

The Eldan Recycling *ScrapBook*

Autumn 2011



24 DIFFERENT
TYPES OF RUBBER



REPUTATION BREEDS
SUCCESS



INDIA - A MARKET HOTTER
THAN INDIAN CURRY?



STILL THE FIRST CHOICE
IN RECYCLING EQUIPMENT



A HAPPY CUSTOMER
ALWAYS RETURN



Toni Talks

So far, 2011 has brought us many interesting meetings and business opportunities. We have expanded our business activities into new geographical areas and have also introduced new technical solutions in all our recycling fields.

Tyre recycling is one of the most important fields for Eldan Recycling. We have several system solutions for this field, which gives us flexibility regarding processing of different input and production of various output materials. Using our systems means you can recycle any kind of tyre - from older textile tyres to the largest mining tyres - and turn them into your desired end product, be it rubber powder, crumb or chip.

Within the field of tyre recycling we have developed new techniques for making black crumb from car tyres. We have also developed steel cleaning lines that make it possible to efficiently increase the value of the steel wire component. These newly developed systems, in addition to our existing solutions, all make Eldan the most competitive supplier of tyre recycling solutions in the world. In the new systems for steel cleaning, and in the upgrading systems for powder and crumb, one of the most important elements is the hardware in the downsizing equipment. The Super Chopper and the Multi-Purpose Rasper are the well-known workhorses in all of Eldan's complete tyre recycling lines.

In 2011 we started to promote various solutions for tyre chip production for tyre derived fuel (TDF), and over the year we sold several large TDF installations. When comparing with other European and North American competitors, we have been able to show that our solution is the most economical and technically stable alternative. Eldan has supplied equipment for TDF production to the largest cement factories in Pakistan, among others.

We are also proud to say that we've now introduced our Heavy Granulator (HG) series for alternative fuel production. The introduction of the product onto the market has been a great success, and we are doing well against the traditional German and Austrian alternatives.

Over the year Eldan has sold and installed equipment and complete recycling lines all over the world, and we can proudly say that we are stronger and larger than our main competitors. This gives our customers better service and support, if and when needed during operations.

We are also proud of the fact that our track record includes over 830 complete lines and 7100 individual machines supplied worldwide. We know recycling equipment!

Toni Reftman
Managing Director

Content

Eldan in brief	4
From 450 pieces of tyre to 2 tons of 99,9 pure rubber in 1 hour	6
24 different types of rubber granulate	10
Recycling in India – a market hotter than Indian curry?	17
Inside Eldan	19
Environmental work as part of production	21
Still the first choice in recycling equipment	23
Ambiental 2011	25
A happy customer always returns	28
Reputation breeds success	32
Around the world	36
Contact details	38

Eldan Recycling ScrapBook

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If you wish to order more copies of the Eldan ScrapBook or if you have any suggestions for upcoming issues please mail us at newsletter@eldan-recycling.com

Eldan welcomes



Søren Wichmann as Area Sales Manager. Søren has a background in technical sales worldwide, from the construction and automotive branches, among others. He will focus on the markets in Scandinavia, Benelux, Southern Europe and the Far East.



Vadim Michagin as Area Sales Manager for the Eastern Europe region. Vadim has a background in the automotive business world, working with NGO's and car dealers, primarily in Africa and Eastern Europe



Ken Moulin as New Equipment Sales, based in Sanborn, New York, USA. Ken brings with him fourteen (14) years of experience in outside sales, in territories in the USA and Canada, representing industrial product components, and covering a wide range of markets. He will be responsible for new equipment sales and support in the USA and Canada.

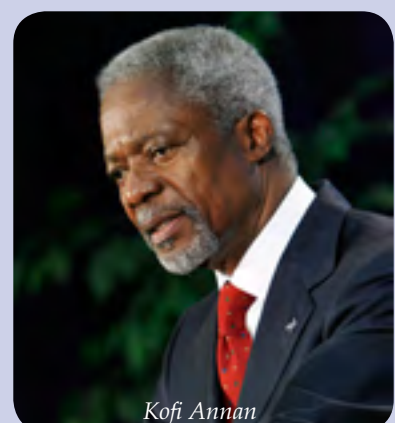
Kofi Annan shares the Gothenburg Award for Sustainable Development award* with food supply project Tigray in Ethiopia

Cultivated land is essential to the development of society and competition for land is intensifying. The need for food is expected to grow by some 70% by 2050 while there are already a billion undernourished people on the planet today. Africa is the continent with the most difficult conditions. However, it is possible to change this trend by allowing agriculture to become the motor behind development in society through ecological and sustainable social and financial means.

For this reason the Gothenburg Award for Sustainable Development 2011 is awarded to a person and an organisation for their work in the field of sustainable food supply;

- The former Secretary-General of the United Nations **Kofi Annan**, who has become a leader of Africa's green revolution.
- **The Tigray Project**, which started out as a local initiative aimed at small farmers in northern Ethiopia and has resulted in both better harvests and less environmental impact.

*The prize is administrated and funded by Eldan Recycling, the City of Gothenburg, and ten other companies.



Kofi Annan

The Danish Royal Reward Medal

We are very pleased to announce that one of our employees, **Kaj Madsen**, has received the Royal Reward Medal (Kongelige Belønningsmedalje) for his meritorious work at Eldan Recycling.



The Royal Reward Medal is awarded after 50 years of admirable work in the same private company, or in connection with resignation after at least 40 years of employment. The process of receiving this medal is initiated through a written application from the employer to the permanent secretary of Economic and Business Affairs. The application is followed by a six-month process that includes recommendations, visits and interviews with both the employer and the employee.

Kaj started his employment at Eldan as a painter in 1971. Later, he was assigned stockroom duties, including the receipt and shipment of merchandise. As the company grew larger, Kaj was assigned his primary tasks; the packing and shipping of spare and wear parts.

Apart from his long employment, there are additional reasons why Kaj received the esteemed Royal Reward Medal. Kaj has always been very dedicated to his work. Although the company has developed its product range considerably over the last 15 years, he has always followed this development with great interest. He has great insight into our products and his long experience has helped the company in sending the right goods to the right customers. His experience and dedication are invaluable to Eldan.

Once Kaj has received the Royal Reward Medal, he must thank Queen Margrethe II of Denmark personally, at an audience at Amalienborg castle. A detailed description of this procedure, and the notice of the medal issuance, are enclosed with the medal.



Kaj Madsen



Kaj Madsen receives the Royal Reward Medal from former Managing Director Steen Larsen and current Managing Director Toni Reftman

Eldan delivers two complete tyre lines in India

During the autumn of 2011, Eldan is installing two complete tyre recycling plants for customers in Mumbai. These plants are a big step forward in a market that is of great interest to Eldan. At the exhibition Tyre Expo India in Chennai in July, Eldan was very well received by potential customers, and had a well attended booth. "It is vital for Eldan to be present at exhibitions such as Tyre Expo India, as this is one of the markets in which we see the greatest

potential in the next few years. India is one of the fastest expanding car markets in the world, meaning that the amount of scrap tyres is going to increase dramatically" says Henning Nørgaard, Area Sales Manager at Eldan.

To maintain presence in India, Ferrostaal India Pvt Ltd has been appointed as agent to promote Eldan's range in the region.

From 450 pieces of tyre

Seder Group is established all over KSA (Kingdom of Saudi Arabia) and the other GCC (Gulf Cooperation Council) countries, and is a highly esteemed company in the region. The group includes companies active in a wide range of industries, ranging from basic domestic products and services to the most advanced telecom and electromechanical works. The subsidiary company Seder Environmental is currently involved in a prestigious tyre recycling project in the region, in cooperation with Jeddah Municipality. Their aim is to turn the huge quantity of scrap tyres dumped in the area into reusable materials, and thus reduce the environmental impact of these tyres.

Disposal of a piled-up problem

In 2008, the municipality of Jeddah, KSA (Kingdom of Saudi Arabia), decided to find a solution to the waste tyres that were continuously piling up in the area. Having heard international success stories about tyre recycling projects, the municipality started to look into the matter and the market. They were looking for both the equipment and someone to operate it.

Seder Environment is part of the prominent Seder Group, which is involved in various projects in KSA and other Middle Eastern countries. In KSA they are active in different municipality waste recycling and sorting projects. The recycling of waste tyres was considered a major problem, and Seder Environmental felt that this issue had not been taken care of properly.

In 2010, Seder Environmental and Jeddah municipality decided to deal with this problem together, and they agreed on a long-term contract for the recycling of waste tyres in the area. It was now time to turn this waste pile into attractive reusable materials.

The specifications for the recycling plant were that it must be able to process whole car and truck tyres, with no prior de-beading. Processing capacity needed to be

4 tons input per production hour. From the used tyres, the plan was to produce TDF (Tyre Derived Fuel), tyre granulate (1-4 mm), crumb rubber, steel (iron granules) and textile (fibre).

From truck tyre to 99.9% pure rubber

In 2008, an Eldan tyre granulation and separation plant (E4000T), as well as a Jet Air Filter, were acquired. The plant has an input capacity of 3.3 tons per production hour (producing 1-4 mm granulate). Thanks to the Jet Air Filter, the granulate produced is 99.9% free of separated steel and textile. The plant is designed for processing whole truck and car tyres with a maximum diameter of 1200mm and a maximum width of 450mm, with no prior de-beading required.

The tyre granulation and separation plant (E4000T) consists of one Super Chopper (SC1412T), one Tumble Back Feeder (TBF), one Multi-Purpose Rasper (MPR160T), two Overband Magnets (DM1450), one Silo (V4), two Fine Granulators (FG1504), two Classifiers (PC10T and PC15T), one Drum Magnet and one Aspirator (UP1750).

The Super Chopper is a powerful pre-chopper used for the coarse size reduction of tyres. It can process whole car and truck tyres (including super singles) down to a



to 2 tons of 99,9 % pure rubber in 1 hour

size more suitable for shredding, (approx. 50-300mm) with no prior de-beading. The Super Chopper does the heavy downsizing work, thus increasing the capacity of the entire plant. A Disc Pusher is occasionally used to assist the Super Chopper, by feeding it truck tyres.

