

The Eldan Recycling *ScrapBook*

Spring 2011





Toni Talks

The global market for recycling equipment is expanding and Eldan Recycling is taking a big part of the development. During the last six months, we have sold several installations world wide, and during these months we have received more projects than during the old all time high in 2008. We have during this same period expanded our own activities into both new business and geographical areas. This has been successful and as an example we have several new installations in the Middle East for different applications.

Eldan Recycling is with our present sales-network, references and running installations one of the key players on the market for recycling equipment.

Our main focus within the company is, and has always been, "Taking Care of Business". We always do the utmost in taking care of our customers and offering them the best equipment and support possible. The T.C.B business idea has been a success for more than 50 years. We are out selling and installing successfully around the world and by doing so we can maintain our high service level wherever our equipment is installed.

By having a stable business we can ensure our customers that we will be available for them in the future – in financial good times but also in global recessions.

Take care of business!

Toni Reftman
Managing Director

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Eldan Recycling ScrapBook

Publisher: Toni Reftman

Editor in Chief: Ulrika Persson

Art Director: Jens Ekberg

Photos: Jens Ekberg, Claus Skotte
Lange, Henning Nørgaard,
Rajesh Sivarajan, Matton,
Process Support and others.

Printing: JMS Media System, Sweden

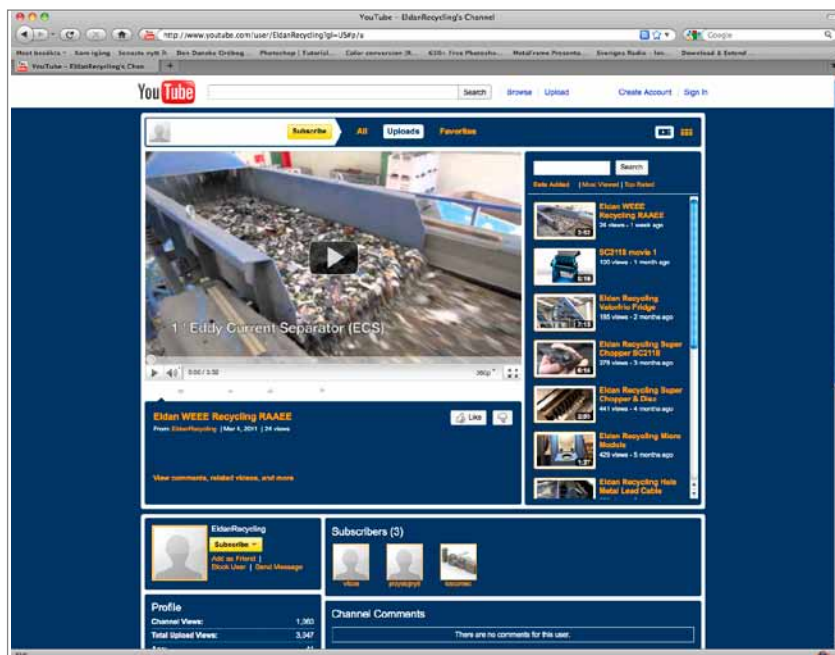
Eldan Scrapbook is published bi-yearly in English.

It's printed on Galerie Art Silk, a Svanen-certified paper in an environmentally friendly process.

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-sr.com

Did you know...

- That seven of the twelve largest tire recyclers in the US use Eldan recycling equipment. Together they process approximately 182 million tires a year.
- That about 190 billion (190.000.000.000) aluminum beverage cans are produced world wide each year. All of these will after use be available for recycling - imagine the market for recycling of UBCs (Used Beverage Cans).
- That one car tire consist of approximately 60 percent rubber, 20 percent steel and 20 percent textile.
- WEEE (Waste Electrical and Electronic Equipment) material like televisions, mobile phones and computers contain many valuable elements and substances like lead, copper, and gold. Printed circuit boards include precious metals like gold, silver, platinum, etc. and such base metals as copper, iron, aluminum, etc.



Continuously growing YouTube archive

We are continuously updating the videoarchive on YouTube. To check it out, go to YouTube.com and search for Eldan Recycling. If you want to you can sign up as a subscriber to our channel. That way you will be sure not to miss any new videos.

New Eldan Test Centre

If you are curious to know what kind of output you would get if processing casino coins, wings of a wind mill or the material of your choice, in one of our machines, or plants, you are now able to try it out in our Test Center in Faaborg, Denmark. To find out more, and to book a date for the testing, please contact our head office.

Anniversaries

We are proud to have a large number of long serving staff at Eldan Recycling. We would like to thank:

10 Years

Helen Lyneborg Gram-Hansen, business administration
John Skytte Hansen, machine department
Carsten Nielsen, Installation Manager
Lars Munk Eriksen, Factory Manager

25 Years

Harry Ejlsborg, assembly department
Kaj Madsen, transit department

Trade Show Report



We have attended several international exhibitions during the last six months, and met many interesting people. You can read more about our future events and exhibitions on page 37.

hibition. Although this was a decrease compared to 2008, the Eldan stand had a high number of interesting visitors from France, as well as the rest of the world. It was striking how many international visitors attended the exhibition this year.

2011

World Future Energy Summit

17-21 January, Abu Dhabi, United Arab Emirates

Eldan co-exhibited with agent in the region, Ferrostaal AG. The stand was visited by many national, as well as international, potential customers. It is noticeable that the region is boiling, and the business opportunities are very interesting.

IERC – International Electronic Recycling Convention

19-21 January, Salzburg, Austria

The annual electronic recycling convention hosted by ICM was this year held in beautiful Austria. The convention gathered 450 participants from 38 countries on its 10 year anniversary.

EU Gateway Japan

31 January – 4 February, Tokyo, Japan

Eldan was chosen by the European Union (European Commission External Relations) to participate in the EU Gateway Program "Environment and Energy". The program assists companies to succeed in the region, by giving support at the critical first stages of the market penetration strategy. A total of 40 European companies participated in this mission, along with 400 specially invited guests. The two day exhibition was held at a Hilton Hotel in Tokyo. "We are always very proud to be chosen for missions via the European commission. These events are always well organized, and the mission to Japan was no exception. It is a great opportunity to get to know the Japanese market and potential customers" says Henning Nørgaard Territory Manager at Eldan Recycling.

2010

IFAT ENTSORGA

13 - 17 September, Munich, Germany

During the five exhibition-days about 110,000 visitors from over 185 countries to attended this leading environmental exhibition in Germany. We took the opportunity to introduce the new Micro Module, which was very well received by both potential customers as well as the international press. This exhibition was a great success for Eldan Recycling.

Aluminium 2010

14 - 16 September, Essen, Germany

Even though the Aluminium 2010 was held at the same time as the IFAT ENTSORGA, it was visited by 17,200 industry active people. The most popular topic to discuss in the Eldan booth was recycling of UBCs. It is evident that this is an growing recycling area in Europe.

Expo Sucata

28 - 30 September, São Paulo, Brazil

At Expo Sucata the Micro Module, E1500T as well as E1500 Multi Function was introduced. The interest for

this equipment, intended for smaller processing quantities was big, and the feedback was very positive.

Green Expo

28 - 30 September, Mexico City, Mexico

The Micro Module, E1500T as well as the E1500 Multi Function was also introduced at Green Expo in Mexico City and was well received here too.

Ecomondo 2010

3 - 6 November, Rimini, Italy

Eldan Recycling has been present on Ecomondo for many years. 2010 was however the first year were Eldan exhibited with an own stand. This was a big success with visitors from entire Europe.

5th World Recycling Forum

15 - 18 November, Kowloon, Hong Kong

At the World Recycling Forum in Hong Kong we had a small exhibition booth focusing on WEEE-recycling.

Pollutec 2010

30 November - 3 December, Lyon, France

The snow storm was probably the most frequent topic during Pollutec in Lyon. 50,830 professionals however defied the weather and visited the ex-



2011

After rain come sunshine

When the financial crisis hit the world in 2008 business worldwide shook nervously. The recycling industry was also affected, and as a manufacturer Eldan Recycling noticed that larger investments were put on hold until the economy was more stable again.

Among our customers we however saw some unexpected opportunities arising. "When one door closes, another one opens" is an expression which many of our customers have experienced during the financial crisis. We have heard stories where companies have lost most of their customers due to bankruptcies, and therefore have been forced to look for business elsewhere. Being forced to look over business possibilities has opened up for new opportunities. I have heard of one customer who could not get a hold of aluminum scrap to recycle during 2008, and instead started to recycle UBCs (Used Beverage Cans). They have now come out the crisis a larger and stronger company than ever, and will open a new facility in the beginning of 2011 with equipment from Eldan" says Jan Kjær, Product Manager at Eldan Recycling.

After the global financial crisis in 2008 the industry has steadily gotten back on track again. "The business is beginning to come back to life again. We have reopened projects which were put on hold during the last two years, and have also been questioned regarding many new ones" says Henning Nørgaard, Territory Manager at Eldan Recycling. "Different from before the economic crisis is that the projects have been considered during a longer period of time. The decision has not been as spontaneous, and the customer has come in contact with the brand Eldan Recycling in many different occasions.

When the purchase is built on a thorough market analysis the company with the longest reference list of satisfied customers is to gain, which we are naturally happy about."

2011 got a much better start than ever could have been predicted. The sales in Europe have received the best kick start. Complete plants have been sold to Hungary (tire recycling), Spain (cable recycling), Italy (cable recycling), Belgium (tire recycling) and Poland (tire recycling). Equipment to increase capacity additionally has been added to existing Eldan plants in Italy (tire recycling), Austria (cable recycling), Holland (cable recycling), Slovenia (lead battery recycling), France (cable recycling), Sweden (cable recycling), Germany (cable recycling), Czech Republic (cable recycling) and Poland (two different tire recycling plants). Equipment to new customers have also been sold to Spain and Poland.

In Asia and Middle East, tire recycling has received the best comeback and complete systems have been sold to India, Pakistan and the United Arab Emirates (double tire recycling plant). Single machines have been sold to Syria.

In the North and South America tire recycling is also the most requested recycling area along with cable recycling. Several projects has been finalized in the region.

E1500

Multi Function plant: processing tire, cable and WEEE.

