IRRT® Process for Waste Incineration Slag
Process up to 65 % of Your Slag into Raw Materials

pro CLIR® GmbH
protects CLIMATE & RESOURCES

Fresh or Aged Slag? Go for the Best of Both Worlds!

Until now, slag has been treated either fresh or aged. Both approaches have their advantages and disadvantages – with the new IRRT® process, you can now not only combine the advantages of both approaches, but also produce high-quality raw materials from your slag in accordance with the REACH regulation and the chemicals and products legislation (ECHA).

Traditional

Aged Incinerator Bottom Ash

- ✓ Moisture and temperature: safe and efficient material to process
- ✓ pH value: almost neutral
- ✓ Carbonation: good physical building properties
- × Metals (especially aluminium) oxidise
- × Space-intensive and expensive storage
- × High dust generation during processing

Fresh Waste Incineration Slag

- ✓ Metals are hardly oxidised
- ✓ Less dust during processing
- ✓ No intermediate storage
- × Moist material with high carryover rate
- × No carbonatisation

NEW

IRRT® Innovative Ressource Recovery Technology

- ✓ Processing of fresh waste incineration slag
- ✓ No expensive storage in stockpiles
- ✓ Virtually no oxidation of metals
- ✓ Production of certified aggregate for concrete production (DIN EN 12620)
- ✓ Production of high-purity glass for foam glass production (insulating materials)
- ✓ Highest recovery rates for metals with maximum purity, Non-ferrous fractions are available in smelting quality
- ✓ Low water consumption for processing (process water to solids ratio of 0.3 / 1)
- ✓ Binding of all processing residues in a contaminant sink with optimum landfill properties (DK I)
- ✓ Up to 70 % less landfill mass
- ✓ Carbon capture through dynamic carbonatisation
  → Impressive return on investment

You Would Like to Know More?

Then take a look here:

Or visit the website of our partner proCLIR®

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Eggersmann
Recycling Technology

How High Are the Recovery Rates?

Up to 65% of the fresh bottom slag can be processed with IRRT® to make it directly marketable. The individual quotas are made up as follows:

Contents of IB Ash and Slag	Recycling Rates: Traditional	Recycling Rates: IRRT®
3,5% **Non ferrous + precious metals**	64 %	> 90 %
8,5% **Glass (UltraSilit®)**	0 %	> 85 %
7,5% **Ferrous metals / stainless steel**	80 %	> 95 %
51% **Aggregate for concrete (UltraLit®)**	0 %	> 95 %

How Is this Possible?

The innovative IRRT® process combines classic processing steps – such as metal separation using magnets – with the three newly developed systems:

DyCAR® dynamic carbonatisation
RoTAC® high-speed digestion
ReUST® ultrasonic high-frequency cleaning (wet-mechanical)

Unique Solution

The patented IRRT® process was developed by our partner proCLIR®. We are the exclusive distribution partner and are pleased to be able to offer you this unique solution.

Is Your Material Suitable for Processing with IRRT®?

IRRT® is not only suitable for slag from household waste incineration plants, but also for slag from waste incineration plants with pre-sorted refuse derived fuel (RDF). Following a non-binding material analysis and a series of tests in our IRRT® technical centre, we will work with you to calculate the economic efficiency of your new IRRT® system.

We can also advise you on the purely dry-mechanical processing of waste incineration slag - after all, we have realised plants with capacities of up to 180 t/h from Germany to Ireland and Singapore. Together we will find the best solution for you.

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