The Tumble Back Feeder ensures a continuous flow from the Super Chopper to the Multi-Purpose Rasper – thus ensuring an optimum load/utilisation of the machine. The Multi-Purpose Rasper further reduces the shreds to granulate, and most of the steel embedded in the input tyres is separated. This is the first granulation stage, and the input shreds (50-300mm) are then reduced to 12mm in a single pass, with up to 98% of the steel being removed. The machine is equipped with exchangeable screens, the output size being determined by the actual screen size installed. The output material – chips – can be used as TDF (Tyre Derived Fuel), or they can be further processed in the plant.

The chips and liberated steel are transported past an Overband Magnet, which removes a large proportion of the steel from the rubber chips (90-98 percent). The steel is diverted to one side. The Silo ensures a continuous flow of chips into the Fine Granulator, which further reduces the chips in size, with further textile being

liberated. The Fine Granulators are also equipped with exchangeable screens, with different hole sizes determining actual output sizes – for another output size, just switch the screens. The first Fine Granulator is used in the primary granulation stage, which separates up to 50% of the textile contained in the tyres. The material is first run past a Drum Magnet that removes the steel component (1-10%), and then past a Classifier, which removes liberated textile (40-50%). The second Fine Granulator is used for the final granulation stage, in which further textile or steel is liberated and then removed in the second Classifier and Drum Magnet.

Finally the remaining textile (10-20%) is removed in the Aspirator. The granulate is divided into three sizes: the oversize fraction (back to the Silo for further downsizing and separation), the main fraction (run through the Aspirator and then considered end-product), and the fine fraction (the end-product).

Two-year check-up

When Seder Environmental was contracted for operation of the plant in 2010, the plant was inspected to determine its current condition. Some of the equipment had been standing outside in strong winds, heat and ➤



Left to right; Henning Nørgaard (Area Sales Manager, Eldan Recycling), Osman Mohammed Osman (Project Manager, Seder Environmental) and Rajesh Sivarajan (Sales Manager, Ferrostaal Dubai office)

sand for the previous two years. As expected, the harsh weather conditions had indeed affected the equipment, but nevertheless, it was still in great shape. Only minor repairs had to be made in order to get them into their original condition. “The machines manufactured by Eldan are strong and robust. The installation was done without problems or delays,” says Othman Mahmoud, General Manager/Logistics Manager at Seder Environmental. “The plant is also completely automatic and is easy to learn to operate. Thanks to Eldan’s introduction and back-up, our technicians were well equipped to handle operations right from the start. As the tyre recycling is done without de-beading or pre-handling, the operational safety is also the best, and the whole system is controlled automatically. The fact that it’s a multi-size system gives us the flexibility to produce different output rubber sizes, according to our customers’ specific requirements.”

The inspection went very well, Seder Environmental took over the recycling in Jeddah municipality early in 2011, and the equipment is running like clockwork.

Eldan - quality that lasts

Over recent years, Eldan has focused particularly on the Middle East and GCC countries. When entering a new market, it is very important to first focus on the region of the key actors, to create a good reputation for your company and products. “It’s no news that there’s a lot going on in this region in general, and in particular in the KSA, which is a huge economy with over 27 million inhabitants.

They have a well established domestic consumption of products manufactured in the region,” says Henning Nørgaard, area sales manager at Eldan. “Seder Group has a strong local strong presence, and we know that they’ll be playing an important role in the development of the recycling industry in the region. So it’s an extra privilege for us to be a part of this successful project.”

The respect between Eldan and Seder Environmental is mutual, and Osman Mohamed Osman, Project Manager at Seder Environmental says; “Eldan Recycling has been identified as a strong, experienced and reliable partner for this project, and everything has gone very well. We want to grow in the recycling industry, having Eldan and Ferrostaal as successful business partners.” Because of the immediate success of the tyre recycling project in Jeddah, discussions about future recycling projects have already been started – not only for tyres, but also for other scrap materials, such as metals.

However, the tyre recycling plant at Seder Environmental is not the only successful plant in the region. Eldan has also supplied equipment for plants in Sharjah, Jordan, etc, all of which have been running for over 7 years. “Eldan Recycling has become a well-known brand of recycling equipment in the region. When we mention that we use Eldan equipment, our customers know that we produce good quality products. The result and reputation of the equipment speaks for itself!” says Osman Mohamed Osman. “There is considerable demand for our products, and the market in Saudi Arabia has great

“We are very happy with the excellent support received from Eldan Recycling.”

Osman Mohamed Osman, Project Manager at Seder Environmental

Seder Group

Location: Riyadh, Jeddah, Kingdom of Saudi Arabia
Founded: 1981
Employees: 12,000

Seder Group is a group of companies involved in various industries, ranging from the ranging from basic domestic products and services to the most advanced telecom and electromechanical works. Since their beginnings in the 1980’s, they have grown from a small family-owned business to a large group employing 12 000 people. Activities include: Operations and Maintenance, Construction, Technical Building Services, Telecommunications, Direct Mail Services, Housing Compounds Management, Catering, Travel and Tourism, Water Supply, Janitorial and Housekeeping Services, Pest Control Services, Solid and Liquid Waste Management, Scrap Metal Collection and Environmental Services. Our aim is to continue to serve in an exemplary manner, to build on the existing confidence in the Client/Company relationship. We will continue to recruit specially trained staff, to ensure high quality performance and workmanship. Our ultimate goal is to provide excellent and cost-effective services.

Seder Environment Tyre Recycling Division

Location: Jeddah New Landfill Site, Jeddah, Kingdom of Saudi Arabia
Founded: 2011
Employees: 28

Seder Environment is part of the prestigious Seder Group, which is involved in various projects in Saudi Arabia and other Middle Eastern countries. Seder Environment is involved in waste recycling and sorting projects in various Saudi municipalities. They recognised the waste tyre problem in Saudi Arabia, a problem not then properly addressed by anyone. They signed a long-term contract with the Jeddah municipality for recycling the waste tyres in the municipality, and they intend to turn this waste pile into reusable materials such as: TDF, tyre granulate, crumb rubber, steel (iron granules) and textile (fibre).

potential. The waste tyres keep on coming, and we see a very bright future for our company.”

As well as having its own sales offices in five countries, Eldan is also represented by agents all over the world. In the KSA Eldan is represented by Ferrostaal AG, more specifically Andreas Krieger, Director of Equipment Solutions, and Manoj Kumar M, Sales Manager of Environmental Technologies. By having local representation, relations between customers and Eldan are strengthened. “We’re very happy with the excellent support we’ve had from Eldan. Especially helpful during the installation process was the Service Manager, Mr Carsten Nielsen, and the Area Sales Manager, Mr Henning Nørgaard, who were always available to us” says Othman Mahmoud, General Manager/Logistics Manager at Seder Environmental. “Ferrostaal has also been of great assistance through their local offices in Jeddah, as well as in Dubai. Being able to contact the local representative as needed, at any time, is an additional assurance. We look forward to a fruitful cooperation with both Eldan and Ferrostaal. The entire project has been very successful.”

Seder Environmental is already planning for the future of the project, as they see many opportunities for other recycling projects in the region. “Seder has been very happy with the running of the plant since production started early in 2011” says Manoj. “The quality of the output has been examined by their customers, and the response has been very positive. They’ve been approached by many prospective customers interested in buying the plant’s products.”

24 different types of rubber granulate

PVP Triptis GmbH is not a typical tyre recycler – their focus is instead on the production of rubber matting. This German manufacturing company specialises in the development and manufacture of products made of rubber granulate combined with polyurethane – e.g. for sporting, construction, acoustic and transport applications. Controlling the entire process, from granulate production to the finished product, they know the importance of quality.



Looking for the best

As co-owner and one of PVP Triptis GmbH's managing directors, Max Madelung has been involved in the company from the beginning. PVP was founded on curiosity and great opportunities.

PVP recycle end-of-life tyres and turn them into granulates or powders of various sizes, which would then either be sold to external customers or further processed internally in the production of rubber matting. In this production, various types of granulate are combined to produce cylinders, which are then cut into mats and rolls for a large variety of applications. These products are then used in gyms, sports halls, rooftop gardens, as artificial turf, and in hundreds of other varied and interesting applications. The key to the company's success is in producing its own raw material for making these products. This philosophy allows for extensive R&D and for the customisation of products for specific customer needs.

In order to achieve the flexibility required in granulate production, a turnkey tyre recycling plant needed to be installed. Various suppliers were considered, with the emphasis on power efficiency, easy maintenance and low levels of downtime. In the late 1990's there were not many companies supplying complete tyre plants with references to prove it. "Comparing Eldan to other players on the market, Eldan was clearly the leader. I remember looking at some of Eldan's larger competitors. Some of the com-

peting plants were about 50% more expensive and used about twice as much power as the one we have. Some alternatives were also much larger in size, which would have forced us to extend our production facility considerably" says Max.

Although at that point Eldan had not yet supplied a complete tyre recycling plant in Europe, they still had an extensive track record in the global tyre recycling industry. Germany had for some time been an established market for Eldan and they had already installed around 60 cable, aluminium and WEEE (Waste Electrical and Electronic Equipment) systems there. "Eldan stands for solid and excellent quality, as well as smoothly running equipment, produced and developed from many years of experience. Eldan already had about 18 year's experience of tyre recycling, so they knew what they were doing, and had the reputation to prove it" says Max.

An E6000 line installed in 2000

In 2000, a complete and customized Eldan tyre recycling plant was acquired by PVP. Specially built for them, the plant included one Tyre Feeder, one pre-chopper (Super Chopper), and two tyre granulation and separation lines (D3000T). The pre-chopper had capacity enough to supply both tyre granulation and separation plants with tyre shreds. The entire plant had an average capacity of 5 tons of input per production hour, producing 0-5 mm granulate. ➤



In October 2000 the plant was delivered to Triptis, and five months later single-shift trials were started. As PVP was completely new to tyre recycling and processing, there was still much to learn. In March 2001, PVP started to construct the bale production facility for rubber mat production.

