

A close-up portrait of a middle-aged man with short brown hair, wearing black-rimmed glasses, a light blue dress shirt, and a dark tie with orange and white stripes. He is smiling slightly and looking directly at the camera. The background is a soft, out-of-focus grey.

INTERVIEW

*Interview with*  
**Mr. Tim Shuttleworth**  
*President/CEO, Eriez®*

**COMMITTED  
TO RECYCLING &  
SUSTAINABILITY**

**SMR:** *You have global manufacturing facilities supporting a worldwide supply chain in a variety of processing sectors, but I see that you have a strong presence in mining countries (Mexico, South Africa, Australia, Brazil). How much of your business is in mining/mineral processing versus other sectors?*

**TS:** Mining is our single largest sector but it represents less than 50 percent of our sales. We are very diversified in fields such as food, chemicals, recycling etc. We have greatly increased our presence in the mining/mineral processing markets since the start of the new millennium. Eriez® has made concentrated efforts to introduce new products in what we call our Heavy Equipment market and grow our mining business worldwide.

One example is the opening of an \$8 million plant in Melbourne, Australia, to better handle demand for our equipment. This plant replaces a previous Eriez facility and now manufactures magnetic separators, vibratory feeders and flotation equipment for the mining and minerals processing markets, in particular. Technological advancements are helping us stay one step ahead of the competition and allowing us to maintain a steady revenue stream in this sector.

We find that we transfer technologies from one part of the world to another as a way to resolve our customers' most challenging problems.

**SMR:** *What are the main types of mineral processing operations that Eriez equipment supports?*

**TS:** Eriez products are found in all global mineral processing applications. Our roots are based in wet and dry magnetic separation and, over the past two decades, we have expanded our product line to include gravity-based, electrostatic and flotation concentration. Applications include carbon-based fuels (coal and oil sands), base metals, precious metals, iron ore and industrial minerals.

In addition to ore concentration, we also offer equipment for heavy duty conveyance and tramp metal detection and separation. Our magnetic product line has been extended to include grinding mill protection using our patented Trunnion Magnet for removal of ball chips from the grinding circuit as well as magnetic liners that extend the operating life of mill and reduces change-out frequency.

**SMR:** *Can you talk a little about Eriez' experience in flotation engineering?*

**TS:** The Eriez Flotation Division (EFD) provides advanced engineering, metallurgical testing and innovative flotation technology for the mining and minerals processing industries. With our in-house expertise in process engineering, equip-

ment design and fabrication, EFD has assumed a global leadership role for the supply of specialty mineral flotation systems such as column flotation. Applications for EFD equipment and systems include sulfide minerals, industrial minerals such as phosphate and potash, oil sands and fine coal recovery.

Our EFD product line encompasses flotation columns, gas spargers, slurry distributors and flotation test equipment such as the mini-pilot plant. EFD has designed, supplied and commissioned more than 800 flotation column systems worldwide for metallic and non-metallic processing operations. We are a leading producer of column flotation systems for recovering bitumen from oil sands. We have also made significant advances in fine coal recovery with flotation systems to recover classified and unclassified coal fines.

**SMR:** *How has the balance of Eriez business changed (mining business versus other sectors), if at all, during the market fluctuations of the last year or two?*

**TS:** The food industry has remained steady and we are seeing an increase in our 5-Star Service® Center, a rebuild facility that can often save operations as much as 40 percent when compared to buying new equipment.

Because of Eriez' diversified product line and international reach, our company has been less affected by market fluctuations than other companies.

**SMR:** *Do you have any upcoming product updates or initiatives planned for the mining sector?*

**TS:** There are always new products under development. For example, we have a new coarse particle flotation cell (HydroFloat™) which has been successfully implemented in the industrial mineral sector and is currently being evaluated for coarse sulfide applications. We also have the StackCell®,

a high capacity flotation machine, and new sparging technologies being tested at multiple sites around the world.

**SMR:** *The Eriez Metal Loss Monitor is an analytical system that helps metal companies to calculate losses and provides opportunities for trend analysis and statistical process control. How big is the market for this system and how popular is this monitor among metal companies worldwide?*

**TS:** One of our newest products—the Metal Loss Monitor (MLM)—is an instrument that, for the first time, allows scrap yard customers to measure and track the amount of metals being lost to the waste stream over specific periods of time. The product was launched in the fourth quarter of 2013, but research and development on the MLM continues as we further develop the many potential applications this instrument can have in multiple applications in recycling. For example,

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as feedback loop for process adjustments.