Being present worldwide means that Eldan Recycling has to be aware of what the potential customers want in all markets. We therefore consciously do market analysis together with the region representatives, to see what trends are particularly interesting at the moment and in the future. "Naturally we see differences between markets which have been active within recycling for a long time, and the ones who have just started to develop this industry" says Henning Nørgaard, Territory Manager at Eldan Recycling. "In the later markets, we see an increasing demand for recycling plants for recycling of smaller quantities. The inquiries tell that potential customers are not yet sure that recycling in their region is a profitable business. For this purpose we developed our new multi function plant recycling of tire, cable or/and WEEE (Waste Electrical and Electronic Equipment) recycling. We introduce to you the E1500 Multi Function plant.



Recycling of tire (E1500T)

The basic version of the multi function plant is the standard tire recycling plant E1500T. The E1500T is the smallest of the standard tire plants, and fit the investor with a smaller budget and a smaller processing need. The input capacity is up to approx. 1.500 kg per production hour, and it can process almost all types of tires. As an example it can for example process truck and car tires at an input capacity of approx. 1-1.5 ton per processing hour when producing 0-4 mm rubber granulate, 95-99% free of liberated steel and textile.

Like all the Eldan lines this is also a modular built, meaning that using the line as a basic line there are numerous possibilities for expanding the line. If required, additional machines can be added to upgrade the E1500T.

The system is designed as simple and effective as possible, to minimize the number of machines. This plant only needs 150 – 200 m² space. The plant layout can be customized to fit into any building of mentioned size. Further the Super Chopper, SC1412T, can be placed outside the building meaning even less space is required inside.

This standard tire recycling plant can easily be modified to a cable and/or WEEE plant.

Recycling of tire and cable (E1500TC)

In order for the plant to also be able to process cable some additional equipment is required:

- one Separation Table (C22) and
- one Pneumatic Material Transport System.

Optional is connecting the plastic fraction from separation to PC15 classifier (existing) and thus cleaning most of the remaining metal fraction from plastic. Optional is also exchanging the existing Fine Granulator to one with a higher capacity (i.e. from FG952 to FG1504).

The capacity for the cable modification is up to 2.0 ton per production hour.

Recycling of tire and WEEE (E1500TW)

The E1500T plant can also – beside tires – be extended to process WEEE. In this case the following equipment is required:

- one Eddy Current Separator (ECS),
- one Heavy Granulator (HG129),
- one Separation Table (C22),
- one Pneumatic Material Transport system and
- conveyors as well as small feeding silos.

The capacity for the WEEE modification is up to 1.5 ton per production hour.

Recycling of tire, cable and WEEE (E1500TCW)

A third option is to be able to process – besides tires – cables as well as WEEE all in the same plant, which really will mean that the Eldan E1500T will live up to its name as being a multi-function plant.

To change from processing tires to cables or WEEE in the same system it is only required to clean out the plant and change over the transport in the system.

Flemming Hansen, Product Manager for cable and WEEE recycling has been involved in the development of the E1500 Multi Function "We noticed that many of our customers were interested in getting into the business of recycling, but were hesitating regarding which recycable material they could get a hold of. During different time periods, it is easy to get a hold of different kinds of waste material. When we presented the concept which implied that they would not have to choose between tire, cable and WEEE, they were immediately interested in the idea".

The process requires – whether you choose only tire processing or above options – a certain aspiration capacity to function best and to obtain a good separation as well a clean environment. For that reason Eldan is able to offer either a preliminary filter system or an automatic filter system (self-cleaning).

The E1500 Multi Function plant shows the flexibility and advantages of the Eldan modular recycling plant concept!

More Info: If you want to know more about the new E1500 Multi Function plant, you are welcome to contact Product Manager Flemming Hansen by mail: flh@eldan-sr.com, by phone: +45 63 61 25 45 or visit our website: www.eldan-recycling.com

R400-3

Adding capacity to the Micro Module



Since the the company was founded in 1956, Eldan Recycling has produced equipment for recycling of cables. The company started off by producing cable strippers, shears etc and has since then developed machinery and entire systems for further granulation and separation of cables. Recently we have learned that there is an increasing demand for cable recycling equipment for smaller quantities of cable. In the autumn 2010 issue of the Eldan ScrapBook we introduced the Micro Module for recycling of smaller quantities of cable (approx. 150-200 kg per production hour). In order to increase this capacity we have now developed a smaller Rasper (R400-3) as a complement the Micro Module.

The Micro Module

Over the years we have delivered several hundreds of plants and single machines for cable recycling. Eldan offer standard cable plants with capacities ranging from 400 kg and up to 4 ton per production hour. The demand for larger cable recycling plants has increased during the years and we have sold and erected cable plants with capacities of 6-8 and 10 ton per production hour. During recent years we have noticed a different trend; an increasing demand for cable recycling equipment for capacities lower than our standard offer.

The Micro Module has an input capacity of 150-200 kg per production hour and only processes dry pre-cut cables without any steel and with a maximum diameter of 15-20 mm and a maximum length of 300-400 mm. These cables usually have copper or aluminum conductors and plastic, rubber or paper insulation. The cable types to be processed in a Micro Module are for example communication wire, installation wire, power cables with copper or aluminum conductors, copper wire and mixed household wire.

The main machines in an Eldan Micro Module consist of a Granulator, a Separator, and a Filter. Installed power is 22 kW. The Micro Module is designed to fit in a 20-foot open top container or on a truck and can easily be handled with a forklift. The Micro Module can achieve a metal purity of approximately 99,5%.

The Rasper R400-3 – increasing capacity

In order to make the most out of the Micro Module, the Rasper R400-3 has been developed. By adding the R400-3, the Micro Module can either process at a higher capacity, cables with larger dimensions or cables containing steel. The R400-3 is in combination with the Micro Module able to increase the input capacity up to approx. 400 Kg per production hour.

The new Rasper R400-3 has been developed from 50 year experience from the industry, and naturally according to the high Eldan standards. The Micro Module and Rasper R400-3 is a highly competitive solution, and the interest from the industry is high. Even though it has just been launched, the Micro Module and Rasper R400-3 combination has already been well received by the market.

Like the other Eldan Raspsers the R400-3 has various screens with different hole sizes available. The rotor is made from wear-resistant steel, and the wedge mounted serrated knives can be grinded multiple times. It is V-belt-driven through the strong 30 kW motor. The motor can be delivered in voltage according to standard in your country. The Rasper R400-3 has four flying and one static knife.

An option for the connection of the Rasper R400-3 to the Micro Module can be offered as well. This connection includes an outlet conveyor belt and overband magnet.

More Info: If you want to know more about cable recycling or the new Rasper in particular, you are welcome to contact Product Manager Flemming Hansen by mail: flh@eldan-sr.com, by phone: +45 63 61 25 45 or visit our website: www.eldan-recycling.com

Focus on the United Arab Emirates

Since oil was discovered in the United Arab Emirates more than 30 years ago, the region has undergone a deep transformation from being an indigent desert region to a modern state with a high standard of living. The government has focused on creating jobs, and developing the infrastructure which resulted in the region having a remarkably high per capita income and a considerable annual trade surplus. Free Trade Zones that offer 100% foreign ownership and zero taxes help to attract foreign investors. Today, the United Arab Emirates is one of the most active and influential regions in the world.

Development generate waste

The fast construction growth, an increasing manufacturing base and a booming service sector, has also opened up new opportunities for the recycling industry. Inquiries to Eldan Recycling show that many players in the region have realized that waste is not worthless. "Since the middle of the 2000's we have noticed a fast increase in requests from the United

Arab Emirates" says Henning Nørgaard, Territory Manager at Eldan. "In 2004 we sold our first tire recycling plant to the region. Since then we have sold plants and single machines for recycling of e.g. UBCs (Used Beverage Cans in aluminum), cable and tires. We also see a growing interest for aluminum and WEEE recycling. The United Arab Emirates is definitely one of the most interesting regions planning ahead."

Environmental thinking

The United Arab Emirates is not just expanding fast they are also a world leader in adapting new technologies, and ideas. In January this year 26,000 world leaders, international policy makers, industry leaders, investors, experts, journalists and other interested parties was brought together at the annual meeting for the renewable energy and environment industry - World Future Energy Summit "WFES 2011" in Abu Dhabi. This summit was founded in 2008, and has already become one of the main environmental events of the year. Since the beginning Eldan has co-exhibited with Ferrostaal AG, our agent in the region. "The United Arab Emirates is expanding faster than any other area in the world. If you want to know the latest, and be visible among the players on the cutting edge, you have to exhibit at the World Future Energy Summit" says Ulrika Persson, Marketing Coordinator at Eldan.



Crown Princess Victoria of Sweden speaking with Toni Reftman, Managing Director of Eldan Recycling

The summit is also frequently visited by royalty world wide. This year the Crown Princess Victoria of Sweden was specially invited to the summit. The introduction speeches were held by the UN Secretary General Ban Ki-Moon and the Pakistani president Asif Ali Zardari. They were followed by the Crown Princess Victoria who held an acclaimed speech where the importance of everyone taking responsibility for the future was pointed out, in particular regarding energy and energy consumption – "reality has caught up with us". The royal attendance at World Future Energy Summit is not just a sign of the environmental awareness in Scandinavia, but also the importance of the United Arab Emirates as an influential region.

Future of the future

Eldan has already delivered several complete recycling plants for the UAE, Saudi Arabia, Kuwait and Jordan and is working on new complete plants in Qatar, Bahrain and Oman.

Recycling of cable scrap is an interesting industry for the region, Eldan has existing plants in Kuwait and Saudi Arabia and recently installed a cable plant with a capacity of 2.5 ton per production hour, in the UAE.

Aluminum recycling is also starting to break through, and our equipment caters to the needs of aluminum recyclers in the region and we are also in the final stages of selling complete WEEE (Waste Electrical and Electronic Equipment) recycling plants in Qatar and Saudi Arabia.

The region has developed remarkably fast, yet it is evident that it is not saturated and done. "The continued development in the region and the increasing awareness for environmental thinking can go various directions" says Henning. "The collecting and sorting of household and industry waste could be organized and expanded. There are also further possibilities within recycling and recovery of the valuable parts of waste. For many years there has been a focus on recovering the copper from cable, and unfortunately the aluminum has ended up in the shadows. There are many reasons for recycling tires – both commercial and environmental. Finally "urban mining" is about to get its breakthrough within WEEE recycling."