In December 2001, the trials with the Eldan plant were completed, and PVP started to run the plant on a single-shift basis. In 2002, processing was stepped up and started to run in 3 shifts, 5 days a week.

Booming business

Rubber mat production has been very successful for PVP, and in December 2007 the company realized that they would need to increase their rubber granulate production to meet future raw material requirements. At this point, they needed so much crumb rubber for their own production that they were forced to purchase more than

1100 tons externally. So, at the beginning of 2008, PVP decided to double their own plant capacity.

To understand the developments and innovations introduced over the 8 years since they purchased their first equipment, PVP once again researched the market for the best possible solution. As before, power efficiency, service, and flexibility in output materials were all vital requirements. This time there was yet another factor added to the equation – the plant had to be installed and operational within one year.

A true partnership

Once again, PVP’s research showed that Eldan was the best alternative. “We knew the technology already acquired from Eldan, and were already very satisfied. Looking at capital expenditure, running costs, delivery dates and installation, there was no other company that came close to competing with Eldan’s offering,” comments Max.

In February 2008, PVP acquired one Tyre Feeder, one complete Eldan tyre granulation and separation line (E4000T), one Quality Upgrade System, and lastly, one full-size Powder Plant. Like the system purchased in 2000, the new equipment would also be processing both car and truck tyres. The customized system has an average capacity of 4 tons of input per processing hour, and produces 0 - 4mm granulate and powder.

Unlike the plant purchased in 2000, which featured two

parallel production lines, this new plant only had a single line. Thanks to their new Quality Upgrade System, PVP could now benefit from the ultimate quality possible to obtain from the main rubber granulate fraction, which is 99.99% free from textiles and steel. If necessary, the output can be further processed in the Powder Plant, to meet customer and market requirements for powder down to 50 Mesh size. The Powder Plant is a separate unit, and is only run when powder production dictates. ➤



Top left: Used tyres on their way into the SuperChopper, Top right: Separation Table (C26), Bottom left: Rubber granulate Bottom right: Rubbermat from PVP

“If I got the opportunity to rebuild our production facility ...One thing is however sure – I would always choose Eldan as our partner again”

Max Madelung, Managing Director and co-owner PVP



Throughout this project, PVP and Eldan have worked in close cooperation, which is vital when working to such short deadlines and when supplying technology tailor-made to customer requirements. “Good two-way communication and great project management is fundamental in projects with deadlines as short as this one. When we had our first meeting with PVP in February 2008, they didn’t even have a facility to install the equipment in – there was just an empty field” says Bjørn Laursen, Product Manager at Eldan. “However, I’m proud to say that we delivered the equipment over July and August, and PVP started granulate production in November 2008. The close collaboration between Eldan and the team at PVP, and in particular with Technical Manager Jürgen Niemann was the key to success in getting everything up and running in just 9 months.”

Proven technology is Eldan’s motto, and PVP got to experience this firsthand. “Over the years, Eldan and PVP have been developing and modifying various parts of the plants, so in 2008 PVP was able to take advantage of the latest and most modern technology

available. The difference in technology between the plant supplied in 2000 and the new one was huge, so it took us quite some time to get used to the new one” says Max. “The developments that impressed us most were the electrical control boards, with which you can control the power and production of the entire plant, and also the Separation Table (C26), which is easily our favourite machine.”

Eldan only as successful as their customers

Although PVP uses Eldan tyre recycling equipment to produce granulates and powders from 0-6mm, this is not actually the company’s main business. “We’re not a recycling company, but rather a company producing rubber matting for various applications” says Max. “We produce 24 different types of rubber granulate and powder, 60% of which is used in our own production, with the other 40% going to external customers in Germany and abroad. We have a great competitive advantage in the fact that we can customize our rubber according to customer requirements.”

PVP predicts that they will process 32,000 tons of tyres in 2011, and produce 20,000 tons of rubber granulate and rubber powder. In order to get the best possible quality in the end product, they are very specific about the quality of the tyre input.

The fact that Eldan has its own production facility in Denmark is an advantage, according to Max: “As the equipment is custom-made, we know that Eldan has complete control over the final quality of the plant. These machines communicate with each other in a way that equipment sourced from several different manufacturers would not. As with any investment, we take good care of our equipment, and we do the recommended maintenance. We’ve had two of the four lines for over 11 years, they’ve run for more than 50,000 hours and we still have an average uptime of up to 80 percent! If there are serious problems that we can’t fix on our own, then we know that Eldan will be there within 8 hours, with personnel and/or spare parts. As we run the plant in three shifts, a stop in production is very costly for us. We’re only earning money when we’re up and running.” The importance of regular maintenance cannot be

stressed enough. “If you take good care of your equipment, naturally it will last longer and run more smoothly. PVP has had two of their lines since the beginning of 2000, and I can tell you – they almost look like the new machines” says Bjørn. “To run the equipment they only use qualified personnel, people who have been in the company for a long time. Sometimes it seems like PVP know more about the end products produced by our equipment than we do, so our relationship with PVP is of the highest importance to us.”

Being a successful company does not only depend on the manufacture of good products or services. The true capital of a company lies in the experience of the employees who have been with the company for many years. “I know that PVP and Eldan are very similar in the way we regard personnel and customer relations as top priority. Eldan is only successful if their customers are successful with their Eldan plants. Here at PVP we see it the same way. Only when our customers are successful with our products will PVP be successful, as customers will be coming back for more.” says Max. ➤

Mutual collaboration — a rewarding partnership

Since the foundation of Eldan in 1956, the company's byword is to listen to its customers and to give them what they need. "You could say that there are two main reasons why we keep choosing Eldan; the equipment and the company" says Max. "The equipment is flexible, and we can produce a number of different end output fractions in our facility. It's also very power-efficient, which is vitally important if you have high electricity costs, as we do in Germany. At the moment, the Eldan equipment uses 1.5MW per production hour, so PVP uses about 7 GWh annually. Equipment maintenance, including knife and screen change, is easy and the machines are built to be operator-friendly – an important criterion in reducing downtime on the lines."

Even though tyre recycling has been a hot topic in Germany over the last decade, Max sees the future as being bright: "Firstly, we're seeing an increase in the demand for products made from rubber granulate. Secondly, the demand for rubber asphalt roads is increasing, as test results have shown that noise is significantly reduced on this type of road, and that they also last longer, thereby saving costs. Once this application is fully established, there are many roads in Germany that need to be repaired and covered with rubber asphalt."

Finally, as an experienced tyre processor – is there anything PVP would do differently a third time? "If I had the opportunity to rebuild our production facility, there are naturally some things I would change. Maybe I'd relocate a few of the machines, or perhaps I'd go for a larger facility. One thing is for sure however – I would always choose Eldan as our partner again" says Max.



PVP Triptis GmbH

Location: Triptis, Germany

Founded: 2000

Employees: 60 employees

Max Madelung, managing director and chief of operations and production in Triptis

Charles Course, managing director

Susanne Madelung, research and development department and vice president of ETRA (European Tyre Recycling Association)

PVP Triptis GmbH is a manufacturing company specializing in the development and manufacture of products from a mix of rubber granulate and polyurethane. The company is the only one in the world that manufactures its own raw material (rubber granulate) for its production of rubber sheets and rolls.

PVP's granulation division produces approximately 20 000 tonnes of rubber powder and granulates per year. Currently, there are more than 2 million m² PVP products installed as mats or shaped sections around the world, as: PROTECTMAT (construction applications), ACOUSTICMAT (sound/noise applications), SPORTMAT (sports and equestrian applications) and TRANSMAT (transport matting).

With "Technology in Gummi – Made in Germany" – PVP satisfies the highest quality standards according to DIN EN ISO 9001:2008 and DIN EN ISO 14001:2005. The variety of products and services offered by PVP demonstrates a high degree of technical competence and innovation. PVP contributes to a sustainable environment, by conserving resources while at the same time imposing the highest standards of quality on its products.

Brief background:

- 2000: the foundation of PVP
- 2002: the bale production, and tyre processing facility was finished. The company was reconstructed and two shareholders left the company.
- 2004: together with an UK financial investor, the new PVP was created.



-a market hotter than Indian curry?

Eldan Recycling is focusing on India. During the autumn, two complete tyre recycling plants have been installed in Mumbai, and there is already a noticeable increase in the demand for equipment. By introducing Eldan recycling equipment onto the Indian market, we are planning on reshaping their views on recycling in a revolutionary way over the next few years. At the exhibition Tyre Expo India in Chennai this July, customer requests and feedback supported this prediction, and our participation at the show was declared a success.

Up to 24 sizes of recycled rubber

Eldan has been active in the development and manufacturing of tyre recycling equipment for more than 25 years. The first complete tyre granulation plant was installed some 20 years ago, and since then over 200 plants have been installed all over the world.

For tyre recyclers, the main priority is getting at the rubber. The cleaner the material is, the more reuse potential and value it has. When reducing scrap tyres in size, the non-rubber fractions (e.g. textile, steel, nylon) are liberated in the automated process. The smaller the granulate gets, the cleaner it gets, i.e. depending on how pure an output the buyer requires, the material can be further reduced in size. Our process and technology focus is on "output per customer requirements". ➤

During the autumn of 2011, Eldan supplied two complete tyre recycling systems to customers in India, and additional projects are in the pipeline. “Due to the huge potential in the tyre recycling area in India, there was a unanimous decision at Eldan to take part in Tyre Expo India in Chennai. I knew that the exhibition would give us many interesting leads, but I must admit that it far exceeded my expectations. We’re already discussing a lot of interesting projects for the future” says Henning Nørgaard, Area Sales Manager at Eldan. “As the recycling industry is already well-developed in India, we had many well-informed visitors to our booth and we had a lot of good discussions with them.”



Henning Nørgaard (Area Sales Manager, Eldan Recycling) with Ravi Narayan (Director of Projects, Ferrostaal India)

Depending on requirements on input and output capacity, or output size and quality, Eldan offers standard or customized plant solutions according to customer’s needs. These are “multi-size plants” - giving the customer complete control over the production of a various range of output sizes. Different sizes of rubber granulate and powder can be produced, meeting all the needs a customer might have. Changing the output size is easily achieved, by the quick and simple changing of the screen combination in the machines. The various output products (i.e. shreds, chips, granulate and powder) each have their own application areas in the recycling industry. Tyre chips can be used for tyre derived fuel (TDF), while rubber granulate can be found in artificial football fields. Granulate output is 99,9% free from e.g. steel and textile.

