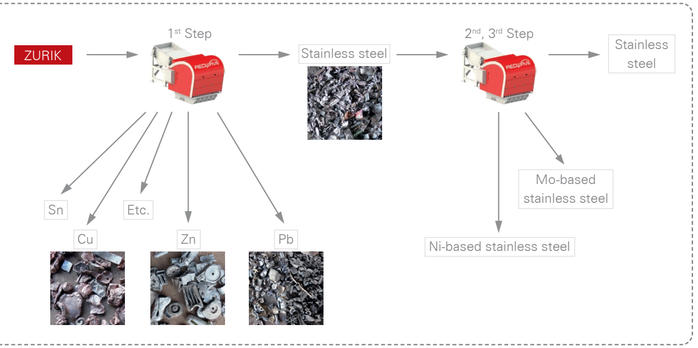
Sample Flow Sheets

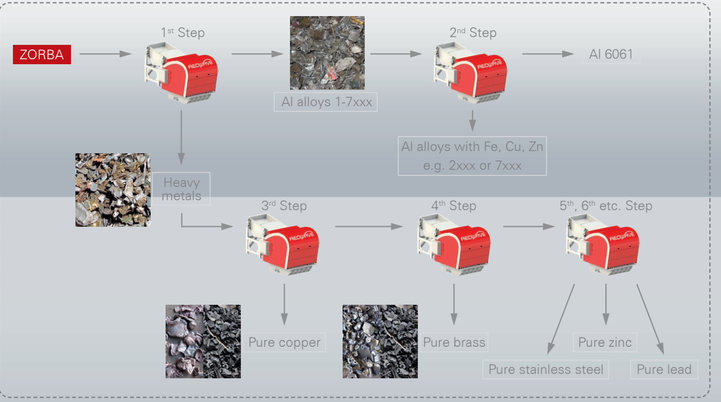
Sorting of ZURIK*

High efficiency recovery of all metals as specified in ZURIK



Sorting of ZORBA**

High efficiency recovery of all metals as specified in ZORBA as well as sorting of aluminum based materials containing copper, zinc and iron



Source: ISRI, Institute of Scrap Recycling Industries, Inc.

**ZURIK: SHREDDED NONFERROUS SENSOR SORTED SCRAP (predominantly stainless steel)*
Shall be made up of a combination of the nonferrous metals: stainless steel, insulated copper wire, aluminum, copper, lead, magnesium, nickel, tin, and zinc, in elemental or alloyed (solid) form.

***ZORBA: SHREDDED NONFERROUS SCRAP (predominantly aluminum)*
Shall be made up of a combination of the nonferrous metals: aluminum, copper, lead, magnesium, stainless steel, nickel, tin, and zinc, in elemental or alloyed (solid) form.

REDWAVE®

Applications

Recovery of:

- Nonferrous metals (aluminum, copper, brass, bronze, zinc, stainless steel, etc.)
- Precious metals (gold, silver, copper, etc.) from slags from waste incineration plants and other ashes
- Precious metals (gold, silver, copper, etc.) from various scrap metals

Sorting of:

- Various aluminum alloys containing copper and zinc in varying concentrations
- Various stainless steel alloys (based on nickel and molybdenum, etc.)
- Various copper alloys (brass, bronze, copper-silver alloys, etc.)
- Nonferrous metals
- ZORBA
- ZURIK

REDWAVE´s XRF technology is not affected by contaminated surfaces and is, therefore, superior over other optical sorting technologies, which rely on clean surfaces.

