MTB's DUAL EDGE

France's MTB Recycling plays a double role in the wire-chopping world—it's both a leading processor in Europe and a worldwide supplier of equipment.

By Robert L. Reid
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Near Lyon, in the culinary heart of France, a company named MTB Recycling has grown and prospered by following the old rule against putting all your eggs in one basket—even when that basket is the infeed portion of a modern wire-chopping system.
More precisely, MTB (the initials stand for Machines de Triages et de Broyages) follows an eggs-in-both-baskets approach to business. The company is both a major cable and wire processor in Europe and a leading machinery manufacturer, producing "prechopper" shredders, granulators, separators, and other equipment, mostly for international customers from the United States to Japan.
On the machinery side in particular, MTB's recent growth has been nothing short of extraordinaire : The company estimates that, over the past five years, more than 50 percent of wire-chopping production in the United States has switched to MTB shredders, with one satisfied American customer even highlighting MTB equipment on its Web site.

Entrepreneurial Origins

So who is MTB and how did this relatively modest operation—with fewer than 50 employees—extend its presence from the small village of Trept, about 30 miles east of Lyon, to "every continent on the globe except Antarctica," as one company official puts it ?
Like many business success stories, this one began with a couple of entrepreneurs who hoped they had a better idea.
In the mid-1970s, Francis Sevilla and Guy Sosson worked for a Lyon wire processor that burned plastic-insulated cable to recover the copper inside. Seeking a more environmentally friendly process, these two mechanical engineers developed a slow-speed rotary shredder system that within half a year was processing 600 mt of cable a month.
By 1980, Sevilla and Sosson were ready to strike out on their own, forming MTB and locating their new firm in an abandoned cement factory in Trept, where the traditions of rural France intersect with the modern technological world—as evidenced by the satellite dish antennas adorning the 300-year-old stone buildings on the road to MTB's facility.
From the beginning, MTB strove to be both a processor and machinery manufacturer and to benefit from this dual role. "When we began, we decided that we did not want to simply repeat what others had tried," says Sevilla, the company's president and owner. "We felt there must be a better way, and you could say that we had the advantage of starting with a fresh canvas, to paint the picture that we, as end users, felt that it should be."
So as MTB simultaneously processed wire and developed wire-processing equipment, it could design and redesign the machinery to meet its needs as a user.
"This is one of the main ingredients to our success," Sevilla explains. "In operating our own plants, we have a good understanding of the problems of the industry and what solutions are required." Moreover, he says, "the equipment designs were refined to a point where they not only competed with but also out-performed the norms of the industry."
For proof, Sevilla points to MTB's rapid rise in the U.S. machinery market and the fact that several of its wire-processing competitors in Europe have adopted MTB shredders and granulators.
But while there are obvious advantages to putting one's wire-chopping eggs in both the machinery and processing baskets, there are also complications. For instance, MTB doesn't want to see its own equipment used against it too close to home. So the company tries not to sell machinery to French processors whose business might overlap with its own—Lyon, for instance, has about a half-dozen other wire processors, Sevilla notes. This helps explains why as much as 90 percent of MTB's equipment sales are exports, primarily to the United States, Italy, and Japan.
Conversely, the bulk of the aluminum and copper that MTB recovers from wire and cable is sold to French consumers such as aluminum giant Pechiney and the French automotive industry, which require the highest-grade material, Sevilla notes.