Additional equipment can be used to further clean the rubber, steel and textile. The rubber can be turned into powder, at sizes down to 50 MESH, and up to 99,99% free of textile and steel. The steel can be cleaned (to 98-99% free from textile and rubber) and reused in steel works.

Steel cleaning opportunities in India

Tyre recycling is not unknown in India, but automated processes to achieve outputs of 99.99% pure granulate are only now starting to evolve, with the advent of Eldan’s plant in India. According to statistics from the Indian Automotive Tyre Manufacturers’ Association, overall domestic tyre production is forecast to increase in revenue in the coming years. The quantity of scrap tyres will increase as a result of the number of new cars. “India is a very interesting market for Eldan, and we see great potential in this area in the coming years” says Henning. “Firstly, the use of cars is not going to go down in this expanding region, so there’s going to be more tyres to recycle. Secondly, there’s still a lot happening in the application areas that use recycled tyres - we hear about new ways of reusing the material every day, and it seems like only the sky is the limit here. Thirdly, the tyre and car industries are moving towards using radial tyres, which contain steel and textile, instead of the current traditional Indian diagonal nylon tyres. This is going to create a new demand for steel cleaning equipment in India. It’s been predicted that by 2015, about 45 percent of these tyres will contain steel. Even though a lot of tyre manufacturers already have recycling equipment, they are going to have to extend their lines to include steel cleaning.”

Eldan is represented in India by Ferrostaal India Private Limited, a global company providing industrial services worldwide. As system integrators, Ferrostaal is not dependent on any one technology, and their business focuses on strong core businesses in the fields of; projects, trading & services, and assembly solutions. Decades of international experience in equipment solutions make Ferrostaal an ideal partner for Eldan. Apart from their insight into the region’s industries, Ferrostaal also offers Eldan customers the whole range of services: from consulting, solution design and tailor-made financing solutions, to installation and local after-sales services. Ferrostaal has its own offices in more than 40 countries, on all continents, and projects are realised by about 5300 employees.

Ravi Narayan, Director of Projects at Ferrostaal’s India Office, is well versed in the recycling process of the region; “In India, waste is not just waste anymore, and everyone from SME’s to large industries, as well as investors at large, have realized that there is a huge opportunity not just to earn money in this business, but also to contribute to our government’s endeavour towards creating a pollution-free and less hazardous environment. I see a continued interest and growth in all recycling fields, but in particular for scrap tyres. I’ve had many questions on the production of granulate and powder, including use of the end product, from a very diversified industry. Many potential customers are impressed by how power-efficient the process is, and the fact that it’s so easy to operate and maintain. I predict that interest for cleaning the steel from waste tyres is going to explode soon...”

Inside Eldan

For over 55 years now, Eldan Recycling has been one of the leaders in the continuous technical development of machinery and methods for ensuring that the processing of tyres, non-ferrous scrap and other materials can be an efficient and profitable business. The company started life in 1956, as E. Laursens Maskinfabrik A/S, a manufacturer of small cable shears and cable strippers. Over the years we have significantly expanded our program of recycling equipment to include a wide range of individual machines and complete turnkey plants. Our standard offering today includes equipment for the processing of tyres (including steel cleaning), cable, WEEE (Waste Electrical and Electronic Equipment), MSW (Municipal Solid Waste), aluminium (including used beverage cans), SLF (Shredder Light Fraction) and refrigerators.

Today, Eldan has a team of highly experienced employees at our own offices in Denmark, Germany, France, Australia and the USA, as well as a closely-knit network of representatives all over the world.

We are proud to present a track record of over 830 complete systems and 7100 individual machines installed worldwide. Eldan is the first choice in recycling solutions, thanks to our high-quality and durable equipment, and also to our experienced and service-minded personnel.

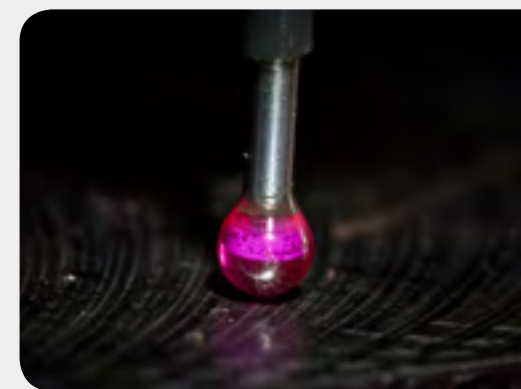
Most advanced technology

Eldan is one of the few companies supplying the recycling industry with equipment manufactured at its own production facilities, which are located at head office in Denmark, enabling information to be communicated quickly and accurately between different departments. Short communication paths ensure product quality and flexibility in production.

The production facilities consist of the most modern technology and production equipment. CNC controlled machinery is, for example, an integral part of our production environment. All Eldan equipment is, of course, manufactured in accordance with EC standards.

In 2008, Eldan expanded its production facilities by about 30%, to meet continued demand, and to cut production and delivery times. This also provided an excellent opportunity to conduct trials using various materials. Two new workshops have also been added to the facilities.

We also manufacture the electrical control panels in-house, which is much appreciated by our customers. By using these control panels, the user can control the power consumption and production of the entire plant, making production highly power-efficient. ➤



Environmental work as part of production

Proven technology and highly experienced personnel

Eldan employs over 100 highly trained and experienced persons. We consider it important to keep the experience gained in the company, and we are proud to say that most of our employees have been with us for 20-40 years.

As proof of our excellent quality control system and high quality equipment, we can point to the thousands of Eldan machines and plants that - with regular maintenance and correct operation - have been making profits for our customers for decades. The resale value of second-hand equipment is high, and used equipment is much sought after.

The team that meets your requirements...

Eldan offers a complete package of services, ranging from design and manufacture, to delivery, installation and after-sales service. As we are total suppliers of the equipment, we personally look after all your needs - from our first meeting to the moment you start production.

Our experienced travelling teams are available to install and commission new equipment and to train your personnel in its operation, adjustment and maintenance.

Our technical and service departments provide fast and efficient after-sales service, including any technical support that might be required.

The sales department run by our area sales managers, who are assisted by our sales coordinators and a strong worldwide network of representatives and distributors.

The project and engineering department includes our experienced project managers who follow up on all our projects, and collaborate regularly with the customer throughout the engineering, installation and running-in phases of the equipment.

The research and development department work closely with our customers. They constantly adapt, develop and design machines and complete plants to meet specific new requirements.

In the production department modern machinery is used in the manufacture of our high-quality equipment. These processes involve the machining department, the welding department, the assembly department, as well as our own in-house electrical department.

Service department. Our service department personnel are always ready to assist customers, either by the phone or by sending one of our service technicians, who are constantly travelling the world. To further assist our customers we offer a full service contract that includes regular visits by our technicians to inspect the equipment and give recommendations on required maintenance.

In future issues of the Eldan ScrapBook we will go deeper into the inside of Eldan, and tell you about the daily routines of e.g. our electricians, blacksmiths, machine workers and installers.

Decisions on targeted environmental measures often also result in increased operating and fixed expenses. Many companies therefore reject such ideas, believing that larger companies are only doing this to better their own image. However, environmental thinking in a company doesn't have to cost an arm and a leg. Eldan Recycling has found that environmental awareness not only improves a company's reputation, but can also save the company money...

People, planet, profit

Corporate social responsibility (CSR) is a way of integrating social and environmental concerns into business activities. The goal is to take responsibility for the company's actions, and to encourage a positive influence through its activities on e.g. the environment or the community. CSR strategies or intentions are often stated in the company's business plan and in press releases, to improve the company's reputation. The reasoning behind involvement in CSR is to maximise the returns on the three pillars: people, planet and profit.

For a company adopting environmental measures, this usually means incurring greater expenses, for example when switching from regular paper to recycled paper. Because of this, many smaller companies consider these targeted environmental measures to be unnecessarily expensive activities, useful only to larger companies.

Environmental work as part of production

At Eldan Recycling, environmental thinking is part of the daily routine of employees and management. Not only due to the fact that the company's main business is producing recycling equipment, but also because there is a major focus on paying close attention to material flows within the company. Eldan has no environmental department or specialist employed, yet has still received a diploma for four environmental statements, and is working on a fifth statement this autumn. Environmental statements mean that the company map the consumption of materials, as well as their flow, in the production. Basically, the aim is to track what enters the facility and what leaves it, this in regard to e.g. electricity, gas, water and hazardous substances. "As a company in the recycling industry, we'd really like to make a targeted effort for the environment and not just focus on our own production - this way we're closing the environmental circle. We're pleased that we've been able to reduce our CO2 impact on the environment, and the fact that we also saved some money in the process was a really nice surprise for us, and of course it makes the project even more satisfying" says Claus Skotte Lange, Production Coordinator at Eldan.

Although Eldan employs almost 100 people, the company organisation is too slim to maintain a whole department focusing solely on environmental management. At Eldan this is instead done by Claus, who is responsible for getting everyone in the company to consider the environment in their work. "Instead of having a formal department and employees working solely on this, we've integrated environmental consciousness into our production. Just by making fairly small changes in work routines we've already seen considerable overall results" says Claus. >>

Small changes and investments result in big savings

One of the changes Eldan has made is turning off the ventilation system at times when there is no production, or when there is no one in the factory. “Being a manufacturing company we need a lot of ventilators, compressors and lighting to ensure a good working environment for employees. We came to realise however, that the ventilation system providing fresh air was always on, even when production was not running, and when there was no one in the buildings. At the moment we only run the ventilation system when it’s needed” says Claus. “Most of our investments and changes might seem small. The investments we’ve made will pay for themselves within 18 months, which makes them easy to implement. We’re also using systematic surveillance of the gas furnace, which has lowered the Co² emission by 17 % for heating (28 tons). By using an intelligent control system with motion sensors that turn off the lights in rooms that are not being used, we save about 30% Co² emission for light (27 tons).”