We believe there is a substantial market potential for the MLM because it can work on any recycling line. It can function on conveyor belts from 12 inches wide up to 48 inches wide. The cantilevered design of the MLM allows it to be mounted easily on the side of just about any conveyor, without the need to cut the conveyor belt for its installation. In all likelihood, recyclers will have several of these within each plant as its merits are better understood.

**SMR:** *Eriez is a world authority in separation technologies and it all began with magnets. What makes your technique world-class in separation technologies? Please explain.*

**TS:** Eriez dates back to 1942 when our founder, Orange Fowler (O.F.) Merwin, designed the first permanent magnet plate separator and sold it to grain millers to recover damaging tramp iron. We have been involved in separation technologies ever since.

What makes us a world class operation is our dedication to research and development as well as product testing. In fact, our Eriez Technical Center is celebrating its 50th anniversary this year. The Technical Center has evolved over the last several decades from simple proof-of-concept testing to more detailed testing that brings solutions to customers' problems before major plant investments. Our lab has more than 150 types of permanent magnetic, electromagnetic, mineral processing, vibratory, screening and metal detecting equipment in a constant state of testing, evaluating and refining. We also have various analytical equipment, such as XRF, which provides quick sample turnaround to determine the best separation methods.

We conduct more than 300 material tests on customer-supplied samples every year. Tests range from evaluating material flow on a vibratory feeder to complex flow sheet development for various mineral applications. Pilot scale tests are also conducted to evaluate continuous, larger scale equipment combinations.

**SMR:** *SumpDoc® is considered a cost-effective intermediate coolant management between a central fluid recycling system and typical sump cleaning. How does the SumpDoc help to provide economic advantages?*

**TS:** The SumpDoc is a portable device that can function with little operator interaction. This machine provides "in-line" coolant filtration and replenishment as a central system does without shutting down the machine tool as is necessary when coolant is removed for cleaning off-line, so plant operators can keep production moving. It's a faster, easier and more cost-effective way to maintain cutting fluids.

The SumpDoc can process water-soluble coolants, synthetics, semi-synthetics, soluble oils and water-based fluids. It's a more economic alternative to a central fluid recycling system or batch processing.

**SMR:** *Eriez Orange University® provides mobile training and education. What is the connection between the business and education? Is the education support an extension of the business or is it a philanthropic initiative?*

**TS:** At Eriez, we believe that knowledge is power. That's why we created Orange University, to educate our customers so they can make informed decisions in relation to their application needs. So, yes, it's a vital extension of our business.

Orange University is the umbrella under which we offer all education resource and materials. That includes the mobile training and education center as well as literature library, videos, free product selection tools, newsletters, articles and case studies. All this is designed to create a dialogue with our customers about their particular needs and help them find the right solution. Sometimes, the right solution may not be an Eriez product.

**SMR:** *Your website mentions that there is likely to be strong global demand for raw materials like steel and aluminum, precious metals in the future, but even greater will be the environmental and economic interest in resource conservation and recycling including plastics and rubber. How does Eriez' equipment align with this growth and need for the future?*

**TS:** Eriez is committed to recycling and sustainability. We have created a program that designates products and technologies that are environmentally friendly and economical to operate. We call it the Eco-Certified "Go Green with Orange®" program. Our 5-Star Service Center puts older equipment, otherwise destined for landfill, back into production. Re-use is an important aspect of this Eco-Certified program.

Many of our products are specifically designed to remove recoverable metals from the product stream, so our customers can reclaim both ferrous and nonferrous metals and put those metals back into everyday use. As the world's resources become scarcer, our ability to recycle will be critical to future customers. For plastic and rubber, Eriez' innovation has led to our patented PolyMag® product/process as well as our work in PET separation to produce high purity plastics.

**SMR:** *Liberty Iron & Metal LLC, based in Erie had issues with their metal sorter. How did you help to solve the problem?*

**TS:** Liberty was in the market for a metal sorter a few years ago. They checked out different models, but were not satisfied with the air requirements, expense, maintenance and freeze-ups in the winter. That's when they approached us about the possibility of an airless metal sorter.

We were at the point of developing our ProSort airless metal sorter and Liberty allowed us to field-test the prototype unit at their facility. We installed a 26-inch wide ProSort that effectively recovered clean, nonferrous metals using far less energy than a traditional air-driven sorter. Liberty later ordered an 84-inch wide unit and continued to use the prototype until we installed the larger one. That was "serial number one" and was left to operate in the outdoor environment which in Erie is very aggressive. Nearly ten years later it is still on the job.