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designed by BTMC | RED-S24-45

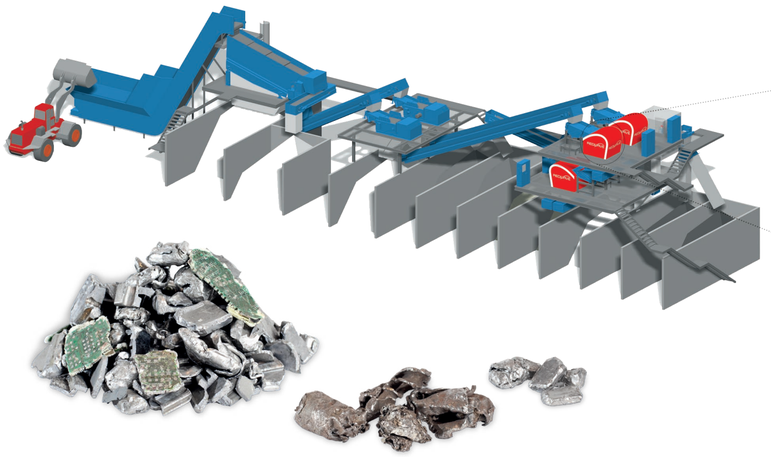
REDWAVE®

METAL SORTING

to recover high-grade metals +

www.redwave.com

PLANT SOLUTIONS



OUTPUTS: Cu | MS | Zn | Au | Ag | CRES | Sn | Pb | Mo | Ni | Fe | V | Pt | W | Ta | etc.

REDWAVE recycling competence:

- Bunker discharge
- Screening technology
- Conveying technology
- Sorting technology
- REDWAVE´s sensor based sorting technology

tailor-made plant solutions | project design | project management | manufacturing

REDWAVE'S SENSOR BASED SORTING MACHINES

after sales service | spare parts | commissioning | start-up | assembly | delivery

Sorting of aluminum and stainless steel

Zinc | Copper | Iron | Stainless steel | Brass | Bronze | ZORBA
ZURIK | Aluminum alloy | Alloys | Residues from combustion
Nonferrous metals | Gold | Lead | Silver | Tungsten

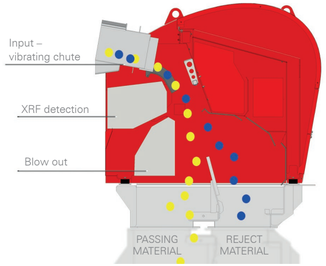
ADVANCED METAL SORTING
using REDWAVE XRF

The REDWAVE XRF-M chute innovation is a further development of the established REDWAVE XRF belt design, which has been successfully in operation worldwide for many years in e.g. glass recycling plants. The REDWAVE XRF-M was specifically designed for the metal recovery industry. It combines the established XRF-technology with the superior chute design, which drastically improves the detection efficiency and, therewith, the product purity.

Advantages of the REDWAVE XRF:

- Surface contaminations do not influence the high recovery efficiency
- Colour-independent detection allows sorting of grey metals (aluminum, zinc, stainless steel, etc.)
- Various alloys can be separated (brass and bronze, various stainless steel alloys, etc.)
- Flexible and versatile
- Highest purity at highest capacity
- Detection and separation of individual elements is possible
- Indefinite sorting logic variations
- Designed for numerous metal recovery applications (ZORBA, ZURIK, stainless steel, etc.)
- Unmatched metal identification accuracy

Functional principle:



The principle of the REDWAVE XRF-M is based on X-ray fluorescence and the material is analyzed for its chemical composition. In comparison to other technologies moisture, color and surface contamination do not have any negative influence on the detection. By sorting with REDWAVE XRF high efficiency recovery is established creating profitable products. Various sorting steps can be accomplished with the same machine using preset sorting programs making the use of this technology very versatile.

Applications:

- Sorting of **shredded end-of-life-vehicles**
- Sorting of **shredded white goods**
- Recycling of **slags and ashes**
- Sorting of various **shredded nonferrous** (= ZORBA, ZURIK and others)
- Recovery of **meatballs** from scrap metal
- Recovery of **precious metals** and **refractory metals** from scrap metal and residues from combustion
- **Sorting of stainless steel:**
  - Separation of impurities such as copper, tin and others
  - Separation of nickel containing and nickel free stainless steel
  - Separation of molybdenum containing and molybdenum free stainless steel
- Sorting of **aluminum alloys** containing copper and zinc in varying concentrations
- Separation of **aluminum from heavy metals**
- Colour-independent sorting of **various heavy metals** in clean fractions