Environment Forum Fyn

Environment Forum Fyn is a private-public network that aims to promote sustainable development. The stated wish of the network is to strengthen the competitiveness of Fyn companies through their environmental and corporate social responsibility efforts.

The municipalities of Fyn and the member companies run this network jointly. The municipalities support the network financially, and by engaging in dialogue with the companies about their environmental efforts. Member companies share experiences gained from participation in groups, workshops and courses. The network is driven by its members, and there is a commitment to continuously work on improving and documenting efforts, which results in an annual environmental statement.

Eldan has been part of the network since 2000, and Claus is a board member of Environment Forum Fyn (Industry). He believes that membership has been a turning point for the company; “We are specialists in manufacturing recycling equipment – we’re not general environmental specialists. The knowledge we’ve gained and are still gaining from network members in Environmental Forum Fyn is invaluable. This knowledge has led to us lowering our consumption of a wide range of materials and commodities. Above all, we’ve gained an increased awareness for environmental thinking.”

Competitive international advantage

As the absolute majority (about 99%) of Eldan’s customers are located abroad, the name “Environmental Forum Fyn” is unknown to them. However, the environmental report and certificates have already increased the company’s reputation internationally. “Many of our customers are very environmentally aware, and they often ask me about our environmental policy. They’re very impressed when I tell them about the network and the fact that environmental thinking is a part of daily routine at all levels of the company” comments Claus. “There are both environmental and financial reasons why we’re members of Environmental Forum Fyn, but it’s worth every penny and every hour.”



Grete Justesen from Environment Forum Fyn handing over the diploma to Claus Skotte Lange, Production Coordinator, Eldan Recycling.

Still the first choice in recycling equipment

Nexans S.A. is the world’s largest manufacturer of cables. These cables are used in construction, industry, computer networks and city infrastructure. To take advantage of the valuable material still remaining in scrap cable, Nexans started recycling as early as 1965, through its subsidiary RIPS (Recyclage Industriel de Produits Sidérurgiques). The relationship between Nexans and Eldan Recycling is a long one, and Nexans acquired their first Eldan recycling equipment way back in 1982. In 2008, using their Eldan equipment, RIPS recycled almost 22,000 tons of cable manufacturing waste from its European and African facilities, as well as several thousand tons of scrap cable collected from customers. In 2008, Nexans’ recycling activities were restructured, and a joint venture company, Recycables, was started in cooperation with Sita Environmental, to provide a comprehensive recycling solution. For this purpose they needed new recycling equipment, and the question was – would they continue with Eldan recycling equipment or choose another supplier?



Searching for the right equipment

Nexans S.A. is a worldwide leader in the cable industry, and offers a wide range of cables, cabling systems and services. The foundations of the company date back to 1897, and they now have more than a century's experience of progress and innovation. As the company itself produces a lot of cable waste in their manufacturing process, they decided in 1965 to start their own recycling facility; RIPS (Recyclage Industriel de Produits Sidérurgiques).

This activity grew quickly over the coming years, and in 1982, RIPS added to the facility by acquiring a separation system from Eldan Recycling. Since then they have acquired several more machines, from Eldan itself, and from Scandinavian Recycling (later acquired by Eldan). They have acquired e.g. Shredders (S400 and S1000), a Pre-Chopper (1602), an LM 455 and a Barracuda (1200).

Because of new regulations, in 2007 RIPS was forced to close down its facility in Calais, France, and the company was posed with with a difficult decision – to buy new equipment or to move the old equipment.

In 2008, in cooperation with SITA (La Société Industrielle des Transports Automobiles) Environmental, a subsidiary of the global wastewater treatment and waste management company Suez Environmental, Recycables SAS was founded. A French system consultancy firm was hired as project manager, to find the best possible equipment solution for Recycables.

Recycables wanted to process mixed cables at the approximate capacity 5.5 tons per processing hour. Input material would come internally from Nexans (second hand cables, production errors) and from SITA (scrap cable), as well as externally from scrap dealers and cable manufacturers. One of the largest telecommunications companies in France sends them around 6,000 tons cables a year. The recycled material is sold to the parent company, or to various major European customers, for reuse in production.

That Eldan had supplied the equipment for the previous plants did not however, make them the obvious choice for a new one. “I remember that it was just like dealing with a completely new customer, as the contact people, the location and the requirements were entirely new” says Christian Duffau, Sales Manager for Eldan in France. “There was an external project manager evaluating the offers and equipment available on the market. You might say that Eldan having supplied the old equipment was both an advantage and a disadvantage. The fact that the current equipment had been in production for up to 30 years and was still running well, was naturally an advantage. The long and stable history of Eldan, and the promising future was also to our advantage. The fact that they initially only knew about our older equipment could have been a disadvantage, since this equipment has developed a lot over the years.”

The external project manager suggested a set-up in which Eldan would supply the recycling equipment, while other manufacturers would supply equipment for manual sorting, a plastic separator, and the ventilation system. Once again, it was the common opinion that Eldan's recycling equipment provided the best and most cost-efficient solution.

Finding the right equipment

Philippe Tailleux, Managing Director at Recycables, supported the decision to continue using Eldan equipment, even though other companies within the SITA group had in the past decided to go with a domestic brand; “Since we had long experience from the industry, we knew what we were looking for. The French consultancy firm investigated the market thoroughly and presented us with the most suitable solutions. We looked at custom-made solutions as well as at standard plants. We also knew that the most interesting offer price-wise is not always the best investment. The global price, i.e. including running costs, is the figure that needs to be considered – particularly if you aim to process as much as we do at Recycables. The final decision was to go with Eldan again, as we had long and satisfactory experience of both their equipment and a rewarding partnership. They presented the best solution for both the equipment and the global pricing.”



Mamadou Aw, Shift Manager at Recycables

Still the first choice in recycling equipment

In 2009, Recycables acquired a pre-chopping line for cables (A-SC2118), as well as a specially-designed cable recycling plant (type E8000C) from Eldan. The complete cable recycling plant handled all the recycling stages; pre-chopping/rasping, primary and final granulation, as well as separation.

The pre-chopping line basically consisted of a Super Chopper (SC2118) specially designed for processing cable waste. By pre-chopping the cables, the material is easier to process in the rest of the plant, thus achieving a greater processing capacity and higher output quality. “We were - and still are - very impressed with the Super Chopper. The more we use it the more incredible it seems” says Philippe. During the pre-chopping stage, the scrap cables are reduced in size and most of the ferrous material is removed from a manual sorting conveyor, which helps reduce wear on the other machines further on in the process. A further step of the recycling process includes a Tumble Back Feeder (TBF), a Multi-Purpose Rasper (MPR200), as well as an Overband Magnet (DM1450).

During primary and final granulation, the cables undergo a few more rounds of size reduction. The conductor and insulation fractions are separated, and further liberated ferrous material is removed. These steps include three Silos (V4 and SMV), a Heavy Granulator (HG209), an Overband Magnet (DM1850), and four Fine Granulators (FG1504). The material is now ready for final separation.

During separation, the remainder of the ferrous and non-ferrous materials are split and separated. This final stage includes four Silos (SMV) and four Separation Tables (C26).

The complete cable plant has an approximate processing capacity of 5.5 tons per production hour, depending on the type of cable being processed. By processing e.g. power cables, capacity can rise to up to 10 tons per production hour. “Eldan makes equipment that we have found to be of high quality and very reliable. In a single day, we can process 100-120 tons of scrap cable” says Philippe.

Cable recycling veteran with high expectations

Supplying a plant to a highly experienced customer who knows precisely what they want and need might, in some cases, be quite difficult. This however, was not the case with Recycables. “Right from the start, Recycables and the French consultancy firm had high demands and expectations on the upcoming plant right from the start, and they were very thorough throughout the project. I can safely say today that we supplied a plant with better specifications for output quality and quantity than actually stated in the contract” says Christian.

Working through an external project manager is different to working directly with the customer. “Since there were other manufacturers involved in the project, for example for the manual sorting equipment, delays or changes made by others indirectly affected us as well” says Christian. ➤➤

“So the project took longer than it usually does in cases where we’re in direct contact with the customer. We had to go back to the drawing board many times, but the end result was very good! By maintaining an open dialogue with the other partners, most obstacles could be identified and dealt with at an early stage. The problems caused by others, which we couldn’t foresee, were easily taken care of at our end thanks to fast communication and short reaction times at our own production facility.”

Recycables is very satisfied with the project, and Philippe Taillez comments; “it’s a pleasure to be working with Eldan again. As a customer you know straight away that you’re in good hands and are benefiting from Eldan’s great experience. We were very satisfied with the project, thanks to the excellent follow-up and great commitment of the sales and technical personnel.”

In an industry that requires large initial investments, having a good reputation is very important. Customers today can be thought of as a marketing billboard, as they probably know your potential customers as well. “Eldan has a really good reputation in the industry and is considered a very reliable supplier. As a long-standing customer of the company, I can only agree. The quality of the machines is very high, and the people you come in contact with at the company are highly experienced and competent. I also think that their partnership philosophy is quite remarkable. Three years after starting our project, results are ahead of the business plan, which is quite rare for this kind of industrial project. I would absolutely recommend doing business with Eldan,” says Philippe.

Nexans

Nexans is a worldwide leader in the cable industry, and offers a wide range of cables, cabling systems and services. They aim to raise industrial productivity, improve business performance, enhance safety, and ensure long-term network reliability. The group has a worldwide presence, operating on all continents. In 1897, the Société Française des Câbles Electriques was founded, and over the years, the company has grown through mergers and acquisitions. The Nexans we know today was created in 2000, and today the company has more than a century’s experience of progress and innovation.

RIPS

RIPS (Recyclage Industriel de Produits Sidérurgiques) is a Nexans subsidiary, and collects, ships, grinds and reuses cable waste. The company was founded in 1965, in Bonnefamille, France, where it started by recovering metals from scrap cables. Initially they focused mainly on electrical and telephone cable scrap. In 1982, they acquired their first equipment from Eldan Recycling. In 1988 RIPS was acquired by the large Alcatel group. At this point they had three recycling facilities across France. A year later, recycling activities were centralized to Calais.

