SWEDISH ENVIRONMENTAL
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# Grinding swarf and oil are recycled by a new technology in Fagersta

**Mireco AB in Fagersta was the first company in Sweden to build a plant that briquetted 1000 tonnes of grinding swarf each year for recycling. Grinding swarf drenched in oil is usually landfilled. Parts of the oil can also be recycled.**

Mireco AB Minerals & Metals Recovering in Fagersta built a plant to handle and briquette grinding swarf drenched in oil in 1998, with support from the Local Investment Programme (LIP). As a result of this measure it is possible to recycle steel and oil that would otherwise have been landfilled. It is possible to recycle around 5 per cent of the oil. Older landfills have also been dealt with.

Grinding swarf containing oil is a major problem for many mechanical engineering firms. This project is a good example of solutions that reduce landfilling and environmental impact.

## POSITIVE ENVIRONMENTAL AND ECONOMIC IMPACTS

- The quantity of waste going to landfill has decreased by 3 596 tonnes/year.
- This action recycles 5 per cent of the oil annually.
- The melting energy supplied is used efficiently.
- The expensive alloying metals chromium and nickel are utilised, making the process profitable.

Photograph: Anders Jakobsson, Mireco AB

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## IMPLEMENTATION

Grinding swarf drenched in oil is formed in processes where stainless steel sheets and strips are polished. The waste products can be used in the steel furnaces, but they have to be briquetted to make re-use possible.

With the aim of re-using at least some of the waste products, Mireco AB erected a complete plant to handle and briquette oil-drenched grinding swarf. The plant consists of storage areas, feeding equipment, a briquette press and equipment for handling the extracted oil.

The result was somewhat less good than expected. Among other things, success was not achieved in reducing landfilled material as much as planned. This may be due to the fact that the project made use of new technology, which meant some uncertainty and risk.

## POTENTIAL AND FUTURE BENEFIT

This project is an example of how the waste fraction can be transformed from waste to a resource that can be used in other industrial processes. It offers both environmental and economic benefits. It also reduces the extraction of virgin raw materials and minimises waste production. Activities that create such industrial collaboration are strategically important.

### WHY BEST PRACTICE

The plant has meant that new technology is successfully tested in Sweden. The technique has proved so successful that the customers for which Mireco briquetted the oil-mixed grinding swarf have now bought their own presses and briquette on the spot, where the grinding swarf arises. Mireco's press is now used for other materials, such as aluminium foil from battery manufacturing.

### FOR FURTHER INFORMATION

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Contractors/providers
The press was supplied by Firma Sjöstrand in Stockholm, which represents the German company RUF.

The project on the Internet:
www.mireco.se

For further information on Best Practice
www.swedishepa.se/bestpractice
www.naturvardsverket.se/mir

FACTS
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