The Middle East region has already seen the initiatives for an intelligent waste management system with Abu Dhabi taking the lead. "These initiatives maintain the feeling that the future generation of the GCC (Gulf Cooperation Council) countries has an environment without large landfills and dump yards of wastes and various scrap" says Rajesh Sivaranjan, Sales Manager at Ferrostaal Dubai office, the responsible agent for Eldan in the Middle East. "We have seen many new projects already completed and are looking forward to many new projects for a proper waste recycling system."

The future is looking very bright for recycling in the region, and Eldan is looking forward to continue the leading position in supplying plants and machinery where the equipment need to handle the hardest environment of scrap recycling.

Tire recycling is no news in the Emirates

For many years there has been heavy activity in the United Arab Emirates – particularly within construction and related industries. Most have heard about the world's tallest building, Burj Khalifa; the world's most expensive airport, Dubai World Central International Airport and the three largest artificial islands in the world, Palm Islands. The world's largest shopping mall is also located here. These investments attract people to the region, and the population has increased from approximately 2.4 millions in 1995 to 5.6 millions in 2009. The fast expansion of this region and its population has generated large amounts of waste – in particular used tires.

Customer Requirements

In the beginning of the 2000's the Ghantoot Group began to investigate the market for "raw material" in the United Arab Emirates. How many end of life tires were available? Was there a market for recycled (size reduced and separated) end of life tires – i.e. shreds, chips, granulates or powder? Which recycling equipment is available on the market? The market studies turned out very positive, and it was clear that there indeed were many end of life tires available, and also an interested market for the recycled products. There was a strong demand for granulate with a high standard of uniform quality and purity. From this study Sharjah National Crumb Rubber Industries was founded.

Sharjah National Crumb Rubber Industries wanted to be able to process different kinds of tires, including car and truck, without de-beading and at a high capacity. They also wanted to be able to produce different size of output material. They were looking for strong, reliable technology to produce the best quality products for a long time.

Eldan Solution

The final selection of supplier of the equipment was Eldan Recycling. "Eldan has extensive experience, and they were a strong partner from the start. Eldan has been present within the recycling industry for more than 50 years, and delivered and installed its first tire recycling plant in 1991. As a total they have delivered 150 tire recycling plants, which of course has given them the experience we needed" says Tariq Al Mansori, General Manager at Sharjah National Crumb Rubber Industries.

In 2004 Sharjah National Crumb Rubber Industries acquired an Eldan turn-key tire recycling plant (E4000T) with a capacity up to 4 tons per production hour. The E4000T plant is designed for recycling of complete truck and car tires, including super singles and tractor tires, to a high quality rubber granulate of various sizes. The output material is 99.9% free ➤



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of liberated steel wire and textile. The dimensions of the input tires can be maximum diameter of 1200 mm and maximum width of 450 mm. De-beading of the tires is not required. The plant includes a Super Chopper (SC1412T), a Tumble Back Feeder, a Multi Purpose Rasper (MPR160), a Silo V4), two Fine Granulators (FG1504 and FG1504) and an Aspirator (UP1750).

The Super Chopper (SC1412T) is a powerful low-speed pre-chopper used for pre-chopping of the input material – partly to size reduce the input and partly to increase the capacity of the recycling plant. It processes complete car and truck tires (including super singles) down to shreds size (approx. 50-300mm).

The Tumble Back Feeder (TBF) ensures a continuous flow into the Multi Purpose Rasper - thus ensuring an optimum load/utilization of the machine. The Multi Purpose Rasper (MPR160) is the first granulation stage which means that it reduces the Super Chopper shred input (50-300 mm) down to 12 mm in one single pass. Up to 98% of the steel is removed. The chips are then used as for example TDF (Tire Derived

Fuel) or continues to be further processed in the granulation plant. This machine is an effective Rasper designed for tire recycling. The machine is equipped with exchangeable screens and the output size will be determined by the actual screen size installed in the machine. It ensures individual size reduction down to approx. 12 mm chips and liberation up to 98% of the steel content.

The Silo (V4) ensures continuous flow through the first Fine Granulator and ensures achieving optimum capacity. The Fine Granulators ensures fine granulation of the rubber granulate. These machines are also equipped with exchangeable screens with different hole sizes to determine the actual output size – if you want a different output size, just change the screen. The first Fine Granulator (FG1504) is used for the first granulation stage enabling liberation of up to 50% of the textile contained in the tires. The liberated textile is then removed in the Classifier (PC10). The Second Fine-Granulator 2 (FG1504) is used for the second and final granulation stage. If there still is any textile or steel left in the material it is liberated here.

“...Eldan manufacture long-life strong machines, that can handle recycling of tires without de-beading”

Tariq Al Mansori, General Manager at Sharjah National Crumb Rubber Industries

The steel is removed by magnets, and the remaining textile is removed by the Classifier (PC15) which removes 40% of the textile. The Classifier (PC15) consists of two layers of screens with bottom trays arranged in a vertical stack - the upper screens having holes and the bottom trays having no holes. The material is fed to the machine at the inlet, where the feed roller distributes the material onto the screen layers. The material is divided with 50% on each of the two screen layers. In operation, the screens are oscillating, causing the granules to settle on the two levels depending on the actual size of the material. The rubber granules will land on the bottom tray through vibration, while the textile remains on the upper screen layers. Bouncing rubber balls will effectively keep the screens from clogging. The screens themselves can be changed very easily for processing different sizes of rubber granulate. The Aspirator (UP1750) ensures the final size distribution of the granulate and removes the remaining, liberated textile providing a high quality rubber granulate with a purity of up to 99.9%.

Currently the tire recycling plant at Sharjah National Crumb Rubber Industries produce 25 ton of rubber granulates per production day. They mostly produce rubber powder which has been very well received by their customers. The output material has also been approved by FIFA (Fédération Internationale de Football Association) for their projects in the region. The approval of FIFA is very interesting since rubber granulate is used in artificial grass at soccer fields.

Comments

The tire plant at Sharjah National Crumb Rubber Industries was the first tire recycling plant in the United Arab Emirates. After processing tires for more than six years in the hot and humid Gulf region it is still processing the tires perfectly. “We saw the opportunity for recycling of tires before anyone else in the region. Our plant is also the only tire plant still running today” says Tariq.

Although there was no tire recycling plants in the region, there were many manufacturers looking to deliver to the area. After a thorough market analysis Sharjah National Crumb Rubber Industries decided to chose Eldan equipment. “There were two main reasons for us choosing to use Eldan equipment for our tire recycling plant. First, they manufacture long-life strong machines, that can handle recycling of tires without de-beading. Not de-beading the tires saves us a lot of time and money” says Tariq. “Second, not only having the capability to meet the demands for uniform quality and purity is important, but also the flexibility in the plant being able to change the production from one fraction size to another is important. We are producing to the customer's order as we do not have any production of end-product ourselves. A multi-size plant was the right solution for us since we have the flexibility to meet the customers' range of different demands.” Unlike other recycling areas there is not only one output material which is the best suited one, instead it depends on what the customers wish to use it for. ➤



"In technical matters I am in contact directly with the product manager Jan Kjær at Eldan, who has always given me great support. The local backing of Rajesh Sivarajan is invaluable. He is just a phone call away which is essential when maintaining the plant."

Used tires are among the largest and most problematic sources of waste today, due to the large volume produced and their durability. Those same characteristics which make end of life tires such a large problem also make them one of the most re-used waste materials. As the rubber is very resilient, it can be reused in other products. The materials that are the outcome of tire recycling have many benefits (as the flexibility, strength and combustibility). Entire or shredded tires can be used for coastal protection projects and reinforcing embankments alongside roads. Because of its noise reducing benefits it is also useful on rail and tram tracks to reduce noise and vibrations. Another popular application for the rubber is in shoe soles, shock absorbers and shock absorbing mats. Applications for powdered rubber are for example wheels (for dustbins, wheelbarrows, lawn mowers), artificial floors covering for sports arenas, flooring for stables and other protective floor (for schools, playgrounds etc) and rubber modified asphalt for road surfacing (added for enhancing longevity and noise reducing).

Taking care of the equipment is vital when making a large investment like acquiring an entire tire recycling plant. "Tariq understands the importance of maintenance, and it is a true joy to visit the plant at Sharjah National Crumb Rubber Industries" says Jan Kjær, product manager at Eldan.

The support of the Eldan representative in the region, Rajesh Sivarajan at Ferrostaal, is warmly appreciated by Tariq: "In technical matters I am in contact directly with the product manager Jan Kjær at Eldan, who has always given me great support and the local backing of Rajesh is invaluable. He is just a phone call away which is essential when maintaining the plant."

Jan has been involved with the project from the beginning: "The highly professional customers pay more and more attention to the fact that the supplier has a good reputation within the industry. It is important that manufacturer give good service after the purchase – i.e. can supply spare and wear parts and give advice or answer additional questions which the customer might have. Naturally the three important consumption rates are highly important - the power consumption per produced ton, the time consumption for a knife change and the time consumption for knife adjustment."