SITA

SITA (La Société Industrielle des Transports Automobiles) is a subsidiary of the global wastewater treatment and waste management company Suez Environmental. The company has almost 80,000 employees worldwide, and in 2010 they had revenues of €13,869 million and invested €73 million in R&D. SITA has been an expert in global waste management for over 90 years, and is the specialist on waste treatment and recovery in the Suez Environmental group.

Recycables SAS

Location: Noyales-Godault, France

Founded: 2008

Employees: 35

In 2008, Nexans recycled almost 22 000 tons of cable manufacturing waste from its European and African sites, as well as several thousand tons of scrap cable collected from its customers. With 30 years of experience in the collection and recovery of end-of-life cables and cabling production waste, Nexans offers a complete recycling solution. In 2008, Nexans created Recycables - in which it holds a 36% stake along with Sita, a Suez Environment subsidiary, to provide a comprehensive recycling solution. Copper and aluminium granules are melted down. Plastics are recycled into external cladding, sidewalk curbs or road cones. Grinding powder is recovered as packaging products. Recycables supplies Nexans with recycled copper and aluminium. Using an exclusive continuous casting process implemented in the plant at Lens, France, Nexans was able to recover 12,000 tons of recycled copper powder as wire in 2008.



Again the epicenter of the environment in Latin America

The eighth version of the exhibition of environmental technology was opened by the ministry of environment María Ignacia Benítez and other important authorities. One outstanding presentation was held by Claudio Romo, product manager at Ferrostaal Chile SAC. Ferrostaal is the representative of Eldan Recycling in Chile.

The International Meeting for Environment of Latin America, AmbientAL 2011, encompassed the main topics of the environmental sector, including knowledge, analysis and projection of new techniques that serve the industry. Over 120 exhibitors mainly related to the sectors solid waste, renewable energy, and water treatment, presented their technological solutions at the exhibition organized by the National Cleaner Production Council from CORFO-CPL- Ministry of the Environment, FISA S.A. and the Association of Business and Professional Environment-AEPA. The transfer of knowledge and exchange of successful experiences of sustainable business management related to the care and preservation of the environment, were the main objectives of this event.



L to R: Claudio Romo, Ferrostaal, and María Ignacia Benítez, Ministry of Environment in Chile.

This year the number of visitors broke previous records by an impressive number of 8,000 people. Visitors and exhibitors represented sectors like agriculture, refrigeration construction, mining companies, aquaculture sector, food, hotel, vineyards, authorities and officers from ministries and municipalities, and others, attended this fair. Many

professionals were especially interested in equipment and machinery for recycling of tyre, cable and WEEE. Due to the great location of the Ferrostaal Chile S.A.C. booth, close to the entrance, the visitors were not able to miss our exhibition area. They could see highly interesting The personnel at the stand where busy answering questions about recycling of for example tyre and cable, and a frequent eye catcher where the samples of processed and recycled material.

The environmental minister María Ignacia Benítez opened and launched the exhibition. We were very pleasantly surprised when she visited the Ferrostaal stand during the last day. Henning Norgaard, area sales manager at Eldan, and Claudio Romo, product manager at Ferrostaal Chile SAC, took the opportunity to explain and answer questions regarding the different machines and complete systems for recycling of solid waste.



L to R: Josefina Guzman (Hostess), Henning Norgaard (Area Sales Manager, Eldan Recycling), Ann Calderon (Hostess), Claudio Romo (Product Manager Ferrostaal Chile S.A.C.), Kinga Varodi (Marketing & Communications Ferrostaal Chile S.A.C.), Alexander Koch (Trainee Ferrostaal Chile S.A.C.)



A happy customer always returns

The family-owned company Metallurgica Vigevanese S.R.L. is one of the largest and most important recyclers of cable in Italy. In 2003, the Azzini family acquired their first Eldan Recycling plant. Since then business has been very good, and they found themselves facing a pleasant problem; they needed to upgrade their plant – in both quality and capacity. At the end of 2010 they took the decision to purchase new Eldan recycling equipment. Today, Metallurgica Vigevanese is owned by twin brothers Paolo and Mauro Azzini, and cousins Claudia and Fabrizio Azzini.

Getting into cable recycling

Metallurgica Vigevanese first got into cable recycling in 1990, when they acquired a cable recycling plant from an Italian manufacturer. This, their first cable recycling plant had a decent capacity and at a good price - a good way of getting into the industry. Processing however, did not go as smoothly as they had hoped. "We had a lot of problems with this equipment. The shredder had double shafts, and these broke many times. It was also very complicated to maintain and run", says Paolo Azzini, one of the owners of Metallurgica Vigevanese. This equipment was capable of processing about 100 kg waste cable per production hour.

Even though their equipment was not what they had hoped for, business was booming. Within a few years they were getting more enquiries than they could handle, and so decided to increase production capacity. "We would have preferred to go with an Italian brand, but we were recommended a French manufacturer that we'd heard good things about. From that manufacturer we purchased some second-hand equipment that could process about 1,2 ton scrap cable per production hour," comments Mauro Azzini, one of the owners of Metallurgica Vigevanese.

Finding your feet

A few years later, the same positive problem occurred again - customer demand and the supply of input was greater than the plant's production capacity. In 2003, they decided again to expand the production facility. "We were satisfied with the equipment supplied by the French manufacturer, and we did consider expanding by buying another complete system from the same company. However, as their equipment was too bulky and complicated, as well as expensive, we started to look for other alternatives" says Mauro. "Our crane supplier, who we have a lot of faith in, introduced us to Alessandro Silvestri (Sandro) at NME s.r.l. Sandro was, and still is, Eldan's Italian agent for cable recycling."



The machine hall prior to the new installation.

Sandro introduced them to Eldan's cable recycling systems, and took them to visit a reference plant in Italy, to see the equipment in action. "During the visit to the reference plant, I was surprised and highly impressed by the equipment" says Paolo. "As we'd been in this field for a while, I knew straight away that this was very good quality equipment."

In 2003, Metallurgica Vigevanese ordered a custom-made Eldan cable plant (E2500C) and an additional Silo (BFS). Together with the existing equipment it guaranteed an average capacity of about 20 tons a day, in a single 8-hour shift. The Eldan plant and the existing French plant were sited next to each other, and would work together as a double-up cable recycling plant. "We were looking for the best professional equipment available, and I knew I could trust Sandro's opinion" says Mauro. "When he recommends a solution, then I believe it to be the best one; there's no reason to hesitate in making the purchase."

The cable plant (E2500C) included a Fine Granulator (FG952), a Silo (V4), a Separation Table (C22), and a Classifier (PC12), as well as various conveyors. The Fine

Granulator (FG1504) is a high-speed, single-shaft Fine Granulator for the granulation stage and opening of the cables. Fraction sizes are typically 4-7 mm granulate. The Fine Granulator has hydraulic opening of the upper part and the screen cradle, for easy access to knives and rotors, and easy access for changing/cleaning the screen. To ensure the best possible quality and optimum flow through the plant, the material is then run through a Silo (V4). The Separation Table is designed to separate the metal from the insulation, and in the final separation gives a 98% (or better) clean metal fraction. The total output from the Separation Table is divided into 4 fractions; dust, metal, plastic and the middling. The Classifier (PC12) - two layers of screens and a bottom tray - effectively removes copper and aluminium fine fractions from the plastic fraction, thus minimising metal loss.

Being able to trust their business partners is very important to Paolo and Mauro. The equipment was installed in a mere four days in the autumn of 2003, and once it had been installed, their impressions of Eldan were reinforced. "We knew that we'd purchased a turnkey plant, but were still surprised by the quick installation. After just one day we were running the plant ourselves," says Paolo.

Practice makes perfect

The cable recycling industry has two kinds of player; the industrial companies who refine or change the material before selling it, and who earn their money from the processing; and the commercial companies that simply buy and sell the same material, earning their money depending from their business connections and on the market price at the time of selling. Metallurgica Vigevanese is a mix of the two, as they basically attempt to buy cables when the price is low, and then sell the copper granulate when the copper price has risen. It is important for them to be able to process large amounts of cables at the same time, and then to store the product while waiting to sell it. "As we're spending about €1.000.000 a month on cables, even slight increases or decreases in market prices can make a huge difference" says Mauro. "We want to be able to increase our processing when cables are cheap, as we need to get it all into storage as quickly as possible. Once we have it processed and in storage, we know we can sell it at any time. When we don't have as much cable to process, then we lower the processing capacity. Many years ago it was easier to get real bargains, as some people were not aware of the market prices in real time." The margin on just processing the cable is small, but the financial risk is small as well. Speculating on the market on the other hand has a larger potential for earnings, but also involves greater risks. ➤

Once again a positive “problem”

At the end of 2010, Metallurgica Vigevanese once again decided to upgrade their production facility. Even though the market had stagnated at this point, the company did not hesitate to invest again. “We have good experience of the Eldan equipment. The systems are compact and don’t take up much space, yet they are very good quality. The knives of the mill have a long life span. Quite simply, Eldan manufactures high quality equipment, which produces a highly desirable output material. The loss of metal in the plastic fraction is very low” says Paolo. “Space is important to us, as we already have a building full of equipment, and the new system needs to fit into the available space.”

There is a great advantage in having greater processing capacity – not only can we process more, but we can also handle the peaks in supply. “We don’t want to have to say no to scrap material! We’d rather put our valuable copper into storage and wait for better times” says Mauro.

Sandro has been doing business with the Azzini family for a long time, and comments: “The opinion of true professionals is extremely important. I know that I represent the best brands on the market, but it’s still a great feeling when you know your customers trust the equipment in the same way you do yourself.”



After thorough discussions with Sandro and the product manager for cable recycling at Eldan, Flemming Hansen, it was decided that the new plant would replace the French line, and would run in parallel with the one supplied by Eldan in 2003.

