

Time for B

O.Z.

A high-tech Kentucky distillery utilizes 320IS digital weight indicators, RoughDeck® floor scales, Rice Lake load cells and a SURVIVOR® OTR truck scale with 720i™ programmable weight indicator and LaserLight2™ remote display to help produce and track bourbon through a unique time-saving process.

Written by Caleb Olson

We are in the middle of a bourbon boom. A spirit that struggled mightily for relevance a few decades ago, bourbon is now experiencing a massive renaissance of popularity. Many distilleries cannot keep up with current demand due to the lengthy aging process required to make quality bourbon. Depending on the category of bourbon being produced (standard, straight or bonded), bourbon takes various time frames to age: as short as a moment for standard bourbon, a minimum of two years for straight bourbon or a minimum of four years for bonded bourbon. While these are requirements mandated by federal law, many bourbons are actually aged much longer—some for longer than 20 years! This makes it extremely difficult for

O.Z. TYLER
DISTILLERY

DSF KY-10

Bourbon Whiskey

New, Charred Oak - RC53G

Lot No: 17E12-02-1-21%

Bourbon at Tyler®

distilleries to predict market demand and set aside enough product to satisfy customers. However, O.Z. Tyler Distillery in Owensboro, Kentucky, has solved this problem. They utilize a patented rapid-filtration process to create the same flavors attributed to multi-year aged bourbon in a fraction of the time. With the help of Rice Lake Weighing Systems' products at various steps in the process, O.Z. Tyler is able to fill the need for quality bourbon without devoting multiple years to aging.

Their cutting-edge process was created by Orville Zelotes Tyler, a brilliant chemist and inventor. Mr. Tyler was responsible for several well-known products, including the coating used on the interior of aluminum cans to shield liquid from aluminum's toxins and metallic taste; indoor/outdoor carpeting; washable wallpaper and outdoor latex paint.

During his retirement, Mr. Tyler took his talents to the world of whiskey. A fan of

Scotch, Mr. Tyler began exploring why it took over a decade for his preferred brand, Macallan 12, to age properly. He learned years of barrel-aging changed Scotch by allowing it to move in and out of the wood. This process slowly filters away unwanted minor alcohols such as isopropanol (which has a harsh taste), leaving behind more pleasant notes of vanilla, caramel and fruits.

If a method could be developed to accomplish the same reaction as barrel-aging without the long wait, quality spirits could be created in a fraction of the time. Although he was a retired inventor, Mr. Tyler had an idea for his next innovation.

He experimented with ways to force unwanted minor alcohols to react with the fatty acids naturally present in whiskey. This would simulate years of interaction with an oak barrel. After several trials and errors, Mr. Tyler discovered a method of using ultrasonic energy to agitate the molecules (similar to the technology used in jewelry cleaners), forcing them to interact with fatty acids and transform into esters: the same chemical result that would take years to achieve in an oak barrel!

Today, this process is known as Terra-PURE®—and if you have enjoyed a store brand or private label bourbon in the past 10 years, you may have already tried it.

Since 2007, Terressentia® Corporation, the company founded on Mr. Tyler's Terra-PURE process, has supplied spirits to large retail chains, individual brand owners and

Continued on page 20

At O.Z. Tyler, bourbon is made the traditional way and enhanced with technology to shorten the aging process.



Continued from page 19

other distilleries or exporters. While Terressentia is the source of bourbon (and other spirits) for other companies, they experienced a sourcing issue of their own when the bourbon boom began to explode, ultimately leading to the creation of the O.Z. Tyler Distillery.

Terressentia had always sourced the bulk of their bourbon from Midwest Grain Products of Indiana (MGPI or commonly referred to as MGP). They would acquire young bourbon from MGP and run it through the TerraPURE process to rapidly enhance its

flavor, matching the same flavor profile as a four- to five-year-old bourbon. It was a brilliant business model; however, when the demand for bourbon began to skyrocket, MGP's sourced bourbon was in high demand and they were unable to fulfill supply to Terressentia. Realizing they needed to gain control of their own supply if they were to continue growing business, Terressentia purchased their own distillery in May, 2014.

Known as the Medley Distillery, the 26-acre property in Owensboro, Kentucky was vacant and in desperate need of renovations.

Over two years later, after an extensive overhaul including the installation of modern controls, a new still, state-of-the-art grain handling and processing centers, the distillery opened its doors

Each rick house at O.Z. Tyler holds approximately 20,000 barrels for aging.



RoughDeck floor scales weigh barrels and totes while 320IS indicators display weights at various stages of bourbon production. Intrinsically-safe equipment is installed throughout the distillery.

as O.Z. Tyler Distillery. A uniquely contemporary facility set within the historic 1930s-era buildings (most of which retained their original triple-walled Owensboro brick siding), O.Z. Tyler features six rick houses (each storing 20,000 barrels of bourbon), a still house with 20 fermenters, a four-story Vendome still, an old dryer house, three warehouse buildings and several office buildings. With all this capacity, the distillery is able to produce over 70,000 barrels (4.5 million proof gallons) per year.