A Triple-Chop Shop

In its role as a processor, MTB sells to customers with exacting quality demands. But getting good, clean scrap metal to consumers is no easy task in the world of French wire chopping, where the infeed material is often quite convoluted and contaminated.
MTB processes some 35 million to 40 million pounds of cable a year of which about a third is aluminum and two-thirds is copper. But in France, wire and cable are often a lower quality than what's found in the United States, often containing only 40 percent copper compared with 50 percent or more in America, notes John Groscurth, president of Wire Recycling Services Inc. (Evergreen, Colo.), a U.S.-based consultant working with MTB.
Likewise, the ACSR (aluminum conductor steel reinforced) cable in France and throughout Europe often includes an outer jacket of plastic insulation not found on U.S. electrical power transmission lines. So MTB must grind its ACSR very small, which in turn means that MTB equipment must be quite rugged to cut steel into such tiny pieces, Groscurth explains. Plus, French cable often includes lead sheathing and plenty of grease, causing even more headaches for a wire-chopping system, he says.
Because of such differences in feedstock, the capacity of U.S. scrap companies using MTB equipment is generally more than twice that of French or other European firms using the same machinery, says Jean Philippe Fusier, MTB's general manager.
MTB acquires its cable and wire mostly from within France, with some material originating in Belgium, Austria, and Italy. The material is collected mainly by MTB trucks from three sources in roughly even amounts of one-third each : clean industrial scrap, material supplied by other scrap processors, and "field scrap" from government sources such as France's state-run electrical and telephone companies.
MTB also processes some cable on a tolling basis for other firms—sometimes in lieu of selling them MTB technology—and occasionally processes material other than cable. Recently, for instance, the company chopped up several tons of coins for the French government.
At its Trept facility, the company operates three processing lines, one dedicated to aluminum and two for different grades of copper. Each line is arranged differently—the first copper line, for instance, processes higher-end material and, thus, needs just one shredder while the second line, which handles lower-grade wire with a lot of steel, needs two.
All three lines, though, include one or more of the same basic building blocks of MTB equipment. First, the cable or wire is fed by crane into a BDR "prechopper" shredder that reduces nonferrous material to pieces ranging in length from 4 inches to 1/2 inch—as opposed to the 1 foot or longer sections that many processors must work with, Sevilla notes. Next, the material moves through a TMR vibrating magnetic separator to remove scrap steel (MTB recovers about 200 mt a month of ferrous material), then into an automatic bin feeder, followed by a BAT granulator that reduces pieces down to roughly 1/4 inch. Plastic and metal are separated by an air/density unit, followed by screening on a TAM sieving table before the material falls into either a barrel or large nylon bag for shipment by truck to customers.
This same machinery is also sold by MTB to other processors worldwide, either new or second-hand (as the equipment currently being used in MTB's three processing lines eventually will be). In addition, MTB also manufactures some equipment, such as an eddy-current nonferrous separation system, for its own use but not for sale.
Because the quality of cable and wire in France is declining each year, MTB must spend more and more time and resources on sorting the material before processing. Fifteen years ago, Fusier says, much of the telephone cable came in as clean, insulated wire that could be fed directly into the shredder. Today, more and more of MTB's small work force must help sort the inventory. This has forced the company to plan for a new sorting system. MTB hopes to put up two new buildings, one for aluminum and another for copper, so that all future sorting can be done indoors with plenty of room to spread out the material. Not only should this eliminate the mountainous piles of inventory around the company's property, it should also triple sorting capacity, Sevilla predicts.
In addition to the copper and aluminum it processes, MTB manages to recover and resell much of the lead and plastic from its cable and wire that might otherwise be considered wastes or unwanted contaminants. The lead goes to battery manufacturers while the plastics are used by a variety of companies, from chemical concerns to road-builders, Sevilla explains. About half of MTB's plastics still must be landfilled, though, which is becoming difficult under France's increasingly strict environmental laws.