An order was placed for a standard Eldan cable granulation and separation plant, for processing mixed dry cables (diameter max. 50 mm, and length max. 450mm) at 4 tons input per production hour. This would allow them to process approximately 28 tons per day. This meant an increase in production capacity of approximately 35%. Production capacity is based on an average copper content of approximately 45%, and depends on the screen size, the feeding method, etc.

The cable granulation and separation plant includes one Multi-Purpose Rasper (MPR160), two Overband Magnets (DM1850), one Tumble Back Feeder, one Heavy Granulator (HG169), one Fine Granulator (FG1504), one Silo (SMV), one Separation Table (C22) and one Classifier (PC12).

The Multi-Purpose Rasper (MPR160) is an effective, medium-speed, dual-drive Rasper designed for cable recycling. It ensures individual size reduction down to approximately 15-25mm fraction sizes. The main housing is equipped with replaceable wear plates, wear rings and other components. The Overband Magnet (DM1850) efficiently removes the liberated iron from the granulate. The Tumble Back Feeder ensures a continuous flow into the Heavy Granulator, thus ensuring its optimum load/utilization. The Heavy Granulator (HG169) is a high-speed, single-shaft Granulator for the first granulation stage. The main housing is equipped with replaceable wear plates, wear rings and other components. The purpose of the Silo (SMV) is to balance the output from the Fine Granulator against the maximum input rate of the Separation Table, thus ensuring that the quality of separation is maintained. The Separation Table (C22) does the final material separation, into a 98% (or better) clean metal fraction.



The new plant was installed during the summer of 2011, and has improved production in both quality and quantity.

A long warm relationship

In many ways it is easier to add to an existing recycling plant, as you already know the customer and their requirements, and they know you and your products. There are however, many things that make it more demanding to extend an existing plant. In the case of Metallurgica Vigevanese, an entire plant needed to be removed, to allow the building to be renovated. Since production has to be stopped during this phase, it is very important that the plant doesn’t stand still needlessly. “Time wasted is money wasted, so it’s important to plan the arrival of the new equipment to fit the rebuilding of the existing plant.

It’s more important to have a well designed project plan and new facility layout when production has to be stopped completely for a period” says Flemming. “For new customers who don’t yet have any production, a week’s delay is not the end of the world, but for a company already in production, delays can mean great financial losses.”



When a project needs to run like clockwork, communication is everything. “We were invited to visit the Eldan production facility in Denmark during the project. The Eldan staff, including project and production management, were very competent and professional. We got to see some of our own machines being manufactured, and we went through the entire project to make sure that nothing would go wrong. Our overall impression was very favourable” says Mauro.

Metallurgica Vigevanese stopped production completely from the beginning of March until the end of May. “It was difficult telling our loyal customers that we couldn’t buy their scrap during this period” says Paolo. “We explained that we were upgrading our processing facilities and asked them to wait until we were back at full capacity again. Of course they sold their scrap to other processors during our stoppage, but we enticed them back to us again by offering them special conditions when we reopened the factory. Today we’re back at full capacity again. Our customers have realized that the rebuilding of the factory was not only for our own good, but for theirs too. We can now process more scrap, with better quality output.”

Equipment quality is important to the Azzini brothers, the most important factor being that machinery does not break down and stand still for any length of time. “Eldan makes better quality equipment, which can be seen in the output granulate. When processing the same cable type in our old plant and in the new Eldan plant, we see a big difference in the output from the two lines. It almost looks like the Eldan copper granulate output has been cut piece-by-piece” says Mauro. “This cutting makes a big difference on the separation table. It’s going to be easier for us to control production when we’re using equipment from the same manufacturer.”

“We knew that we’d purchased a turnkey plant, but were still surprised by the quick installation. After just one day we were running the plant ourselves.”

Paolo Azzini, Co-Owner
Metallurgica Vigevanese S.R.L.

Metallurgica Vigevanese S.R.L.

Located: Vigevano, Italy
Founded: Officially in 1971.
Employees: 12 (including the family).
Owners: Paolo, Mauro, Claudia and Fabrizio Azzini

Although officially founded in 1971, the company was originally founded by the current owners’ grandfather in 1948. Just after the war, there were many buildings that had been demolished, and which were now being rebuilt. It was hard to get a hold of metals and other raw materials, and so recycling became a popular new branch. Mauro Azzini explains: “There are many industrial companies in Italy and the rest of Europe with similar backgrounds, now being run by the third generation of the family. Many of these companies have closed over the years, but a few have survived and grown. A new generation of owners has emerged almost simultaneously in these companies, since the current owners are at approximately the same age. You can see a similar pattern in the smaller steel and iron workshops.”

At the start of the 1990’s, the cable recycling industry was only a marginal activity - “just something fun to be involved in” according to Paolo Azzini. Today, about 70% of Metallurgica Vigevanese’s business is in cable recycling. Producing recycled copper involves more risks, as even small changes in value can cause major losses. Influencing the price of copper is difficult, as it is related to what’s happening worldwide. However, along with the potentially major risks, there is also a lot of money to be made if you play your cards right.

Metallurgica Vigevanese acquire most of their cable scrap from Italy, but also sources minor amounts from other European countries, e.g. France and Germany.



Reputation breeds success

Francisco Alberich S.A. is a traditional scrap dealer handling mainly ferrous and non-ferrous scrap material. The company is active in industrial demolition, scrap metal, waste management and recovery, industrial and environmental engineering, and the international trade in ferrous and non-ferrous metals. The company started business in the recovery branch 111 years as Brígida Vilalta, and is today one of the most important recycling companies in Spain; Francisco Alberich S.A. In 2003, Francisco Alberich decided to start a combined recycling business for the processing of cables, aluminium and WEEE (Waste Electrical and Electronic Equipment).

Looking for a solution

As veterans of the industry, Francisco Alberich already had a clear idea of what they were looking for; a complete system for processing copper cables, aluminium and electronic waste.

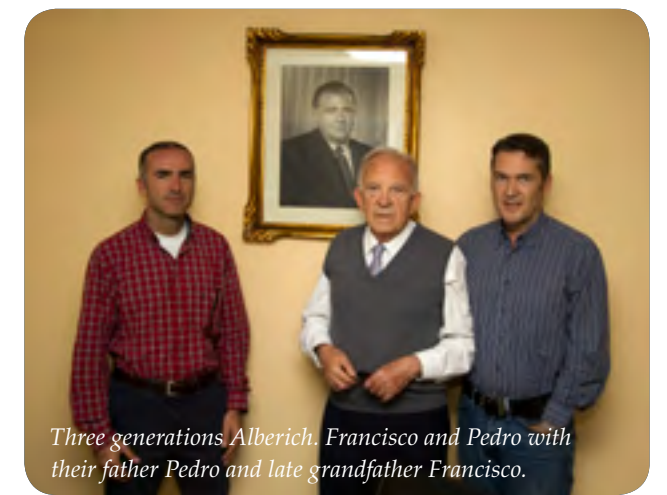
The cable input was to be mixed dry cables (e.g. communication wire, copper wire and mixed household wire). The aluminium input was also expected to be mixed (die-cast, profiles etc.). The process input capacity needed to be about 2.5 tons per production hour, i.e. 250 tons cable and 150 tons aluminium per month. WEEE (Waste Electrical and Electronic Equipment) input contains mixed electronic waste (e.g. computers, small home appliances and other electronic scrap).

It was considered vital that changes in the equipment required to switch the recycling process from e.g. cable to aluminium should be kept to a minimum.

As Francisco Alberich had already had business dealings for other equipment with Recycling Equipos, S.L., this was a natural starting point for them. Recycling Equipos is Eldan's Spanish representative, so this was their introduction to Eldan's recycling solutions.



L to R: Rafael Martínez, Marcos Clavel, Steen Laursen (former managing director and son of the founder of Eldan Recycling), Pedro Alberich and Francisco Alberich.



Three generations Alberich. Francisco and Pedro with their father Pedro and late grandfather Francisco.

Trusting the best solution

Finding the best equipment solution takes time and careful research. "When we selected Eldan as our supplier, we weren't looking for a specific machine, but instead for a concept, an idea, a complete process that would fit our project and goals. When making such an important decision, one that affects the current situation as well as the future for our company, many arguments were taken into account, and we compared several solutions and offerings" says Rafael Martínez, technical manager at Francisco Alberich. "Naturally, the manufacturer's experience of the industry, as well as their reputation were very important to us. The fact that Eldan specialised in metal recycling and understood our project very well was also important. Having dealt with many suppliers over the years, we place great value on the company's competence, i.e. the technical and sales staff, the after-sales department, as well as the company's whole philosophy. The professionalism and experience at Eldan and Recycling Equipos are remarkable, which is why we opted for this solution."

In the summer of 2006, Francisco Alberich acquired a specially designed Eldan plant for the downsizing, granulation and separation of cable, aluminium and WEEE.

The plant included a Super Chopper (SC1412), a Heavy Pre-Granulator (HPG165), an Overband Magnet, an Eddy Current Separator (ECS), a Silo (V4), a Heavy Granulator (HG169), a Silo (SMV), a Separation Table (C22), a Fine Granulator (FG952), a Separation Table (C15) and a Water Separation System (WST).

In 2007, a Tumble Back Feeder was added to the plant. This machine ensures a continuous flow into the Heavy Pre-Granulator, thus ensuring optimum machine load/utilization.

Processing cable, aluminium and WEEE scrap

As various input materials differ greatly from each other, they also have different input capacities. The plant can be run for a single daily shift (approx. 170 hours per month), but this can also be increased to two or three shifts a day.

Dry cable and wire of various shapes and sizes are the easiest of these material types to process. The Super Chopper processes this input at 3-8 tons per production hour, while the granulation and separation plant allow the processing of 250 tons per production month. The metal purity of the output is 99,5%. ➤

“The attention from product management and the support from Eldan’s after-sales division has been crucial for the smooth running and profitability of our plant...”

Rafael Martínez
Technical manager
Francisco Alberich S.A.

Aluminium scrap can vary in processing difficulty (die-cast items, extrusions, profiles, sheets, window frames, baled UBC’s etc). Generally, the Super Chopper will process the input material at 3-5 tons per production hour. The granulation and separation plant can process 150 tons of input material per production month. Aluminium scrap with printing leaves the plant 97% free of paint.

