# NEWS

MeWa Recycling Anlagen
Der Pionier

June 2011 Newsletter for customers and employees

# Intelligent preparation of processor boards

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## The topics:



Automotive waste

# Real pioneering work in Bosnia and Herzegovina

***Although the recycling economy in Bosnia and Herzegovina is still in its infancy, a company from the city of Srebrenik has now taken the initiative: the first recycling plant in the country in accordance with modern standards has gone into operation. Oil Metal is putting their trust in MeWa as a technology partner.***

*One of the oldest buildings in Bosnia and Herzegovina (1333): In the Middle Ages, the castle in Srebrenik played an important role in defending the country against attacks by the Ottomans.*

For several weeks now, the material has been steadily piling up on the premises of Oil Metal in Srebrenik. Old tyres are being stacked in one location, pressed car bodies are delivered to another location and bumpers, dashboards, car seats and harnesses are also accepted by the company.

*Rotary shear UC 150.*

It is not a matter of course that, in Bosnia and Herzegovina, the waste flows are specifically collected and supplied to a recycling facility. The contrary, in fact. Modern recycling centres do not yet exist in this young republic. High commodity prices and legislation by the EU have led to different groups forming which are now dealing with the issue of recycling.

## First recycling facility

One of those companies is Oil Metal, which is based in the northern city of Srebrenik. Instead of wasting any more time talking about it, they are now trading. The company has recognised the opportunity offered by secondary raw materials management and recently opened the first modern recycling centre in Bosnia-Herzegovina, a republic which has been independent since 1992.

In a first stage of expansion in the new processing plant, MeWa has installed a turnkey pre- and secondary shredding facility with separation technology. Firstly, used tyres, car seats, bumpers and other composite materials are pre-shredded in a MeWa UC 150 rotary shear and are then granulated to the desired grain sizes using a UG 1000 MSL. Iron, non-ferrous metals and plastics are separated using the separation technology that follows.

## Production of ActiMeWa

In a second stage of expansion, MeWa cutting mills will soon be delivered to the former Yugoslav constituent republic. This will allow Oil Metal to recycle cable waste and tyre pellets. The latter, in a final stage, is further processed into an active finely ground rubber (ActiMeWa). MeWa will provide a complete fine grinding line to Srebrenik.

## Own trade channels

In this way, a model plant for automobile waste will be created in Bosnia and Herzegovina on 2,000 m² of land. Oil Metal can use their own channels to feed the recycled raw materials back into the market again. This group of companies is active in all states of the former Republic of Yugoslavia and also has, among other things, an extensive logistics division.

The company now uses this constellation for the collection and transportation of the input and output materials: true pioneering work, following in the footsteps of their technology partner MeWa. ■

# INTELLIGENT PREPARATION OF PROCESSOR BOARDS

***Computer PCBs contain numerous precious metals. One company in Lower Saxony is now specialising in processing these components that contain recyclable components. As part of an open day, the sophisticated process was demonstrated to members of the public. This means that there is a completely new field of application for the MeWa QZ.***

Managing the environment intelligently – With this slogan in mind, MPM Environment Intelligence KG held an open day at its new recycling plant for PCB assemblies at the company's headquarters at Gittelde in Germany.

PCBs are among the most interesting of any components processed in a modern industrial society. One the one hand, the processor boards are fitted with capacitors that contain harmful substances, and must be properly disposed of when no longer required.

On the other hand, the electronic components contain a wide range of high-quality, precious metals such as gold, silver, copper, palladium or cobalt. In one tonne of computer PCBs, you will find, for example, the same amount of gold as you would find ore in a profitable gold mine.

Moreover, the effort required to be able to mine these metals places great strain on nature and the environment. Recycling the electronic components has therefore become indispensable for the sustainable handling of our resources.

## Recycling saves resources

A recycling operation can also win back the recyclable materials substantially more economically and with significantly less energy consumed than is needed for extracting the same quantity from the ground. Furthermore, recycling spares the environment and places tough requirements on the workplace and on the protection of one's surroundings.

*Intelligent recycling process: PCB recycling at MPM in Germany.*

However, intelligent processes are needed for this. Instead of digging through sand and making tunnels, MPM uses ultra-modern technologies at its new disposal facility.

## QZ dismantles PCBs

At its plant in Gittelde, Lower Saxony, the company specialises in recycling PCB assemblies. The main dismantling work in the new plant is carried out by the MeWa Querstromzerspaner QZ. In this way, the tried and tested QZ has added another innovative string to its bow in Gittelde.

All PCBs are first conveyed to the QZ and have their components removed efficiently according to the recycling principle. Then the individual material items are sorted using a sophisticated process. Any dust that arises is extracted, collected in an enclosed process and put into sealed containers.

## 10,000 tonnes annual capacity

Each PCB contains only milligrams of the precious metals. But the total amount is what brings success. In the future, MPM would like to process approx. 10,000 tonnes of PCBs per year. A task that is becoming ever more important in an industrial country that has few raw materials.

