

Solution for the processing of TV and PC monitors



Bundles of power

The disposal specialist L + N Recycling in Bubesheim had been trying to resolve a longstanding conflicting challenge: TV and PC monitor plastics should be compacted as tightly as possible for transportation, however, at the same time should remain in pieces that were large enough to be sorted later. The Bubesheim company found the solution in the HSM baling press. Since then, not only have the plastics been delivered in a highly compacted state to the recipient in Asia, but L + N has also saved transportation and processing costs.

Customer quote:

“For a recycling company of our size, the HSM baling press offers the optimal solution also in terms of the costs”

*Dr. Bernd Funk,
Chief Technician of L + N Recycling GmbH*

Dr. Bernd Funk will be pleased to convince those who believe that all plastics are the same of the contrary. “TV monitors,” says the Chief Technician at L + N, “are made from a different plastic than computer monitors.” But that’s not all: The manufacturers use different plastic compounds for the reinforcement strips and yet another for the speaker covers. The recycling specialist cannot, therefore, just feed the material to be recycled into the shredder and turn it into granulate, which would appear to be the ideal solution at first glance. “Then they couldn’t sort the fractions in China, which would render the material un-recyclable,” says Bernd Funk. Equally out of the question is “loose tipping” as Bernd Funk calls it. This would drive up the transport costs dramatically, as more air would be transported in the

overseas shipping containers than plastics. This in turn would conflict with environmentally sound recycling stipulated by the Electrical and electronics law of March 2005. The so-called ElectroG is practically the raison d’ être of recycling specialists such as L + N. It implements the European Directive WEEE into national law and regulates the environmentally correct disposal of computers and other electronic devices such as refrigerators.

No alternative to compacting

Accordingly L + N are left with the options of baling or compacting. Around 400 televisions and computer monitors are stripped down by the employees of the medium sized enterprise every week, separating the plastics from the electronics



The facts

Company

L + N Recycling GmbH in Bubesheim is a recycling specialist, that has focussed its activities on recycling refrigerators, TVs and computer monitors. The medium sized business based in Günzburg is part of the Gröger group and has 19 employees.

Task

For many years the disposal company had the plastics of TV and PC monitors compacted by a neighbouring container service, and this brought a lot of problems with it: unnecessary transportation, undesired intermixing of plastics such as PET, insufficient packaging of the compacted bales that often fall apart when loading.

Solution

In 2008 L + N Recycling GmbH decided to purchase the vertical baling press V-Press 860 S from HSM. Since that time, the recycling specialists have the compacting and loading of the bales under their own control.

Benefit

- **Cost saving:** The transportation of plastics to be compacted at container services being no longer necessary, also no more leasing costs for roller containers
- **Better processes:** Monitoring of the compacting in-house
- **Reliable technology:** The baling press is specifically designed for compacting rigid plastics
- **High purity plastics:** No undesired mixing of plastic fractions due to the service provider compacting several sorts of plastic in the same machine

at the six disassembly stations. The plastics then head straight to the HSM baling press, which stands nearby and can easily be manually filled by the dismantlers. At the end of the baling process, 50 to 60 PC monitor housings are compacted into a bale the size of approximately half a cubic metre and a weight of 280 kilograms. Bernd Funk speaks



of a compression ratio of 10:1. The compact bales are initially stored by the recycling specialist in the company's yard, until there is a store of approximately 60 bales, which is enough to fill an overseas shipping container.

An end to laborious processes

The HSM baling press has been in use at L + N for a year now. Bernd Funk is very satisfied with its performance. "Now we have control over how we compact" he says. Additionally, L + N can react faster to any problems that crop up. That was not always the case. The chief technician remembers with displeasure, the at times, laborious and time consuming processes of the past. For years the recycling specialist collected the plastic TV and PC monitor housings in two separate roller containers which were then driven to a nearby container service for compacting. They used normal paper baling presses, which were obviously not entirely up to the job. They did manage a similar level of compression as the HSM baling press currently used. However: The sharp edged, rigid plastics did put the baling presses under considerable strain, with conse-

quential "down time" as a result. Worse still: Because the service provider "could not cross bind the pressed bales, they often fell apart when being loaded up on the fork lift truck" says Bernd Funk.

A thorn in the flesh of the chief technician was also the fact that the container service used their machines to compact other types of plastic fractions such as plastic films or PET. The result. "We often had the remnants of other plastics that had got mixed in with our material" says Bernd Funk. Which compromised the chances of being able to recycle.

Successful test phase

Understandable, therefore, that Bernd Funk looked around for a better long-term solution. He found just what he was looking for at the company HSM in Frickingen/Germany, that specialises in document shredders, cutting machines and baling presses. The "specialists for disposal technologies" as the Frickingen company describes itself, did not have any easy time in Bubesheim. Bernd Funk, an engineer and expert on mechanical processing engineering, knows his trade.

HSM gave the people at Bubesheim the vertical baling press V-Press 860 S to start with, for testing. HSM had converted this model especially for use with rigid plastics: a reinforced press chamber and door lock and a chain ejector in place of belt ejector. The test phase at L + N, that lasted approximately six weeks, ran anything but trouble free. Problems became evident with the rear wall of the press, that had to be rectified. Nevertheless, L + N stuck with the decision to purchase the machine at the end of the test phase. Bernd Funk gives the reason for this: "HSM doesn't just talk about service, they practice it too." All faults were rectified, quickly without discussion and to the full satisfaction of the Bubesheim company.



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