That is a lot of alcohol to create and store, and the U.S. government is very strict about knowing exactly how much alcohol is in every location for tax requirements. The distillery needed a way to accurately trace its quantities.

They contacted Scale Consultants Inc., a local Rice Lake equipment dealer in Owensboro, to develop and install weighing solutions throughout the distillery. However, weighing barrels and totes housing 120-proof bourbon (it is later proofed down or "cut" with water before bottled) required special consideration. Scale Consultants' Lafe and Jim Benson recommended RoughDeck® floor scales for barrel weighing, with 320IS digital weight indicators to meet the environment's safety requirements.

The 320IS indicator features a stainless steel, NEMA Type 4X/IP66 enclosure,



T4 temperature rating and Factory Mutual (FM) approval for hazardous environments. The indicator's power supply is intrinsically-safe and auto-ranging, allowing for simplified wiring to a single AC conduit line and seal from a safe area. The

320IS provided an ideal solution for weighing the highly flammable product without sacrificing safety—eliminating the danger of a bourbon BOOM nobody wants.

Rice Lake FM-approved load cells are also installed under the distillery's 15 giant 6,000+ gallon stainless steel storage tanks, each featuring a 320IS to display live weight. A matching number of stainless steel Rice Lake intrinsically-safe junction boxes are neatly wall-mounted across the room, with all wiring running through protective conduit and along intrinsically-safe circuits.

Outside, the distillery utilizes an 80-foot by 11-foot pit-mounted SURVIVOR® OTR steel deck truck scale to weigh incoming grain and outgoing shipments of bulk alcohol. A 720i programmable weight indicator/controller with truck in/out program connected to a LaserLight2 remote display with stop/go lights work together to manage data, clearly display weights (even in the bright Kentucky summer sunlight) and help direct traffic flow.

Lafe, a bourbon enthusiast himself, takes great pride in his work and relished the opportunity to install equipment at his hometown distillery. All of O.Z. Tyler's buildings are immaculate, with classic brick charm on the exterior masking cutting-edge interior equipment. Scale Consultants' installations fit right into the surrounding environment, providing clean and secure solutions for the distillery's vast weighing needs.

“The scales have worked terrific for us,” says Jacob Call, master distiller of O.Z. Tyler, who oversaw the renovations. “It’s vitally important that we know exactly how much product we have at any given time for tax purposes, and I couldn’t have asked for a better solution than what Scale Consultants provided.” This importance cannot be overstated, as bourbon is one of the most highly regulated and highly taxed products in America.

its competitors, such as popular white label bourbons you might see on the mid-shelf at your local liquor store.

“Even though our bourbon goes through the TerraPURE process, we still age it in new, charred oak barrels,” Jacob continues. “We produce bourbon the traditional way and use technology to enhance it.”

The public seems to enjoy technologically-enhanced bourbon, as TerraPURE



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--Jacob Call, Master Distiller of O.Z. Tyler

barrels in anticipation of upcoming demand. While many of their competitors have teams devoted to forecasting market trends five to 25 years from today, O.Z. Tyler uses technology to better adapt to today’s customer. They also have their eyes on tomorrow however, as the company is working on new advancements, such as a mobile version of their TerraPURE system which can be transported to process whiskey at remote locations across the world.

The future looks bright for O.Z. Tyler Distillery. Their extensive renovation of this historic location allowed them to implement the best of both worlds: traditional charm with modern technology. Rice Lake equipment, expertly installed by Owensboro’s very own weighing experts Scale Consultants, Inc., fits right in to the mix! ■

In fact, there are *seven* different taxes on bourbon, including a special “ad valorem” charge which taxes the increasing value of bourbon as it ages every year in the barrel. After all is said and done, when the consumer finally buys a bottle of bourbon, approximately 60 percent of the purchase price will have gone to Uncle Sam.

There are also unseen “taxes.” As a barrel sits in the rick house, its contents are subject to evaporation. This is charmingly referred to as the angel’s share, but it can account for up to 20 percent of lost bourbon in four years.

Minimizing the time a bourbon spends in the barrel is a huge competitive advantage for Terressentia. Quantities can increase, rick house space is reduced, ad valorem taxes are kept to a minimum and the angels don’t get as large of a feast. However, it’s all for naught if the final product doesn’t pass the taste test.

“We’re not trying to compete with 12-year-old bourbon or older, for example” says Jacob Call. “But we are able to create a bourbon that matches the same flavor profile as the bulk of bourbon consumed in the world, the vast majority of which is four to five years old. It can be enjoyed on its own or as a mixer.”

O.Z. Tyler certainly holds its own against

products have won over 100 medals across its various brands and O.Z. Tyler has been added to the prestigious Kentucky Bourbon Trail as of June 2018. There is no way to predict the bourbon boom’s ceiling. New brands are emerging at a record pace, and existing distilleries are putting away record numbers of

From left to right: O.Z. Tyler Master Distiller Jacob Call and Scale Consultants’ Jim Benson and Lafe Benson.

