

EXTRUSION SOLUTIONS

 **TENCATE**

Chooses



*Global Leader in
Synthetic Grass Fibers
Compounds Materials
and Color Feedstock
with ENTEK Extruders*

TenCate Grass is the world's leading producer of synthetic grass fibers and components. Based in The Netherlands with manufacturing facilities in North America, Asia and the Middle East, the company produces innovative synthetic grass fiber, primary backing, and infill materials that enhance the overall performance of artificial turf fields. The company's products are used in major college and professional sports stadiums worldwide.

Quality Compounded Product Using ENTEK Extruders

The TenCate manufacturing facility in Dayton, TN USA uses ENTEK E-MAX™ twin-screw extruders for compounding color feedstock and producing pre-colored plastic pellets. The ENTEK extruders used by TenCate provide excellent mixing capabilities at low process temperatures.

The pellets produced on the ENTEK extruders are a mixture of polyethylene with color concentrates and ultraviolet (UV) stabilizers mixed in. After production they are fed into single-screw extruders for monofilament and slit tape fiber lines. This unique 'plastic to textile' production results in TenCate's finished product, the Thiolon® brand of synthetic fibers.

Turnkey Service a Plus

When originally sourcing new twin-screw extruders for the Dayton plant, TenCate considered numerous brands but chose ENTEK because of the company's turnkey expertise and reputation for excellent customer service. "It was important to us that our supplier be able to provide readily-available parts and service," said Bill Jones, TenCate's Dayton Plant Engineer. "ENTEK was our choice for these reasons and also because they were able to provide us with complete turnkey services to help us get our first line up and running. This included designing their line to fit into our existing space, providing custom feeder and material handling equipment to go along with their twin-screw extruder, and handling installation and start-up."

TenCate's decision to work with ENTEK has paid off in numerous ways. The need for fast service was tested when one of the extruders had a problem with its gearbox. "I was away for the weekend and got a call early on Saturday that the extruder gearbox was malfunctioning," said Jones. "I immediately called ENTEK; even though it was Saturday and it was 5:30 a.m. in Oregon, I got a live person on the phone. The bottom line is that within four days, and that includes the weekend, we had a new gearbox at our plant in Dayton and ENTEK technicians were there for us to help install it. This is just one example of how responsive ENTEK has been. They are there for us to help solve any and all problems we have."

Bright Future for Synthetic Turf

TenCate in Dayton has doubled its output of turf fibers in the past seven years since the company was purchased from Polyloom Corporation in 2001. This increase in production has been necessary to keep up with the market for synthetic turf, which is growing worldwide at rates of at least 10 – 15%/year. "We will be installing several new monofilament lines to keep up with the demand," said Jones. "And the next time we need a new compounding line, we will be talking with ENTEK. Working with them is a pleasure, whether we're dealing with sales, engineering, or service."



A Sale in the Family

"The Sale of ENTEK International LLC to the Company's Senior Managers Will Have No Impact on ENTEK Manufacturing Inc."



Welcome to our latest issue of *Extrusion Solutions*.

In November our sister company, ENTEK International, was sold by Jim Young, the company's founder, to a team of senior managers at the company. Many of you may have seen a news item about this sale either online or in the trade press. I would like to emphasize that this sale does not impact us, ENTEK Manufacturing Inc. (EMI), or you, our customers, in any way.

We have told the ENTEK story in previous issues of *Extrusion Solutions* and it's also online on our website at www.entekextruders.com. But it's worth repeating that the company next door at 250 North Hansard Avenue was started in 1984 by Jim Young to produce a superior battery separator, and the rest as they say is history. Today that company, who is one of our best customers, is the global leader in battery separators for the automotive market and has diversified its product offerings by providing separator materials for lithium-ion batteries for products such as cell phones, cameras, computers and other mobile electronic devices.

Our company, EMI, originally was started to make machinery and equipment for ENTEK International, and we still do that today. However, in 1998 EMI began producing twin-screw extruders and complete extrusion systems for other companies in the plastics industry, and serves many different markets and different customers from ENTEK International. As such, EMI was not a part of this sale and continues to be owned by Jim Young.

So, going forward it will be business as usual for us, and for you.

A Change in our In-House Development Lab

Please join me in welcoming Dean Elliott (see article on p. 3) as our new Extrusion Lab Manager. Dean has a wealth of experience in the plastics extrusion industry and will be a real asset for our customers, as he will manage the many lab trials we run here at our facility. To welcome Dean, we have already assigned him a new duty; he will be writing a new technical column that will appear in upcoming issues of *Extrusion Solutions*. It's our hope that this column will help our customers learn more about twin-screw extrusion and the many ways we can help you optimize your process.

