Description: N1

The wet system recovers NF-metals from mixed materials.
All materials like metals, light and heavy plastics can be recovered in enriched fractions.
The plant is designed for single and multi-stage operation.

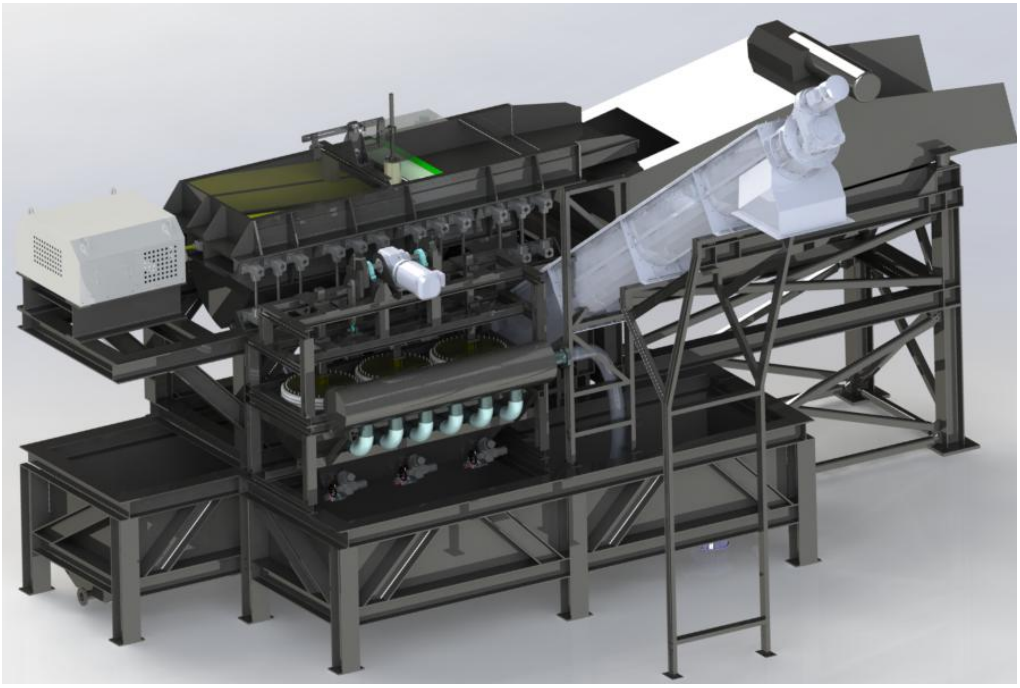

Fig. 1: N1

Application:

The plant is used for processing non-ferrous fractions. The result is the recovery of metals, light and heavy plastics in enriched fractions. A kind of separation which improves the economy of downstream recycling equipment.
This system is cutting down incineration and dumping cost and is a valuable contribution to reduce environmental contamination caused by emissions and dumping.

Functional description

The single-stage wet separation system can handle materials like pre-treated electronic scrap or car shredder residue (ASR).
The first pass in the single-stage system divides the heavy fraction (metals) from the light fraction (plastic etc.)
The second pass divides light from heavy plastics.

Capacity and efficiency of system :

The throughput is depending on kind and consistency, particle size and shape of the material and machine parameters.

For the specification of throughput we recommend a test in our technical center.

Type of system:

All input to this plant has to be pre-treated (shredded/milled/screened). Storage areas must be suitable in size and must be assessed in fire safety and ecological compatibility.

A suitable feed for this kind of material is a controllable vibrating feeder. This sink-float system works with water only – no further additives.

The system consists of

- screw conveyor for heavy material discharge
- dewatering screen for light material discharge

Mode of operation:

Inside the separation cell the metal-fraction is concentrated on the bottom and discharged by a screw conveyor.

The light fraction such as plastic, wood, paper, rubber, foam and textile is discharged by the de-watering screen.

Following this principle a density-separation of light and heavy plastics is also possible with this single stage system.

The heavy side contains hard and soft polyvinyl chloride, polyamide ,poly-carbonates and polyethylene.

Materials such as wood, paper, rubber and textiles are concentrated on the light side.

All process water is re-used. Special pumps are in use and tanks can take all water after production stop.

Fine particles are screened in the separation-cell by the screen-plate and conveyed to a container by a screw conveyor.

The process-water is cleaned mechanically by a reliable by-pass system and remains in closed circuit.

All drives for the system are electric and have a central control unit, covering analog and digital signals.

The electric power supply combined with frequency controlled drives plus the control terminal

with a display, is showing real time operating status.

Full control is given and provides optimized production flow by maximum adaption to the material.

Operations conditions:

During line operation no immission loads like air pollution, light, heat, or any radiance are to be expected. The sound emission during operation is less than 80 dB (A).

Emissions and immissions

The above mentioned sound emission has no effect on surrounding property due to recommended production in a hall. Additionally there is no impact on the workers.

Total installed load of complete system is approx. 35kW; this energy input in relation to the separation result is highly efficient.
Comparable separation results can only be achieved by more milling, screening or classifying work – with additional machines and high energy input.

Right of changes without further notice!

Kontakt: KM Key Machinery GmbH
Wachsenegg 3
87477 Sulzberg Germany
Fon: +49 8376-921828-0
Fax: +49 8376-921828-99
Email: info@km-recycling.de
Internet: www.km-recycling.de