The condition would be that companies follow MPM's lead and invest in innovative recycling technologies and intelligent environmental management. In any case, the MeWa Querstromzerspaner stands ready, and has discovered a completely new field of application in PCB recycling. ■


# Biogas-Boom in Italy

## Bio-QZ takes off

***Italy bid farewell to nuclear energy over 20 years ago. Instead, the Italians are consistently investing in renewable energies. Attractive remuneration for feeding energy into the national grid has triggered a real boom in biogas, particularly in the agricultural sector. By 2020, experts expect investment of 5 billion in this sector.***

Cupolas and cathedrales: In Northern Italy, green cupolas are becoming an ever more common sight on farms, from the fertile Po Plain and across Emilia Romagna to the mountainous terrain of South Tyrol. The farmers build no basilicas but many of them are investing in biogas production.

There is a good reason for this: In 2009, the feed-in tariff in Italy for electricity generated from biogas plants was set at 28 cents per kilowatt hour, and guaranteed for 15 years. But that's not all: This applies across the board, up to a plant output of 1 MWe, without any complicated scales based on size.

At these rates, and with other tax benefits, the Italians have created the most attractive conditions in Europe for new biogas plants.

The number of plants is therefore increasing at a very rapid pace. From 161 registered in 2009, the number of plants skyrocketed to its current level of more than 600. This trend looks set to continue. Experts expect growth of 250 biogas plants per year until 2020.

Most farms running these plants are located in Northern Italy. The Po Plain is particularly fertile, and is often referred to as the „breadbasket of Italy". In addition to maize and wheat, grass and sugar beets are also waiting to be placed in fermenters. Furthermore, the rearing of cattle, sheep and pigs also has an important role in agriculture in Italy. The largest contiguous breeding areas are located in Northern Italy. Livestock farming is also part of South Tyrol's regional culture.

### Slurry and manure used as substrate

The new biogas plants must therefore be designed in such a way that slurry and manure can be reused for the most part. In the meantime, many German biogas plant manufacturers have found a lot of business south of the Alps. The trend in plant technology is tending more and more towards more efficient plant types. Smaller fermenters, in which the fermenting substrates produce high-quality gas in shorter periods, are gaining in popularity.

The right substrate preparation is therefore becoming ever more important. Biologists say that cell structures must be broken down properly and the most uniform mass possible overall must be used for feeding into the fermenters.

For this task, MeWa has developed the patented Querstromzerspaner even further. In Italy, the recycling principle of the Bio-QZ is now having double the effect. In addition to fuel crops, the Bio-QZ also recycles the manure (difficult to process), which is ideal for fermenting. The bacteria therefore find a large contact surface that they can work on. This speeds up the decomposition process and shortens the holding time in the fermenter.

### Bio-QZ takes off in Italy

In Italy, the MeWa Bio-QZ has made a successful entry onto the market. The company Power Green is a typical customer. The biogas plants in Northern Italy and Tuscany mainly process slurry and manure from their own intensive stock-rearing. Just the task for the Bio-QZ from MeWa.

And so, the farmyards in Italy are growing for another green cupolas. ■

*The MeWa Bio-QZ takes off in Italy. Beside maize cattle manure is often fed into Italian biogas plants.*


## Imprint

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Editing: Harald Pandl
Design: Marius Hörrmann

Printing: Druckhaus Weber, Althengstett

Photos: MeWa, Mutsaerts International, Oil metal, Panoramio, Wikipedia
Cover photo: PCB and QZ

# Bio-QZ introduces itself in Holland

***The Bio-QZ can do it. This was the conclusion of interested onlookers after watching a demonstration at Wilp-Achterhoek in the Netherlands. MeWa sales partner Mutsaerts International invited many plant operators from across the whole Benelux region to a machine presentation at the composting and fermenting plant of waste management company VAR.***

From now on in Oranje: "Everyone was enthusiastic about the output of the Bio-QZ", summarised Will Fred Mutsaerts after presenting the Bio-QZ 1600 at the 75-hectare "De Sluiner" waste management facility in Wilp-Achterhoek. In addition to its admin HQ, the recycling service provider VAR runs a biomass plant there, with composting and fermenting.

## Material mix put to the test

The fermenter takes organic domestic and commercial waste collected in the Netherlands. Vegetables that had spoiled, e.g. cucumbers and tomatoes, were also used in the experiment in the countryside close to Apeldoorn, as were packaged food and dog food. But cut grass from motorway embankments and other plant waste from public parks were also at the ready.

Regional head of sales Piet Gilbos, the MeWa team consisting of Elmar Kniesel, Frank Rottluff and Karsten Mennerich, as well as the Dutch sales partner Mutsaerts International, showed specialist onlookers how versatile the Bio-QZ is when used in fermenting plants.

The right recycling process for the biomass increases the biogas yield of the plants by up to 30%. At the same time, packaging, wood and metals are in large pieces when they leave the Bio-QZ, and they can then be easily removed from the flow of material.

## Convincing performance

The journey made by the specialists from the Benelux countries was worthwhile in any case. You could see this from the conversations being held around the edge of where the demonstrations were being held. And so, in addition to the Bio-QZ 1600 in Wilp-Achterhoek, other MeWa machines will soon be swirling in Holland. ■