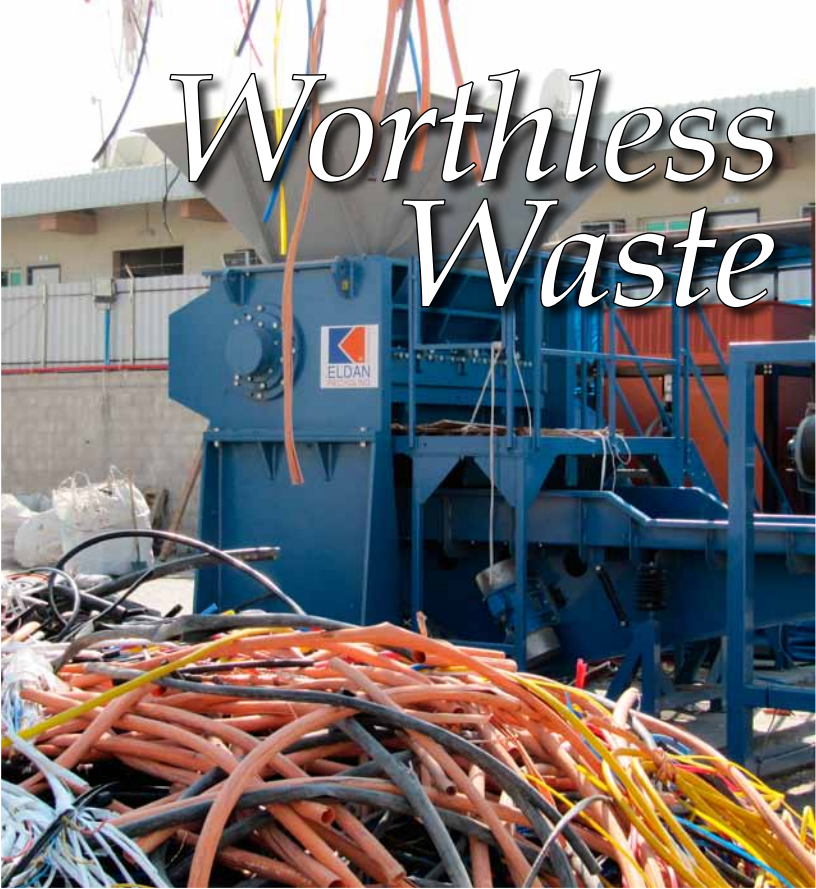
According to Tariq, Eldan has a good reputation in the region: "I have only heard good things about Eldan – from competitors of Eldan as well as from companies who purchase the material coming out of their equipment. It is high quality machinery producing a high quality material."

Sharjah National Crumb Rubber Industries

Located: Sharjah - Sajaa, United Arab Emirates
Founded: 2004
Employees: 28

Sharjah National Crumb Rubber Industries is a tire recycler in the United Arab Emirates. They see that waste tires will be a large problem in the United Arab Emirates in the future, and they turn this pile of waste into a reusable material. The material produced from the whole used tire are TDF, tire granulate, crumb rubber, steel (iron granules) and textile (fibre). They are the authorized contractor for Sharjah Municipality for long-term basis for their scrap yard of tires.

The company is owned by Ghantoot Group, Abu Dhabi, United Arab Emirates.



Worthless Waste



Valuable Copper

Gulf Star Metals LLC is a company based in the United Arab Emirates. In 2002 they entered into the non-ferrous metals scrap business. For decades they had been active within trading of base metal and other commodities.

Requirements

With growing demand from their customers, as well as a boost in supplies from in- and out-house projects, Gulf Star Metals LLC (GSM) saw a great potential in adding to its business. They started to look for opportunities to expand, and decided to enter cable recycling. Copper is a highly valuable metal, which had a big demand in the market.

During 2008, GSM started looking in to the possibility of recycling of scrap cables instead of trading of scrap cables.

Eldan solution

At the World Future Energy Summit 2009, in Abu Dhabi, GSM got in contact with Ferrostaal, Eldan's agent in the United Arab Emirates, for the first time, and was introduced more deeply to Eldan Recycling A/S.

During the decision making process GSM visited recycling plants in Europe (e.g. France and the United Kingdom), in order to get a clearer picture of the various equipment manufacturers. They were given an opportunity to get a more in depth understanding by visiting a running plant, and speaking to the actual

plant and machine users. These visits convinced GSM to decide on Eldan equipment.

In order to fully understand the requirements of the customer, the product manager at Eldan Recycling, Jan Kjær; the managing director at Eldan Recycling, Toni Reftman; and the sales manager at Ferrostaal, Rajesh Sivarajan visited an existing GSM yard in Ajman to see the available cable scrap.

In 2010 a standard Eldan cable plant (E2500C) including a pre-chopping system was delivered. The system consisted of a Super Chopper (SC1412), an Electromagnet (Electromagnetic Belt Separator), a Multi Purpose Rasper (MPR120), an Overband Magnet (DM1450), a Silo (BF), a Fine Granulator (FG952), and a Silo (Silo SMV).

The Super Chopper (SC1412) is a powerful, low-speed, single shaft pre-chopper used for pre-chopping of the input material – partly to size reduce the input and partly to increase the capacity of the cable recycling plant. The Electromagnet (Electromagnetic Belt Separator) separate iron particles from the material flow. The Electromagnet is arranged across a Vibrating Discharge Conveyor Belt of stainless ➤

“We finally chose Eldan based on their good reputation in the industry and in the region and due to high quality products, proven technology and a strong brand,”

Syed Natharsha, General Manager, GSM



Left to right: Joy Thomas (Plant Maintenance Manager) Zahir Hussein (Executive Supervisor), Henning Nørgaard (Territory Manager, Eldan Recycling), Hameed Abdul Kader (Office Manager), Rajesh Sivarajan (Sales Manager, Ferrostaal, Dubai office)

steel and separates iron particles automatically. The material does not get into contact with the magnetic system itself and can thus be damp, sticky and have a temperature of up to 150° C.

The Multi Purpose Rasper (MPR120) is an effective, medium-speed, dual drive Rasper designed for cable recycling. It ensures individual size reduction down to approximately 15-25 mm fraction sizes. The Overband Magnet (DM1450) will effectively remove the liberated steel from the granulate. The Silo (BF) balances the output from the Multi Purpose Rasper (MPR120) to the input rate of the Fine Granulator (FG952). The Fine Granulator (FG952) is a high-speed, single shaft Fine Granulator for opening of the cables, and for final granulation stage producing fraction sizes typically between 4-7 mm. It is supplied with hydraulic opening of the upper part as well as screen cradle for easy access to the knives and the rotor and easy access for changing or cleaning of the screen. The purpose of the Silo (Silo SMV) is to balance the output from the Fine Granulator to the maximum input rate of the Separation Table thus ensuring that the quality of separation is maintained. It is possible to obtain a copper purity up to 99,9%. The Separation Table is designed to separate the metal from the insulation.

The output from the Separation Table (C22) is divided into four output fractions; dust, metal, plastic and middling. The system achieves an input capacity of approx. 2.5 tons per production hour depending on type of cables, screen size, method of feeding etc.

Comments

Even though GSM started to investigate the market for recycling equipment during the global financial recession, they felt confident with investing even though times were uncertain. “It took a long time to make the decision as we took in quotes from various recycling equipment manufacturers and visited many reference plants. We finally chose Eldan based on their good reputation in the industry and in the region and due to high quality products, proven technology and a strong brand, says Syed Natharsha, General Manager, at GSM

According to Rajesh Sivarajan, Sales Manager at Ferrostaal, Dubai office, the connection between GSM and the ETA Group (Emirates Trading Agency) is of high importance: “The ETA Group is a huge organization with many business opportunities, due to their presence in various sectors of project as well as product engineering and management through-

out GCC (Gulf Cooperation Council). It is of course a great privilege to be closely associated with them in this project! We expect a continued close cooperation with them in various projects.”

Since GSM had not previously been active with recycling, but mostly within trading of scrap, they had a lot to learn to start with. “The great support and follow-up by Rajesh Sivarajan and Andreas Krieger at Ferrostaal as well as the product management team at Eldan Recycling has made us feel at ease getting into the recycling industry” says Syed.

According to Andreas Krieger, Director of Equipment Solutions, Ferrostaal Dubai office, it is important not just to sell equipment to the customer, but to build a two way relationship. “Ferrostaal treats the customer as the partner and aims to build a long term relationship, instead of merely having single project contacts. Being good partners is of great interest, and also financial gain, for both the customer as well as for Ferrostaal.” The traditional sales expression is true – it is eight times more expensive to get a new customer than to keep an old one. A content customer will return to your company in the future as well as speak well of you in their network.

Eldan has built up a good reputation in the region due to reliability of the equipment. “Further we congratulate and give our sincere thank you for the prompt delivery and installation as well as after sales service and training from Eldan’s commercial and technical team. It is very satisfactory and highly professional” says Syed “We look forward to grow in this industry further, along with Eldan.”

Gulf Star Metals LLC

Located in: Abu Dhabi, United Arab Emirates

Founded in: 2002

Employees: 75

Gulf Star Metals LLC a United Arab Emirates based company. In 2002 they entered into the non-ferrous metals scrap business. For decades they had been active within base metal trading and other commodities.

Gulf Star Metals LLC is a part of Emirates Trading Agency (E.T.A. Star House), which is one of the largest companies in the region with more than 70,000 employees.



Global Representation

Wherever you are located, rest assured that Eldan Recycling is able to meet your requirements for a professional partner. Eldan has its own sales offices in Denmark (head office), Germany, France, Australia and in the USA. In the rest of the world we are represented by agents.

In order to have the best possible conditions to meet your requests and demands, we feel that it is important to be able to communicate in your language, and at your conditions. Our sales offices and extensive agent network covers most of the world, and since all agents are highly familiar with our equipment, they are able to give you qualified advice in your own language.

In addition to language, business culture is an additional barrier to breach when doing business in all

continents. "In China too many hand gestures and eye contact might seem impolite, while normal meetings in the USA might seem a bit aggressive due to the open and lively discussions. Even though you do not mean any disrespect, if you do not know the cultural traditions you might step on someone's toes" says Henning Nørgaard, Territory Manager at Eldan. "This is a great advantage with having an agent in the region. Someone who can do the ground work before Eldan enters the negotiations, and who can advise you on what to do, or what to avoid."

The agent is the face of Eldan externally, and is responsible for the communication and marketing in the region of responsibility. Behind the face stand the entire Eldan teams with, for example, product managers, sales coordinators and project managers. They are always available to answer questions, to visit the customer or to arrange a visit at a reference factory.

When doing business with Eldan, the initial ground work is in most cases done by the agent in the region. When the agent feels the need for more assistance, he will contact Eldan. Eldan can be involved in arranging a reference plant visit or just to explain the equipment in more detail. Sometimes this contact is fairly immediate after the first contact with the customer, while other times Eldan does not meet the customer until the contract signing.

Middle East/GCC countries

Ferrostaal AG is the responsible agent for Eldan in the Middle East/Gulf Cooperation Council countries (Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates), Latin America, India and China. In the Dubai Office Andreas Krieger, Director Equipment Solutions and Rajesh Sivarajan Sales Manager Environmental Technologies are the responsible contacts.