Electronic scrap (WEEE input) with a maximum Fe-size of 1,5-2 mm is the most difficult of the three input types to process. The Super Chopper processes the material at 2-4 tons per production hour, and the granulation and separation lines process it at 2 tons per production hour.

No major adjustments or modifications are required when switching between cable, aluminium and WEEE recycling. When processing cable however, the Eddy Current Separator is not used.

Reputation breeds success

The Spanish market is not a new one for Eldan, who had already sold their first cable plant in the Barcelona area in the 1970’s. Since then, almost 40 plants and many more individual machines have been sold in the region. It’s a well-known fact that most others want to follow in the steps of a winner. “There are many recyclers in Spain who already have a single machine or a complete processing plant from Eldan. In our business, it’s very common to take a look at the competition and then try to copy and improve what they’re doing. This is why Eldan always ranks highly on the list of potential suppliers when a company is in the market for a new plant, be it for recycling tyres, WEEE or non-ferrous materials in general. Lately, we’ve been hearing rumours about the great performance of their machines when processing “waste to energy” materials, also like MSW (Municipal Solid Waste)” says Rafael. “Eldan has a very good reputation and is very well regarded in the Spanish recycling industry. This is largely due to the efficient sales and after-sales provided by their Spanish agent Recycling Equipos. Together with their

mother company Industrias Hidráulicas S.A., Recycling Equipos has a wide network and a great reputation in the industry all over Spain, and internationally as well, which is a great advantage.”

When making a major investment that your business is going to be relying on, it is vital that you can trust the support you will be getting from the supplier. “The attention from product management and the support from Eldan’s after-sales division has been crucial for the smooth running and profitability of our plant. The truth is that they’ve helped us a lot, and they’ve cleared up many of the problems we’ve had in processing the materials we handle. Thanks to their advice and answers to the questions we’ve had, we’ve been able to improve the productivity and efficiency of our process” says Rafael. “When acquiring a large and advanced recycling system like this one, it’s going to take time to learn and understand the machines. As a user you need to adopt a good working philosophy and strict maintenance discipline.”

Even though the centralised support is important, minor issues can often be handled locally. “Our relationship with Recycling Equipos is pleasant and rewarding. They show genuine interest in our production and our equipment. We have an open, two-way communication with them, and whenever we have questions we always get a prompt answer from them. We’ve received good advice and solutions for minor, everyday problems, which can still be tricky to solve sometimes” says Rafael. “To sum up, they are great representatives for first-class products such as Eldan’s.”

The close relationship between Recycling Equipment and its customers is a key factor for success. Marcos Clavel, Sales Manager at Recycling Equipos comments; “Alberich is a really good reference customer, but above all they’re really nice people who always make us feel at home when we visit them. This makes it very easy for us to recommend what we honestly believe is the best solution for them, even if that might mean losing an order. Trust is the most important factor in business.”

“In short, our relation with Eldan has been very positive so far. Everyone has learnt from everyone else, and we’ve reached our goals, as well as a bit more” says Rafael. “We trust that we’ll be able to continue this way, and as I’m sure our business will always need quality equipment and recycling techniques, we trust that Eldan will be there to provide us with good solutions.”

ALBERICH

Francisco Alberich S.A.

Located: Castellbisal (Barcelona) and
La Llagosta (Barcelona), Spain

Founded: 1900
Employees: 100

Francisco Alberich S.A. is a Spanish scrap dealer mainly active within ferrous and non-ferrous scrap. The company is active within industrial demolition, scrap metal, management and recovery of waste and industrial and environmental engineering and international commerce of ferrous and non-ferrous metal.

It has been more than 110 years since Brígida Vilalta started up the recovery business activities which today are Francisco Alberich S.A. The company has since then opened two new waste management warehouses and started an aggregate recycling business. Today over one hundred people are employed at the company, which has its main office, warehouse and demolitions division in Castellbisbal and a branch in La Llagosta.



Rafael Martínez
Technical manager, Francisco Alberich S.A.



Wherever you are located, you can be sure that Eldan Recycling will meet your requirements for a professional partner. Eldan's head office and production facility are located in Denmark, and we have our own sales offices in Germany, France, Australia and the USA. In the rest of the world we are represented by agents.

To create the best possible conditions in which to meet your requests and answer your questions, we believe that it's important to be able to communicate with you in your own language. Our sales offices and extensive network of agents cover most of the world, and all of our agents are familiar with our equipment and can give you qualified advice in your own language.

As well as language, business culture can also be a barrier to cross when doing business on any continent. "In China, too many hand gestures and too intense eye contact can be seen as being impolite, while meetings in the USA can often be quite agitated, and may even appear a little aggressive, because of the open and lively tone of discussions. Even though you don't mean any harm or disrespect, if you don't know the cultural traditions of the area, you might be stepping on someone's toes" says Henning Nørgaard, Sales Area Manager at Eldan. "This is where having an agent in the region is a great advantage. Someone who can do the ground work before Eldan enters negotiations, and who can advise you on what to do, and what to avoid."

When Eldan does business in a region, the initial ground-work is in most cases done by the agent in the region. The agent is Eldan's local ambassador and is responsible for the communication and marketing in their region. Behind these external ambassadors, there is the entire Eldan team, including, for example, area sales managers, product managers, sales coordinators and project leaders. The team is always available to answer questions, to visit a customer, or to arrange a visit to a reference site.

In Spain and Portugal, Eldan Recycling is represented by Recycling Equipos S.L. and Marcos Clavel and Guillermo Del Río. Recycling Equipos is the sister company of Industrias Hidráulicas, S.A. (Moros).

Industrias Hidráulicas/MOROS

Industrias Hidráulicas, S.A. (IHSA) has its head office and production in Zaragoza, Spain, but is also represented worldwide. The company manufactures a broad range of equipment for processing ferrous and non-ferrous scrap, including guillotine shears, hydraulic alligator shears, mo-

bile and stationary balers, all under the brand name Moros. The foundations of IHSA were laid as early as 1958, when the company's forerunner produced its first scrap baler. Since then, the company has invested a large part of its resources in the research and development of machinery specifically designed for the processing and recycling of scrap metal, paper and solid wastes. IHSA itself was established in 1966, by Ángel Moros Yagüe. At that time, the company was focused on the production of agricultural machinery and hydraulic presses. The company quickly became one of the leading manufacturers of metal presses, paper mills, and shears for processing e.g. ferrous scrap, and activity on international markets was not long in coming. A steady export line was established during the 1970's and 80's, which led to the formation of a permanent network of contacts and representatives in other countries.

Thanks to continuous contact with the industry, IHSA realized that there was a lot of interest in recycling equipment. This led them to decide on combining their own production with the import and representation of complementary systems not available in their own product range, to further broaden their competence in this field. Recycling Equipos was established in 1989, to differentiate between their own production and the import of complementary systems.

Today, IHSA has 70 skilled employees and - in memory of its founder - manufactures a range of recycling equipment under the brand name of Moros. The current managing director, and a main shareholder, is Miguel Clavel.

Recycling Equipos S.L.

The relationship between Miguel Clavel of Industrias Hidráulicas and former owner of Eldan, Steen Laursen, goes back a long way. The two met in the early 1980's, at a BIR (Bureau of International Recycling) conference in Hamburg, Germany, and Miguel was invited to visit Eldan. Initially there was no agent agreement, just a firm friendship between the two. In the middle of the 1980's, Steen introduced the concept of "Eldan solution", and a representative agent was appointed in Spain. This collaboration ended at the turn of the millennium, and a new collaboration with Industrias Hidráulicas began. Recycling Equipos S.L. was founded as a sister company to Industrias Hidráulicas, to represent Eldan in Spain and Portugal. Miguel's son was put in charge of Recycling Equipos.

In Spain and Portugal, Recycling Equipos is synonymous with excellent quality in service and products. "Our main advantage is that, unlike other companies engaged in imports and sales, we have access to the technical and material support of companies with over 50 years' experience of manufacturing complex machinery and technologically

advanced equipment" says Marcos. "We're always looking for new developments coming onto the market, attending international trade fairs, visiting leading companies, etc, so that we can advise our customers on the best way to undertake their projects."

Successful collaboration

At Recycling Equipos, Marcos and his colleague Guillermo Del Río are responsible for representing Eldan. At the same time, they are also the Spanish representatives for other products in the recycling industry. This is an important advantage for a representative in the region - a wider product range means a wider customer base to offer products to. "Many of the customers we sold Eldan equipment had already purchased from us earlier, but in connection then with their involvements in other recycling areas" says Marcos. "Our customers know that we sell quality products, and when we recommend a product they know they can trust our judgement."

The relationship between Eldan and Recycling Equipos has been very fruitful, and the Spanish-Portuguese market is blooming. Through Recycling Equipos, Eldan has sold nine large plants, eight medium-sized plants, three small plants and over 20 stand-alone machines in the region. "Recycling Equipos is undoubtedly one of our best agents. Not only have they succeeded in sales, they've also built up a lot of trust among customers, and on the Spanish and Portuguese recycling market in general. The relationship we have with Recycling Equipos is very cordial. Both Marcos and Guillermo are competent and trustworthy, as well as open and humorous - qualities much appreciated by both their customers and us" says Søren Wichmann, Eldan's area sales manager for Spain.

By having a close business relationship with the customer, emerging trends in the industry can be spotted early on. "We're in a very good position in our market, but that doesn't mean we can afford to drop our guard," says Marcos. "I believe that the future for the recycling industry is diversification. A recycling company must be able to process any kind of material they get, which means smaller amounts, but more different types of material. For the future, we predict that companies are going to be using smaller plants and machines."

In Spain and Portugal, market reputation is important when making major investment decisions. "Eldan Recycling has a really good reputation in Spain and Portugal, which naturally helps when meeting with potential customers" says Guillermo. "Further into the purchasing process, it's important to be able to show the potential customer a plant or machine at a reference site. Eldan has many reference plants all over Europe that we can take customers to see."

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