation Infrared sensor. The optical path has been enhanced to improve signal-to-noise, precision and accuracy and tolerance to web flutter.

Strong Local Support
Shaoxing Riyue appreciated the process knowledge and experience of NDC’s China service team. Since the installation, the measurement has proved both accurate and reliable, allowing Shaoxing Riyue personnel to use their systems confidently to improve both productivity and quality. Also, during usage, the China service team responds quickly to any problem and solves them shortly as NDC deeply understands that by quickly recovering from downtime, you minimize production losses.

Why NDC?
NDC’s innovative infrared technology provides a reliable, trustworthy and trouble-free in-line measurement solution for Shaoxing Riyue that drives their production ambition. Since the installation, these systems have contributed toward their operations and quality programs and have provided a fast return on investment for the company.