

Date 01.07.2009
Customer Chargold
Project-No. 068-09

Carried out Marc Pisall
Report Marc Pisall

Sorting material Slag

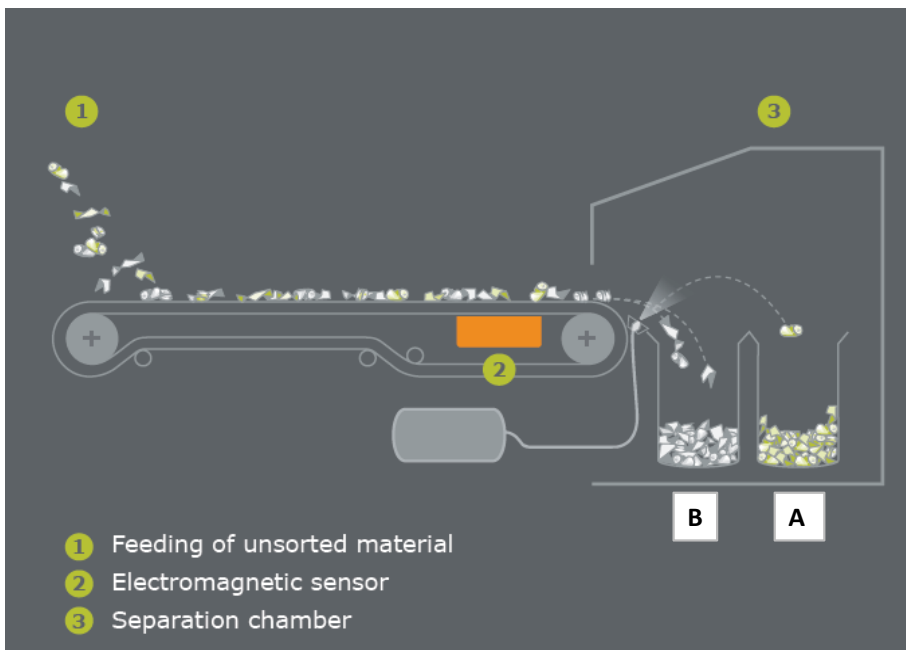


Sorting Machine: **MikroSort FINDER®**

The used sorting machine for the separation task was the MikroSort FINDER® sorter.

This type of sorting machine has a high developed electromagnetic metal sensor. The sensor can detect all metals or with a special setting only stainless steel.

The principle of the MikroSort FINDER® is shown in the figure.
The material is feeded over an vibration feeder to a high speed conveyor belt. The metal sensor is integrated in this belt. Detected metals will be ejected upwards and forwards (Material Stream A) and not detected particles are collected in Material Stream B.



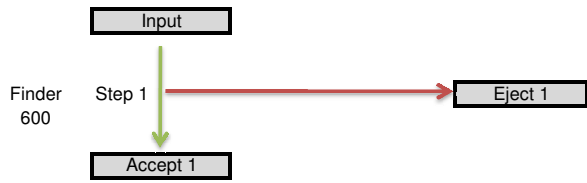
Sample No.	#1
Sample name	Slag
Size [mm]	8 - 40 mm
Tasks	Sort out all ferrosilicon pieces

Machine	TITECH Finder®
Working width	600 mm
Sensors	Electromagnetic Sensor
Valves (Count / Type)	48 / MAC52
Lighting	no
Background	no
Belt speed	3 m/s
Compressed air	8 bar

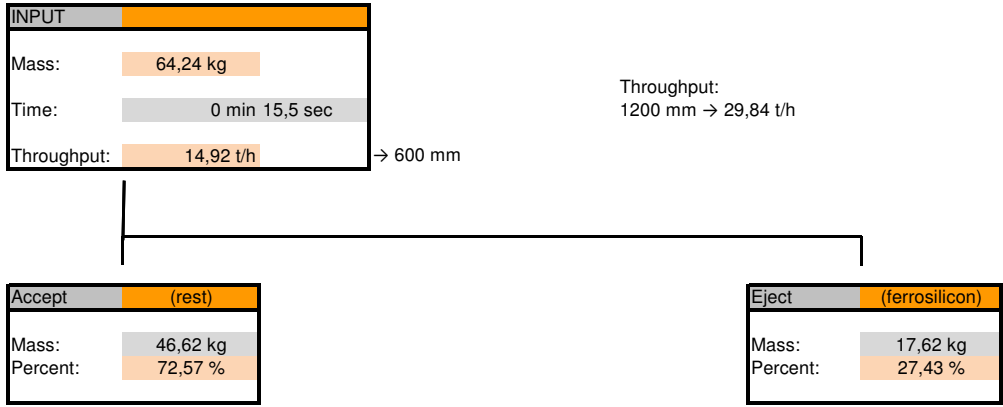
Input



Procedure



Massbalance



Content analysis (manual counting)

Subset Accept (rest)	Subset Eject (ferrosilicon)																								
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Content of input

INPUT	Input	
ferrosilicon	Mass [kg] 7,56 kg	Mass [%] 11,8%
rest	56,68 kg	88,2%
	64,24 kg	

A subset was counted manually, to calculate the content of the input.

Recovery Rate

Recovery			
ferrosilicon	Mass [kg] 6,34 kg	Loss [%] 19,90%	Recovery Rate [%] 83,89%
rest	11,28 kg		

Pictures of sorting results

Accept (rest)



Eject (ferrosilicon)



Pictures of manual sorting

Subset Accept (rest)



Subset Eject (ferrosilicon)