Ferrostaal is a global provider of industrial services world wide. As a technology-independent system integrator their business is focused around strong core business units in the competence areas;

projects, trading & services and assembly solutions. Within environmental technology the company offers machines and systems for recycling, odour control and waste water treatment. Decades of international experience within equipment solutions, make Ferrostaal an ideal partner for Eldan. They offer 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 own offices in more than 40 countries in all continents and the projects are turned into reality by about 5,300 employees.

A blooming collaboration

In 2009 Ferrostaal became the responsible agent for Eldan in the Middle East / GCC countries. There are many advantages with using a local agent as representation in a region. "Since Ferrostaal has been active in the region for a long time, not only representing Eldan Recycling, they have a wide customer base. If someone in the Ferrostaal network starts to look into recycling equipment, they immediately get in contact with the Eldan brand" says Henning. "This means that we get our name out there in a way which would not have been possible otherwise. Even though there has been much development within IT and communication tools, being able to offer face to face communication is always appreciated." ➤





Ferrostaal exhibition stand at the World Future Energy Summit in Abu Dhabi 2011. From left to right: Toni Reftman (Managing Director, Eldan Recycling), Juri Salvadori, Stefan Behnke, Ursina Mutzner, Henning Nørgaard (Territory Manager, Eldan Recycling), Urban Kozinc, Rajesh Sivarajan (Sales Manager, Ferrostaal Dubai office) and Andreas Krieger (Director, Equipment Solutions, Ferrostaal Dubai office).

Eldan has already become a preferred equipment manufacturer for the region. The existing customers in the region are happy with the equipment, and the reliability of the Eldan plants and machines. "In addition the after sales support from Eldan is always the best compared to any others" says Rajesh. "The operating costs of the Eldan machines and plants is one of the main reasons why the customers ultimately decide to buy Eldan equipment."

Laws and regulations also differ extensively worldwide. "Especially in the recycling industry the existing regulations in each GCC country differs and you need to be closely associated with each region to have a good understanding about the existing and upcoming projects. This is what Ferrostaal is doing from our Dubai office. In some cases the municipalities invest directly in the recycling projects. These waste recycling plants are either operated by the municipality itself or a contracted private company.

Most municipalities however support the private initiatives in the region which enable the investors to have the best technologies in the environmental sector along with good support from the regional governments. Ferrostaal is offering different technologies from Europe for various recycling projects and Eldan has been one of the best technology partners of Ferrostaal in waste recycling business" says Rajesh.

By having a close relationship with the agents, the Eldan brand is better represented. "Rajesh is definitely one of our agents who I depend on the most. He is always on his way to find new projects and opportunities" says Henning. "His positive energy and willingness to find the best solution for the customer, makes him very well liked by both us at Eldan, as well as by the customers. At the moment we have several interesting projects in the region, which we look forward to carry through."

Are you looking for the agent in your country?

Have a look in the contact pages of this magazine or visit our website: www.eldan-recycling.com



Hola Latin America

Since the mid-eighties Eldan Recycling has been active on the Latin American continent selling equipment and solutions to the recycling industry.

There are many similarities between the recycling evolution in the Latin America and the recycling development in other markets across the globe.

Learning from experience

Often the cable recycling industry is the starting point, where the basic cable recycling per handcraft is moving to be operated by machinery. Eldan introduced its first Cable Stripper in 1960 on markets mature for this type of equipment. Currently, we are still selling this machine to the Latin American market, for customers who have a smaller capacity requirement, and for those who wish to process cables with larger diameters (up to 150mm). The next stage is typically that we see a demand for our automatic solutions – like a cable granulating line. Today we offer standard cable lines with capacities ranging from 400 kg up to 4 ton per production hour. We have also however sold and erected cable plants with capacities of 6 – 8 and 10 tons per production hour. For new customers with a smaller capacity demand, yet still looking for a automatic solution we have developed the Eldan Micro Module which has a capacity of approximately 200 kilo per hours. ➤

“there is 80 times more gold in WEEE scrap than the same quantity of material from gold ore” report from German University of Aachen

In the Latin-American market we have an extensive reference list including customers in Argentina, Brazil, Chile, Colombia, Mexico and Venezuela. These customers are mainly active within the cable recycling industry. The market is however not saturated and we foresee great interest for cable recycling in the future as well.

Thinking ahead

New business segments like recycling of tire, electronic waste (WEEE - Waste Electrical and Electronic Equipment) and refrigerators are segments where we see a growing interest. “These segments are boosted due to changed national regulations and also by the demand for “new raw materials”” says Henning Nørgaard, Territory Manager at Eldan.

In tire recycling there are three valuable materials: rubber, steel and fiber (nylon, PE or kevlar) which all are valuable materials. If tires are not recycled they can be a large environmental hazard. They can also be a large health risk since there is moisture in the tires and it is a perfect breeding ground for

both malaria and dengue mosquitoes. Big piles of used tires are also a risk during fires, since it is very difficult to extinguish fires in them. The same properties which make used tires such a big waste problem also make them one of the most re-used materials. As the rubber is very resilient, it can be reused in other products. The materials that are the outcome of tire recycling have many benefits (flexibility, strength and combustibility), and can be used in shoe soles, artificial turf and rubber modified asphalt for road surfing.

Recycling of electronic waste is increasing concurrently with the increase of sold electronic products on the market. In typical WEEE scrap there are the fractions magnetic ferrous, aluminum, organic (plastic) as well as copper and precious metals. All valuable material which are demanded from the market. The German University of Aachen mentions a “gold rush” in a report mentioned by ERP (European Recycling Platform). The report also states that there is “80 times more gold in WEEE scrap than the same quantity of material from gold ore”.



In the Kyoto agreement (written by the United Nations to fight global warming), among many others, it is pointed out the importance of reducing the CFC (Chloro-Fluoro-Carbon) gases, which are found in refrigerators. When recycling refrigerators it is important to collect all the gases, which is approximately 400 gram per unit. In addition to that there is an amount of magnetic ferrous, aluminum, copper and organic (plastic) material, which to a larger extent is marketable.

Proven technology close to you

Eldan offer proven solutions for all the segments. We have a philosophy at the company to always be close to our customers. Therefore we currently have own sales offices in Denmark (head office), Germany, France, US and Australia, and a network of agents throughout the world.

In 2009 Eldan Recycling established cooperation with the international trading house Ferrostaal AG. Ferrostaal has sales offices in most parts of the world, and we agreed that they would be our repre-

sentative agents in e.g. Latin America and the GCC countries. Ferrostaal AG has a long background, and experience in the Latin American market, since they have been present there since 1930. This almost 80 years background in their local markets like Mexico (covering Central America), Colombia, Venezuela, Ecuador, Peru, Bolivia, Chile, Argentina and Brazil is invaluable. They have the best background for serving the market in the most efficient way.

Eldan Recycling has already introduced Ferrostaal AG as our Latin American agent at the most important exhibitions in Mexico, Colombia, Chile and Brazil and we are happy to mention that we are already in contact with the most important players in the market.

Visit our web site for latest updated contact information; www.eldan-recycling.com

Being passionate about your business

“Enjoying what you do is the most important thing...”

Poggio Metalli s.r.l. is a successful family owned metal trader and recycler from Spinetta Marengo, Italy. The company was founded in 1948 by Mario Poggio and his wife Giulia Poggio. Since then the company has grown from a small local metal trader into a large cable recycler with a capacity requirement steadily growing each year. The ownership is soon to be taken over by their granddaughter, the third generation of the family; Luisa Poggio.

Customer requirement

Poggio Metalli is a metal trader (mainly within non-ferrous metals) and a recycler of cable. They place empty containers with their customers, who fill them with e.g. waste cables. When they are filled, Poggio Metalli pick them up again, and bring them back to the recycling facility for processing.

Since the beginning of the seventies' the three brothers and sons of the founders Luigi Poggio, Bruno Poggio and Renzo Poggio have run the company together. In 1974 they started a foundry where they melted the recovered zinc alloys into ingots. In the end of the 1980's they got in contact with Alessandro Silvestri, at NME s.r.l., the local Eldan agent.

The brothers knew that metal smelting was a pollutant process, and had therefore started to look for alternatives to smelting the metal. Since they were already involved in cable scrap as dealers, Silvestri suggested that they should recycle the cables instead. “The fact that recycling is better for the environment made us change from burning the metals to instead recycling them” says Luigi, owner of Poggio Metalli. “Burning cables is bad for the environment, while recycling them is very good.”

At this time Poggio Metalli did not have any particular requirements regarding capacity or output. They were basically just interested in getting into the cable recycling business. Their idea was to start investing a reasonable amount of money to see how this new business would turn out.



Left to Right: Bruno Poggio, Luigi Poggio, . Luisa Poggio

Eldan Solution

The business background between what today is Eldan Recycling and Poggio Metalli started in 1989 when Poggio Metalli bought a small cable recycling plant, a Mini Module, from Scandinavian Recycling. At this time NME s.r.l. was the representing agent in Italy for cable recycling equipment from Scandinavian Recycling AB. Scandinavian Recycling was founded in Sweden in 1976. In 1998 it was fully owned by ScanRec AB, a company in Carl Bennet Group. In 1999 Scandinavian Recycling merged with Eldan Recycling A/S, which also was a part of the same Swedish group. They acquired a Mini Module, that had a capacity of 300-500 kg per production hour.

Within one year, in 1990, Poggio realized that they needed a plant with a larger capacity. The company had received more material for recycling than they had calculated before the purchase of the Mini Module. Since they were happy with the Mini Module and with the support of Scandinavian Recycling, they decided to buy the new equipment from the company as well. They purchased a larger plant containing a Pre-Chopper, a Primary-Granulator,

two Secondary-Granulators and Separation Table. The new plant had a capacity of approximately 1.3 ton per production hour.

The Mini Module was sold back to Eldan, who in turn sold it to another customer. The Mini Module is still active today – more than 20 years after it first was acquired by Poggio.

In 1994 the plant was expanded with a third Secondary-Granulator in order to increase the capacity to 1.8-2.0 ton per production hour. At the same time a Water Separation System was added to recover remaining metals from the plastic fraction. The metal recovery was increased by approximately 3-5%.