I hope you enjoy reading our latest newsletter and as always, I encourage you to contact me anytime at khanawalt@entek-mfg.com.

Sincerely,



Dr. Kirk Hanawalt, Vice President/Chief Operating Officer, ENTEK Manufacturing, Inc.

Dean Elliott Appointed Extrusion Lab Manager



ENTEK is happy to announce the hiring of Dean Elliott to the position of Extrusion Lab Manager. Dean joins ENTEK after working for the past two years as Senior Processing Engineer at Kroy Corporation's vinyl and composite fence and railing products plant in Fairbluff, North Carolina.

Prior to Kroy, Dean worked for four years at CertainTeed, where he led material development trials, trained operators on best operating practices, and led teams in implementing Six Sigma practices to achieve cost savings and production improvements in the production of wood-plastic composite products.

"Dean has an extensive background as a processing engineer, working with twin-screw extruders and a variety of materials," said John Effmann, Director of Sales & Marketing at ENTEK. "He is uniquely qualified to assume this position at ENTEK, where he will lead what we consider one of our most important customer resources."

In his new position, Dean will lead all customer extrusion lab trials and support customers by helping improve their efficiencies and overcome processing challenges. In addition, he will work to develop new processes and advance them from the lab environment to the production environment.

Starting in 2008, Dean will also be authoring a new column for *Extrusion Solutions* that will touch on recent developments in the ENTEK lab, and provide technical information that you, our customers, can use.

A native of South Africa, Dean earned a BS in Mechanical Engineering from the University of Durban-Natal in that country. He and his family have now relocated to Oregon and we hope you will join us in welcoming him to the ENTEK family.

Upcoming Events

Below is a list of upcoming events at which ENTEK will be exhibiting in 2008. Please mark your calendars now and we hope you can visit us at one or more of these conferences/trade shows!



PLASTEC West
January 29-31
Anaheim, California



**Wood-Plastic and Natural Fiber
Composites 2008**
October 6-7
Baltimore, Maryland



Plastics Encounter/ANTEC
May 4-8
Milwaukee, Wisconsin



Ausplas
October 7-10
Melbourne, Australia



**10th International Conference
on Progress in
Biofibre Plastic Composites**
May 12-13
Toronto, Canada

EXTRUSION SOLUTIONS



Chooses



*Wood-Plastic
Composites Processor
Uses ENTEK E-MAX™
Extruders for Producing
100% Recycled
Fencing Products*



FiberTech Polymers Inc. of Santa Ana, California is a recognized industry pioneer in producing wood-plastic composite fencing products. The company's line of fencing, edging, and building products are sold nationally under the brand names TimberWolf® and SmartEdge® at Lowe's Home Improvement, OSH, and several other lawn and garden retailers.

Fencing is one of the hottest new markets for wood-plastic composites. As one of the first developers of WPC fencing, FiberTech has perfected the process of turning 100% post consumer recycled plastic and paperboard products, which include plastics waste, into pristine, maintenance-free fencing that lasts a lifetime. FiberTech exclusively uses ENTEK E-MAX™ twin-screw extruders to produce their entire line of WPC fencing, landscaping and building products.

Waste In – Fencing Out

As Darren Traub, FiberTech's Vice President & Chief Technical Officer put it, "its not easy making wood out of waste that otherwise would have been sent to a landfill." A visit to FiberTech's processing facility in Ontario, California shows what he means; it's hard to believe the high quality fencing and landscaping finished products begin as cardboard bale waste recycled from paper mills. A complex system of grinders, feeders, blowers and magnets at FiberTech systematically grind up and separate the waste to produce the raw material used in the extrusion process.

FiberTech is proud that nothing is wasted in this process; the only material not used in the process is scrap metal that is separated from the waste stream. "The fiber and plastic that is recycled in this process used to be either sent to landfills or burned, and we didn't consider that acceptable," said Traub. "It was a goal of ours to find a way to reuse basically all of the recycled fiber and plastic waste."