Making (and Remaking) Machinery

As an equipment maker as well as a processor, MTB constantly revises and improves its machinery to meet its changing needs. Likewise, before MTB offers a new machine to customers, it first tests the prototypes on its own processing lines, sometimes for a year or more before putting the new unit on the market.
"We have an entire processing plant that serves as our test center," explains Sevilla. "Unlike other suppliers, which may run tests on small lab units with results 'scaled-up,' tests here are performed on a full-production basis. We, and our customers, want to know real-world results."
Even equipment that MTB doesn't normally use itself—such as a new tire-shredding system—will get its first tryout in Trept.
MTB equipment is designed by the company's cofounder, Guy Sosson, who sold his half of the business to Francis Sevilla early in the company's history. The 75-year-old Sosson now works mostly out of his Lyon office, designing equipment by hand rather than on computer, and visiting the Trept facility weekly to oversee work by the company's other designers.
The basic components for each MTB machine are built by quality parts suppliers that have worked with the company for all of its 20-plus years. These include large factories that manufacture reactor vessels for France's nuclear power industry and shafts for the country's submarines.
Each supplier specializes in a single part for MTB equipment, and in certain cases—such as welding shredder frames—is trained to do the job in an MTB-specific way, Fusier notes.
MTB even purchases a specialty steel it likes and ships the material to its suppliers so it knows exactly what sort of steel goes into its products, Sevilla adds.
In Trept, the various components are assembled, final welding is completed, and the finished machines are painted MTB's signature yellow. Every completed machine is also tested before being shipped to a customer. Each shredder, for instance, is run for at least four hours to check for noise, temperature levels, and other quality concerns.
Durability is a key feature of MTB's machines, company officials note. The firm's shredders and granulators feature an extremely tough four-sided blade—a rectangular block with sharp edges all around that neatly cuts through cable, Fusier notes. When one edge dulls, the user can just turn the blade to one of the remaining sharp edges—which, given the blades' tough construction, enables users to process material for several weeks before removing and sharpening the blade block. On average, MTB users report that their blades cut some 800,000 pounds of wire per edge before needing to be changed.
By comparison, conventional machines use only a single-sided blade that must be sharpened after just one or two days of use—about 200,000 pounds of processing, says Sevilla. So with four edges each processing at least four times as much material, MTB boasts that its blades last 16 times longer than conventional blades.
In addition, MTB's machines are designed for easy maintenance. For instance, it takes well over an hour to regap the blades on most granulators, notes John Groscurth, while the same task on MTB's equipment takes less than 10 minutes. Likewise, the company reworked its designs and processes until the act of changing granulator blades—which once took a full day—can now be done in two hours, Fusier says.
Maintenance in all its facets is one reason why Mike Rosen, president of Atlas Metal & Iron Corp. (Denver), likes his BDR 2400 prechopper shredder. Changing blades is easier on the MTB unit than on any other shredder he has used, Rosen says. He also praises MTB's service, noting that a company official cut short a vacation to visit Atlas Metal's facility when the shredder needed to be repaired.
Likewise, Toby Shine, president of Shine Bros. Corp. (Spencer, Iowa), says MTB has "revolutionized" the wire-chopping industry with the extremely small pieces that its shredders can produce. As MTB's first U.S. customer (for shredders and, more recently, a granulator), Shine speaks from experience when he uses the "neatest-thing-since-sliced-bread" analogy to describe the two BDR 2400 units he operates.

Principles and Patience

Asked to define MTB's business philosophy, Francis Sevilla lists four guiding principles : integrity, quality, simplicity, and teamwork. The first three relate mostly to the company's products, while the fourth—teamwork—is a hallmark of how the company interacts with its customers, suppliers, and employees.
MTB likes to consider itself a "familial factory," Sevilla notes, where employees are paid well, treated with respect, and rewarded for good work. "When MTB earns money, employees earn money," he says of the company's production bonus system. In return, MTB benefits from a skilled work force and extremely low turnover.
If there is a fifth principle guiding MTB, however, it must surely be patience—both in dealing with the realities of conducting business in France and planning for the future.
MTB likes to reinvest profits in itself. Currently, in fact, the firm is ready to expand by basically doubling the size of its machinery assembly facility, putting in a modern paint booth, adding several more overhead cranes, and making other improvements. Plus, MTB wants to put up those new buildings for sorting aluminum and copper wire. But all these projects are several months overdue largely because of labor and supply issues. "It takes a long time to put up a building in France," Sevilla explains.
The company also wants to expand processing. Right now, it doesn't have enough employees to run all three lines at 100-percent capacity. But MTB has an incentive to add just technology, not employees. The reason : In France, companies with fewer than 50 employees enjoy a lower tax rate than larger firms and can hire non-union workers. But once a firm reaches 50 employees, much higher taxes kick in and the work force must be unionized. As a result, MTB would need to at least double in size just to overcome those extra costs, Fusier notes.
Still, Francis Sevilla doesn't let this stop him from thinking long-term. In his office, for instance, is a cabinet with at least 10 years of new projects to consider. Also, MTB is launching a large spare parts facility in Denver to better serve its North American customers. In addition, the company hopes to boost sales of its granulators and separation tables, which have just barely penetrated the U.S. market.
Plus, MTB recently launched a new line of BDD tire shredders that are selling well in Europe and, the company hopes, will appeal to North American customers as well.
MTB also plans to seek both ISO 9000 and ISO 14000 certification.
And the list goes on ...
Given such diversified interests and demands, MTB could easily be excused for losing its focus. Instead, the company seems to clearly know what it wants and where it's going. Integrity, quality, simplicity, and teamwork are all part of the answer—but there may also be a historical precedent.
MTB resides in a region that was once a provincial capital of the Roman Empire. Lyon even features a museum about its classical heritage. The Romans, you may recall, worshiped a god who could look in two directions at once, a feat that MTB's eggs-in-both-baskets way of doing business can match any day, n'est-ce pas ?