In 1996 a special plant was installed including a Zig Zag separator. The Zig Zag separator separates the light material from the heavy material. Poggio Metalli had a special customer, who needed to separate the insulation material from copper pipes, and for this purpose the Zig Zag separator was perfect. ➤



“The fact that recycling is better for the environment made us change from burning the metals to instead recycling them” says Luigi Poggio, owner of Poggio Metalli. “Burning cables is bad for the environment, while recycling them is very good.”

In 1999, Scandinavian Recycling merged with Eldan Recycling. The product manager for cable recycling at Scandinavian Recycling, Bertil Eklöv, as well as the Italian agent Alessandro, continued on working with Eldan. Poggio Metalli also joined the new constellation.

Two years later Poggio Metalli invested in two more Eldan machines – a Super Chopper (SC1412) and a Heavy Granulator (HG129). The Super Chopper (SC1412) is used for pre-cutting of the cable scrap before processing in the granulation and separation plant. This not only reduces the size of the input material, but also increases the capacity of the entire cable recycling plant. In 2011 additional modifications are going to be made on the equipment. The plan is to increase the capacity to 3-4 tons per production hour.



“Sandro convinced us that recycling, through downsizing and separating the material, was the future. The benefits were convincing” says Luigi Poggio. “You can say that Sandro changed our company and lives”.

Comments

The relationship between Eldan Recycling/ Scandinavian Recycling and Poggio Metalli has been long and fruitful. “I first got in contact with Sandro through one of his colleagues. At that time we did melt down the metals in our foundry, to later on sell them to factories across Italy. This was however a polluting way of taking care of the cable. Sandro convinced us that recycling, through downsizing and separating the material, was the future. The benefits were convincing” says Luigi. “You can say that Sandro changed our company and lives”.



There is no doubt that Luigi Poggio is passionate about his business. Like the true Italian he is, when he speaks he speaks and gestures with his entire body.

When the Mini Module was purchased in 1989, Poggio Metalli researched the market well. They looked at other European manufacturers and their reference plants. “We visited Scandinavian Recycling’s reference factories in Italy, and also went to see the Mini Module in Sweden. What we saw is the reason why we chose Scandinavian Recycling” says Luigi Poggio. Recycling is thinking about the future, and no hasty decisions should therefore be made regarding the investment in the equipment. “Since cable recycling was a new industry for Poggio, they were of course careful with the investments when they decided to acquire the Mini Module. Once they realized that cable recycling actually was a highly profitable business, they gradually decided to invest more” says Alessandro. “Now we have known each other for more than 20 years!”

As in all other relations, the business relationship should be based on honesty and respect. “I think that the secret behind this good relationship is the fact that both Eldan and I sincerely want what is best for Poggio Metalli. I would never recommend a solution which I did not believe was the best pos-



Alessandro Silvestri, of NME s.r.l., Luisa Poggio of Poggio Metalli Srl & Flemming Hansen (Product Manager, Eldan Recycling)

sible solution for them” says Alessandro. “Whether or not they call me to get some help or answer to a question, or to buy new equipment, I will always try my best to help them. And also to have a similar thinking with a customer is important. It is not always possible, but when it happens, like in my case with the Poggio family, it is really satisfying - not just for business but also for private life.”

During the 20 years that have past from the purchase of the Mini Module, Poggio Metalli has naturally gone through some changes. “We have grown from a small company to a large company and received a good reputation in the business. The bigger we become the larger processing capacity we need. We know that we always can turn to Eldan for help to develop the plant and it’s capacity. Their experience and knowledge is priceless” says Luigi.

In 2010 the recycling plant is celebrating its 20th birthday. “The equipment at Poggio Metalli is a great example of the high quality of equipment that Scandinavian Recycling and Eldan Recycling produce. With the recommended maintenance the equipment will last for a very long time” says Bertil. By sorting the cables before processing them, the result is optimized. “To optimize the capacity of the plant and quality of end products it is important to prepare the material in the way recommended by Eldan. Poggio Metalli is careful with their pre-sorting of cables, and this pays

off when you see the result” says Bertil. By giving the customer a better product, the business will increase. Luisa Poggio concludes: “By sorting the cables we will get a higher purity in the end result, and also a better market price. We run for example the sorted dirty cables just before regrinding of the knives, since they are extra rough on the knives. Our customers can rely on the quality of the products purchased from us, and therefore we get a better price. We always try to increase the quality as well as to increase the market of our current consumption. Currently we purchase about 80 percent of the scrap cables from Italy, and approximately 20 percent from sellers abroad. In 2011 we are going to process more cables at a smaller cost per ton.”

Poggio Metalli Srl

Located in: Spinetta Marengo, Italy

Established: 1948

Turn over: €10 million

Employees: 15 (including the owners)

Recycling activity: Process mixed cables. Approximately 13 tons per day in one shift (8 hour work, 1 hour cleaning, i.e. 1,8 tons/hour). ,

The company was founded in 1948. The company downsizes, separate and recycle nonferrous metals (like copper, aluminum, zinc, lead, nickel, tin and steel) as well a electric cable. They have been active within electric cable recycling since 1980.



When thinking recycling, most of us immediately think about aluminum beverage cans. In the United Kingdom alone nearly seven billion aluminum beverage cans are sold each year. World wide the corresponding amount is about 190 billion (190.000.000.000) pcs. Every one of these could be recycled over and over again, saving energy, raw materials and reducing waste. One recycled can will save enough energy to make 160 new cans, or enough to watch television for three hours.

Alutrade Limited is one of the largest recyclers of aluminum extrusion scrap in the UK. They recycle e.g. aluminum extrusion scrap, seating and UBCs (Used Beverage Cans). The company purchases the aluminum waste and cleans it up to a material quality which is more usable for the customers (e.g. smelters).

Customer Requirements

Alutrade was founded in 1986 by Chris George. A few months later his brother, Malcolm, also joined the company. To start with they focused on recycling of aluminum extrusions. In 1992, Don Larner, joined the company from the Aluminum foundry industry.

Alutrade had this time cut the material using alligator shears, and in order to increase the capacity they

needed to mechanize this process. By the end of the 1990's they started to look for equipment which would accomplish this. The intended input material was aluminum profiles, and the plant should have a input capacity of 300 tons per processing month. It was desired that the technology would be significantly updated compared to the existing machinery. Naturally a reasonable price limit also had been set.

Eldan Solution

Alutrade had previously done other business with Eldan Recycling's British representative MMH Recycling Systems. In 1999 the two parties discussed the problem and MMH's Managing Director, Philip Keatley immediately recommended them to get an Eldan Super Chopper: "Buy a Super Chopper! It might seem like it is a lot of money, but it is worth it!"

Alutrade was invited to see the Super Chopper at a cable plant in the United Kingdom and Malcolm was impressed: "When you see something that does the job, you just know that you want it".

In 1999 Alutrade acquired a Super Chopper (SC1412) intended for aluminum recycling. The Super Chopper can process soft and hard aluminum material, clean as well as contaminated material and baled as well as loose UBCs (Used Beverage Cans). The material can be processed into fractions which are suitable for secondary aluminum, aluminum granules and aluminum drops for deoxidation purpose. The main fraction size is smaller than 300 mm. 10 % of the output material is oversize (i.e. larger than 300 mm and smaller than 400 mm).

Before the installation of the Super Chopper Alutrade processed about 300 tons of aluminum extrusion monthly. With the Super Chopper they increased the capacity to 1,500 tons per month.

After a while the three owners realized that the Super Chopper might be too efficient compared to the rest of the recycling facility. The other equipment had a hard time keeping up with the Super Chopper. When raising the problem with MMH, Philip simply said: "You need an Eldan Heavy Rasper".

In 2002 Alutrade acquired an Eldan Heavy Rasper (HR125). After the Super Chopper and the Rasper the output size can be varied (according to the needs) between 20 mm and 80 mm. The Heavy Rasper is ideally suited for processing e.g. aluminum profiles and aluminum cans. The main rotor housing is equipped with replaceable wear plates to increase the durability of the machine. Special tool-steel knives can be reground multiple times on a »flat-bed« grinder to ensure long life and low operating costs. Adjustable knife clearance and serrated knife designs are available in different steel qualities. Screens are available with different hole sizes and different steel qualities.

Three years later, in 2005, they once again needed to increase the capacity of the plant, and purchased another Super Chopper (SC1412) and Heavy Rasper (HR160). The processing capacity was immediately increased enabling further expansion of the company's activities.



Alutrade processes both baled and loose aluminum cans

The same year, Alutrade received a load of aluminum UBCs from the British company, Alcan. The equipment purchased from Eldan could easily handle this, and the trials went very well. Alutrade started to look for additional aluminum cans. Out of the approximately seven billion aluminum drink cans which are sold in the UK every year, a very small portion of these were recycled at this time. There were no incentives for the consumers to recycle, and therefore the UBCs were hard to get a hold of. Each one could be recycled over and over again, saving energy, raw materials and reducing waste.

When recycling the UBCs is it desired to separate the aluminum from the organic material. The aluminum would then be baled again, and then later on smelted at the customer. By downsizing the material, and thereby increasing the density of the material, a lot of money will also be saved on transport of the cans.

There where two major concerns with the British aluminum cans: the plastic widget and the thick layer of paint covering the can. The widget is a device placed in a can of beer to manage the characteristics of the beer's head. It looks like a table tennis ball and contains pressurized liquid nitrogen. When the can is opened, the pressure in the can quickly drops, ➤



Malcolm George (left) and Don Larnar (right) in front of what started their business – a huge pile of aluminum profiles

“When you see something that does the job, you just know that you want it”

Malcolm George, Co-Owner, Alutrade Ltd.

causing the pressurized gas inside the widget to jet out from the hole into the beer. The result, when the can is then poured out, is a surging mixture in the glass of very small gas bubbles and liquid. The plastic widget is removed by an ECS (Eddy Current System) after the Rasper. The paint on the aluminum beverage can is removed in the Multi Purpose Rasper. The amount of paint removed depends on the size of the screens in the machine.

In 2008 Alutrade purchased a new and larger Rasper – a Multi Purpose Rasper (MPR200). The machine is specially designed to process aluminum (e.g. aluminum profiles, cast aluminum etc). It ensures individual size reduction down to approximately 20 mm. This machine was supposed to be used in the recycling of aluminum profiles.