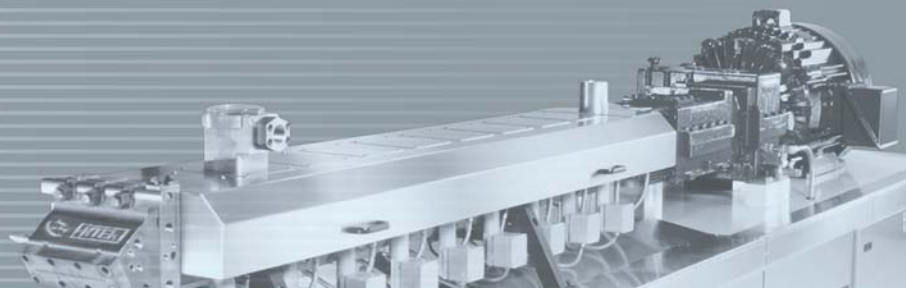
Perfecting the Process

When FiberTech set out five years ago to produce WPC end products, they researched various twin-screw extruder suppliers. "We quickly learned that ENTEK was the supplier for us," said Traub. "We spent over four months training in ENTEK's in-house lab in Oregon working to perfect the process, and everyone there was committed to helping us succeed. We were trying to process some pretty difficult material formulations, and their patience and support helped us bring our first products to market.

"In addition, ENTEK is a company that stands behind its products 100%. Since we purchased our first system from them, a 73mm twin-screw extruder, and subsequent systems, their service and support have always been extraordinary."

Today, all FiberTech WPC products are produced using ENTEK machinery. The TimberWolf line of fencing products includes fence boards, backer rails, posts, pre-built panels, and post caps, that are available in a variety of colors, styles and surface finishes. FiberTech has been producing its line of landscape edging for about four years, and the line of fencing for two years. "Two years isn't a long time, but in this business it makes us the pioneer," said Traub. "We're forecasting strong sales increases for our fencing and edging products and are happy we have ENTEK supporting us as we continue to grow."





Products



Editor's Note: At NPE 2006 ENTEK introduced its new line of ENTEK Smart Controls. At the time the company's new E-MAX™ E-40 was the first ENTEK extruder to include these controls, but they are now available for use with all E-MAX twin-screw extruder models. The following article is the first of two detailing some of the features of the ENTEK Smart Controls.

A Better Control System for Better Processing

ENTEK's Smart Control Systems feature fanless computers with 17" flat-screen displays and NEMA 4 keyboards for industrial strength operation. The monitor is separate from the PC, allowing for simple screen replacement if necessary. Each controller can handle pre-programming of up to 45 heat zones, 10 feeders, and hundreds of recipes.

The Human Machine Interface (HMI) on the ENTEK Smart Control system operates in a Microsoft® Windows XP Professional™ platform and communicates with the programmable logic controller (PLC) via Ethernet. The new Smart Controls offer users advanced troubleshooting and diagnostic capabilities including real-time as well as historical tracking and recipe control.

Extruder Control

The main Extruder Control screen allows processors to simply monitor all process activity on their extrusion line. From this screen, operators can run the extruder and auxiliary equipment. The screen layout is designed to display all of the important process data at the top (extruder torque, melt pressure and melt temperature). Each device on the screen has its own controller.

Trend Monitoring

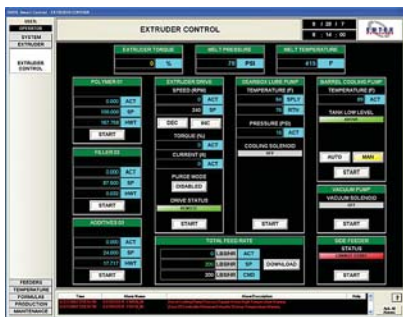
The Trend Screen on the ENTEK Smart Control system is an excellent tool for processors who want to analyze such variables as temperature, pressure, torque, feeder weights and throughput. For historical analysis, the data logger function allows users to compare changes in process, ingredients, and monitor preventative maintenance issues.

The trend screens can be viewed either live (real-time) or historical. For closer trend analysis, a zoom feature can be used. The data can be copied and viewed in Microsoft® Excel™ format, and the historical trend files are stored on the HMI hard drive from 7 to 30 days (configurable).

Other Capabilities

Detailed Temperature Control and Feeder Control screens are also important features of the ENTEK Smart Control system. These will be featured in our next issue of *Extrusion Solutions*.

The ENTEK Smart Control system is now available with all new ENTEK twin-screw extruders. If you have questions about the ENTEK Smart Control system and how it can help improve your process, please contact us!



Extruder Control screen



Trend Monitoring screen

SEASON'S GREETINGS

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We at ENTEK wish all of you a very happy holiday season, and thank you for your business and continued loyalty.



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