In 2008 the global financial crisis punctured the aluminum industry of the UK. Some of the customers which used to use Alutrade went bankrupt or moved production to Asia. Many orders were cancelled, and

Alutrade had to rethink their strategy. New potential markets which still had a big demand for aluminum were found in the USA and India. The aluminum can industry had also grown extensively, and had become a serious business for Alutrade. One year later, in 2009, Alutrade had noticed an increase in requests on their services, and acquired one more Super Chopper (SC1412).

In 2010 another Multi Purpose Rasper (MPR200) was purchased. The total of three Super Choppers (SC1412), two Heavy Raspers (HR125) and two Multi Purpose Raspers (MPR200) will be placed in two recycling facilities (in Oldbury and in Redditch). The Oldbury Plant will process various aluminum profiles and old rolled aluminum. It entails one Super Chopper and two Raspers (MPR200 and HR125). The Redditch facility will just processing UBCs (baled) and contains two Super Choppers and two Raspers (MPR200 and HR125). The plants were both ready to process in February 2011. The plants will together process 33,000 tons a year (in two 12

hour shifts, four days a week). If desired, the plant however has a capacity of 56,000 tons per year. A third baler is soon to be installed in Redditch which will increase capacity up to 76,000 tons per year.

Alutrade have a fairly steady customer circuit at 30,000 tons a year. 15,000 tons are sold within the UK, while another 15,000 tons are exported internationally.

Comment

Malcolm was responsible for the purchase of the first Super Chopper. Eldan Recycling was an unfamiliar company in the UK aluminum industry. From the steel, WEEE and tire industry the company however got great reviews. “I remember that one person I talked to said Eldan is good – you will not have any problems with their equipment, and after 10 years with the equipment I understand what he was talking about” says Malcolm. His business partner had not seen the machine before it was delivered, but just

heard about how powerful it was. “When it arrived, I was actually kind of surprised that it was so small! But when we started the processing we immediately realized its capabilities and surprising powers. Due to it processing material much faster and the fact that we could lower the transport costs, the Super Chopper actually repaid itself in only one year!” says Don. “The Super Chopper might cost a lot of money, but it is not expensive.”

The purchase of the Super Chopper quickly delivered results. “We had about 400 tons of aluminum scaffolds and ladders in storage which we had not been able to get rid of with the equipment we had before the Super Chopper. Once our new super machines had arrived, it was gone within two months” says Malcolm.

Alutrade take pride in their “state of the art sorting and shredding plant”. The recent investment in processing facilities and equipment as described, enables them to handle both baled and loose cans, ➤



"It is great to see that it is going so well for Alutrade. Due to the great demand, they have just opened a new processing facility in Redditch where they will process their UBCs. "The processing of aluminum profiles will stay in Oldbury" says Jan Kjær, product manager for aluminum recycling at Eldan Recycling.

There is however one secret behind their success – choosing the best equipment. "Eldan is reliable with both regards to the machinery and the people behind and next to it. You can trust that the equipment and the separate parts is in really good quality. They for example use Hägglund motors" says Malcolm. "Whenever you have a question or a concern, you are always able to get an answer or help from Eldan."

Altogether Alutrade has purchased three Super Choppers and four different Rasps from Eldan. "An advantage with the Super Chopper, part from it being of amazing quality, is the fact that you can control the speed of the entire plant by changing the pace of the Super Chopper. If you are processing some tough material you turn down the speed so that it will be processed thoroughly, while you turn up the speed if you have a simpler material" says Don.

Alutrade Limited

Located: Oldbury and Redditch, UK

Established: 1986

Employees: 2010: about 80, and predict about 20 more in 2011.

Ownership: Chris George (founder), Malcolm George and Don Larnar.

Alutrade is one of the largest recyclers of aluminum extrusion scrap in the UK. They operate from a modern 100,000 square foot factory in the Birmingham area (Oldbury and Redditch). The central location coupled with a fleet of new vehicles, enables Alutrade to offer a 24 hour free collection service throughout the UK.

The company is recognised as one of the countries leading aluminum recycling companies dealing primarily in H9 (6063), H30 (6082) and other pure based metals. They serve over 500 end users ranging from window companies to the aerospace industry and with a client roster that includes well known companies such as Hydro Aluminum Extrusions, Alcoa and Sapa.

as well as mixed metals and contaminated cans. "Established for over 20 years, we have invested heavily in state of the art mechanical sorting and grading facilities. This enables us to trade in high volumes of aluminum scrap which coupled with our trading skills enables us to offer consistently competitive prices and prompt payments to suit your requirements." says Malcolm.

Business is going very well for Alutrade. They just opened their second recycling facility, and have a bright outlook on the future. "I think that it has gone so well for Alutrade due to the fact that we have chosen to niche our business. Many people might try to conquer the world at once when everything starts to go well for them. From the start we have decided what we wish to sell and to whom. We are now known for selling great quality products at a fair price. Our customers know what they get" says Malcolm at Alutrade. "We do not have one or a few customers to thank for our success. We have learned a lesson from the financial crisis in 2008, and will not put all our eggs in one basket."

CONTACT DETAILS ELDAN PRODUCT MANAGERS

Aluminum recycling

Jan Kjaer,
Email: jk@eldan-sr.com

Cable recycling

Flemming Hansen,
Email: flh@eldan-sr.com

Magnesium recycling

Jan Kjaer,
Email: jk@eldan-sr.com

MSW recycling

Jan Kjaer,
Email: jk@eldan-sr.com

Refrigerator recycling

Jan Kjaer,
Email: jk@eldan-sr.com

Recycling of various scrap types

Jan Kjaer,
Email: jk@eldan-sr.com

SLF / ASR recycling

Flemming Hansen,
Email: flh@eldan-sr.com

Tire recycling

Bjorn Laursen,
Email: bl@eldan-sr.com

WEEE recycling

Flemming Hansen,
Email: flh@eldan-sr.com

MEET US AT

Eldan Recycling will be present at the following exhibitions or events. If you are interested in meeting us at any of them, you are welcome to our stand/booth or contact us in advance at info@eldan-recycling.com



ISRI Convention Institute of Scrap Recycling Industries

5 - 9 April, Los Angeles (CA), USA
Los Angeles Convention Centre. Stand 1410.



IFAT China

5 - 7 May, Shanghai, China
Shanghai New International Expo Centre (SNIEC)



Recycling Aktiv

18-20 May, Baden Baden, Germany
Flughafengelände Karlsruhe/Baden-Baden (Baden-Airpark)



BIR Spring Convention

22-25 May, Singapore
Shangri-La Hotel



EU Gateway – Korea

6-10 June, Seoul, South Korea
COEX Intercontinental Hotel



Nouvelles Matières Premières

15-16 June, Tours, France
Parc des Expositions de Tours



Tyre expo India

5-7 July, Chennai, India
Chennai Trade Centre



E-Scrap Conference

5-6 October, Orlando (FL), USA
Omni ChampionsGate Orlando Resort



Ecomondo 2011

9-12 November, Rimini, Italy
Rimini Fiera



Pollutec Horizons 2011

29 November - 2 December, Paris, France
Paris-Nord Villepinte

CONTACT DETAILS

Europe

Head Office

Eldan Recycling A/S
Værkmestervej 4
5600 Faaborg
Denmark
www.eldan-recycling.com
Phone: +45 63 61 25 45
Fax: +45 63 61 25 40
E-mail: eldan-sr@eldan-sr.com

Belgium, Netherlands

Recuperma BVBA
Maatheide 76
3920 Lommel
Belgium
Contact persons: Mr. Gerard Nierman,
Mr. Marc Hermans
Phone: +32 11 552010
Fax: +32 11 552023
E-mail: recuperma@skynet.be

Bulgaria

Zh. Lagera, Str. Bogovetz
Block 37B, Floor 1
Sofia 1612
Bulgaria
www.arcon-environmental.bg
Contact: Mr. Tsvetan Doxinov
Phone: +359 2 952 39 33/36 53
Fax: +359 2 954 46 43
E-mail: doxinov@arcon.bg

Croatia, Slovenia & Bosnia Herzegovina

Trnjanska 105
10 000 Zagreb
Croatia
Contact: Mr. Zeljko Dedic
Phone: +385 1 615 45 94
Fax: +385 1 615 45 95
E-mail: dedic@arcon.hr

Czech Republic

Arcon Machinery a.s
ul. K Arconu 66
251 01 Ricany-Jazlovice
Czech Republic
www.arcon.cz
Contact: Mr. Jaroslav Kvasnica
Phone: +420 323 637 930
Fax: +420 323 637 970
E-mail: sales@arcon.cz
kvasnica@arcon.cz

Finland

Ollila & CO OY
Museokatu 33 B
00100 Helsinki
Finland
Contact: Mr. Veikko Ollila
Phone: +358 945 48 151
Fax: +358 945 48 153
E-mail: veikko.ollila@saunalahti.fi

France

Eldan France
15 Rue Gerbert
75015 Paris
France
Contact: Mr. Christian Duffau
Phone: +33 1 42 50 25 45
Mobile: +33 6 71 20 68 37
E-mail: cd@eldan-sr.com

Germany, Austria, Switzerland

Eldan Recycling A/S
Hauptstrasse 21
40597 Düsseldorf
Germany
www.eldan-recycling.com
Contact: Mr. Dieter Jerschl
Phone: +49 211 171 460 56
Fax: +49 211 171 460 57
E-mail: dj@eldan-sr.com

Greece

INDUSTRIA S.A
9, Klisthenous str.
105 52 Athens
Greece
www.industria.gr
Contact: Mr. Charalampos E.
Fostiropoulos
Phone: +30 210 52 27 914
Fax: +30 210 52 29 487
Email: info@industria.gr

Hungary

Arcon Hungary
Szent István tér 7. III.em.10
H-8000 Székesfehérvár
Hungary
Contact: Mr. Domonkos Balázs
Mobile: +36 30 300 8452
Phone/fax: +36 22 318 789
E-mail: domonkos@arcon.hu

Italy

(Cables, Complex and Electronic scrap)
NME s.r.l.
Via F.dell'Orto 8
24126 Bergamo BG
Italy
www.nmesrl.it
Contact: Mr. Alessandro Silvestri
Phone: +39 035 320030
Fax: +39 035 312022
E-mail: nme@nmesrl.it

Italy

(Tires, Aluminum, Industrial scrap)
P.I. Armando Icardi Sas di Maurizio Icardi
Via Edolo 29 A
20125 Milano
Italy
Contact: Mr. Maurizio Icardi
Phone: +39 2669 0926
Fax: +39 2897 74234
Mobile: +39 3387 111979
E-mail: info@icardisas.it

Poland

Rub-Met
ul. Krotka 38
05-080 Izabelin
Poland
Contact: Mr. Tomasz Kajzer
Phone/fax: +48 22 722 67 68
Mobile: +48 601 35 53 50
E-mail: kajzer@rubmet.com.pl

Romania

Arcon Overseas Limited
Bd. Corneliu Coposu no. 3
Bl. 101, Sc. 1, Etaj. 5 App. 9
Sector 3, Bucharest
Romania
Contact: Mr. Adrian Usec
Phone: +40 21 322 8451
Fax: +40 21 320 8436
E-mail: usec@arcon.ro

Russia

GP Systems LLC
23A. Pryanishnikova str.
127550 Moscow
Russia
www.gpsystems.ru
Contact: Mr. Andrey Kuryachiy
Phone: +7 495 662 7005
Fax: +7 495 662 7006
Email: kuryachiy@arcon.com.ru

Serbia, Montenegro and Macedonia

Arcon Overseas Limited
Marka Miljanova 10
21000 Novi Sad
Serbia
Contact: Mr. Vladimir Raskovic
Phone: +381 21 417809
Mobile: +381 63 590920
Fax: +381 21 417809
E-mail: raskovic@arcon.rs

Slovakia

Arcon Slovakia s.r.o
Nakovna 9
821 06 Bratislava
Slovak Republic
www.arcon-environmental.sk
Contact: Ms. Eva Ondrisova
Phone: +421 240 208031
Fax: +421 240 208039
E-mail: ondrisova@arcon.sk

Spain/Portugal

Recycling Equipos S.L
Poligono Industrial Malpica, calle E. núms.
54-55
50016 Zaragoza
Spain
www.recyclingequipos.com
Contact: Mr. Marcos Clavel
Phone: +34 976 573 410
Fax: +34 976 572 354
E-mail: recycling@moros.com

United Kingdom and Ireland (Eire)

MMH Recycling Systems Limited
Unit 6, Broomers Hill Park
Codmore Hill, Pulborough
West Sussex, RH20 2RY
England
www.mmhrecsys.com
Contact persons: Mr. Philip Keatley,
Mr. Peter Jones
Phone: +44 1798 874440
Fax: +44 1798 875613
Email: keatley@mmhrecsys.com,
jones@mmhrecsys.com

North America

USA and Canada

Eldan Inc
6311 Inducon Corporate Drive
Unit 14
Sanborn, N.Y. 14132
USA
www.eldan.us
www.eldan-recycling.com
Contact: Mr. John Crowley
Phone: +1 716 731 4900
Fax: +1 716 731 4909
Email: jrc@eldan-sr.com

South & Central America

Argentina

Ferrostaal Argentina S.A
Lima 3558 - 8° piso
C1073AAG - Buenos Aires
Argentina
www.ferrostaal-recycling.com
Contact: Mr. Osvaldo Balzano
Telefon: +54. 11. 50 31 53 00
Email: osvaldo.balzano@ferrostaal.com

Bolivia

Ferrostaal Bolivia Ltda.
Av. Arce Esq. Clavijo N° 2883
1212 La Paz
Bolivia
www.ferrostaal-recycling.com
Contact: Mr. Andres Kucharsky
Phone: +591. 2. 2 43 25 33
Email: info@ferrostaalbolivia.com

Brazil

Ferrostaal Equipamentos e Soluções Ltda.
Departamento de Máquinas Operatrizes
Av. das Nacoes Unidas, 22.351
04795-100 Sao Paulo - SP
Brazil
www.ferrostaal-recycling.com
Contact: Mr. Edson S. Oliveira
Phone : +5511 5522.5999 - ext. 517
Fax: +5511 5521.6965
E-mail: edson.oliveira@ferrostaal.com

Chile

Ferrostaal Chile S.A.C
Equipment Solutions
Avda. Santa Maria 2810 - Providencia
Casilla 184 Correo 10
Santiago de Chile
Chile
www.ferrostaal.cl
www.ferrostaal-recycling.com
Contact: Mr. Claudio Romo
Phone: +56 2 388 7800
Fax: +56 2 231.99.93
Email: claudio.romo@ferrostaal.com

Colombia

Ferrostaal de Colombia Ltda
Carrera 69 No. 25B-44 Of. 501
Edificio World Business Port
Apartado Aéreo: 7384
Bogotá D.C
Colombia
www.ferrostaal.com
www.ferrostaal-recycling.com
Contact: Mr. Dorian Hernández
Rodríguez
Phone: +571 401 13 00
Direct: +571 4011329
Fax: +571 416 54 89
Email: dorian.hernandez@ferrostaal.com

Ecuador

Ferrostaal Ecuador S.A.
Toledo N24-750 y Valladolid
La Floresta
Quito - Ecuador
www.ferrostaal-recycling.com
Contact: Mr. Sebastian Rosero
Phone: +593 2 223 7715
Fax: +593 2 256 6691
E-mail: sebastian.rosero@ferrostaal.com

Mexico and Central America

Ferrostaal México, S.A. de C.V.
Div Director Energy plants and Propulsion
systems
Rio Nilo 47 Col. Cuauhtemoc
06500 Mexico City
Mexico
www.ferrostaal-recycling.com
Contact: Mr. Jaime Zubillaga
Tel. +52 55 5242 3593
Fax +52 55 5242 3516
mailto: jaime.zubillaga@ferrostaal.com

Peru

Ferrostaal Perú S.A.C.
Av. Canaval y Moreyra 595
27 Lima
Peru
www.ferrostaal-recycling.com
Contact: Mr. Fabio Lobo
Phone: +51. 1. 6 16 60 00
Email: fabio.lobo@ferrostaal.com

Venezuela

Ferrostaal de Venezuela S.A.
Edificio La Pirámide, Piso 3, Ofic. 301, A
v. Rio Caura con Rio Paragua
Sector Parque Humboldt, Prados del Este
1080-A Caracas
Venezuela
www.ferrostaal-recycling.com
Contact: Mr. Jörg Hausmann
Phone: +58 212 979 7011, Ext. 108
Fax: +58 212 979 9464
E-mail: joerg.hausmann@ferrostaal.com

Africa

Morocco, Algeria and Tunisia

Eldan France
15 Rue Gerbert
75015 Paris
France
Contact: Mr. Christian Duffau
Phone: +33 1 42 50 25 45
Mobile: +33 6 71 20 68 37
E-mail: cd@eldan-sr.com

South Africa

MMH Recycling Systems (Pty) Ltd
6 Naples Place
Apex Ext 4
Benoni
South Africa
Contact: Ms.Samantha Watts
Mr. Nic Potgieter
Tel: +27 11 421 1944
Fax: +27 11 421 4015
Email: sam@mmhrecsys.co.za or
nic@mmhrecsys.co.za

Middle East

Iran

Ferrostaal AG
Representative Office Tehran
Av. Dastjerdi 283 (ex Zafar)
Tehran 14155
Iran
www.ferrostaal-recycling.com
Contact: Dr. Jens Carsten Claus
Tel. +98-21-88 78 42 51 / 52
Fax +98-21-88 78 32 56
E-mail: jens.carsten.claus@ferrostaal.com

Bahrain, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates

Ferrostaal AG
Dubai Airport Free Zone (5E-B)
P.O. Box 29 35 21
Dubai / United Arab Emirates
www.ferrostaal-recycling.com
Contact: Mr. Rajesh Sivarajan
Phone: +971 4 299 1991
Direct phone: +971 4 6016 153
Mobile: +971 50 7083267
Fax: +971 4 299 1993
E-mail: rajesh.sivarajan@ferrostaal.com

Australia

Eldan-Westrup South Pacific Pty Ltd
P.O. Box 567, Gordon 2072
N.S.W Australia
www.eldan-recycling.com
Contact: Mr. Jim Hole
Phone: +61 (0) 29844 5430
Mobile: +61 (0) 4000 35326
Fax: +61 (0) 29844 5445
Email: jimh@eldan-sr.com

Asia

China

Ferrostaal Commercial (Beijing) Co., Ltd.
10F, 1008 CYTS Tower
5 Dongzhimen Nan Dajie
Dongcheng District
Beijing 100007
www.ferrostaal-recycling.com:
www.ferrostaal.com.cn
Contact: Mr.Hao Yuan and Ms. Huaning Xu
Phone: +86 10 58156015
Fax: +86 10 58156017
Mobile, Mr. Yuan: +86 13601034703
Mobile, Ms. Xu: +86 13911786707
E-mail: hao.yuan@manferrostaal.com.cn
huaning.xu@manferrostaal.com.cn

India

Ferrostaal India Private Limited
16th Floor, Tower B, Building No. # 9
DLF Cyber City Phase III,
Gurgaon - 122002
India
www.ferrostaal-recycling.com
Contact: Mr. Ravi Narayan
Phone: +91 124 482 00 00
Dir. phone: +91 124 482 00 12
Fax: +91 124 482 00 44
Mobile: +91 99 99 90 81 07
E-mail: ravi.narayan@ferrostaal.com

Japan

Correns Corporation
Ark Yagi Hills
8-7, Roppongi 1-chome
Minato-ku
Tokyo 106-0032
Japan
www.correns.co.jp
Contact: Mr.Koji Sakamoto and
Mr. Masahito Nakamura of D43
Tel: 03 5114 0799
Fax: 03 3583 1330
Mobile, Mr. Sakamoto: 090 5224 8026
Mobile, Mr. Nakamura: 090 4398 7887
E-mail: koji.sakamoto@correns.co.jp
m.nakamura@correns.co.jp

Pakistan

East-West Commercial Enterprise
1, Central Hotel Building, Civil Lines,
Karachi-75530
Pakistan
Contact: Mr. Masarrat H. Siddiqi
Phone: (+92-21) 35681408-9
Fax: (+92-21) 35683472, 35681174
E-mail: masarrat.siddiqi@eastwest-pk.com:
eastwest_pk@yahoo.com

