

**REMEX Secondary aggregates** 

# Paving the way with recycling



#### Solid grounds for the future

An important part of the REMEX Group's business activities involves the production of secondary aggregates. Be it construction and demolition waste, bottom ash from municipal solid waste incineration or track ballast – the use of these materials as alternative construction materials offers two decisive advantages: firstly, considerable cost savings compared to primary construction materials and secondly, the protection of natural resources.

The balanced use of primary and secondary construction materials is one of the most important issues for the future

#### Construct and conserve

The worldwide demand for aggregates is increasing: UNEP¹ states 40 to 50 billion tons per year, with an estimated annual growth rate of 5.5 %. Most of these aggregates are gravel, sand and natural stone for the construction industry. At the same time, large quantities of mineral waste are produced on construction sites, in industrial production and in the course of waste incineration. REMEX uses secondary raw materials like these to produce construction materials that can sustainably replace part of the raw materials needed for construction.

#### Diverse possibilities

For reuse as construction material, mineral waste is processed in one of the many REMEX Group plants. We distinguish between sites for the treatment of construction and demolition waste, incinerator bottom ash and track ballast. After processing, aggregates remain that can be applied in a variety of ways, including road constrution, earthworks, landfill construction and noise protection barriers.





<sup>1</sup>UNEP 2019, Sand and sustainability: Finding new solutions for environmental governance of global sand resources. GRID-Geneva, United Nations Environment Programme, Geneva, Switzerland.







#### Secondary aggregates in brand quality

When it comes to waste recycling – quality and reliability are essential. This is why REMEX pursues a consistent brand strategy. We market our recycled aggregates made from construction and demolition waste and road rubble under the name REMEXIT. Our GRANOVA brand is registered internationally for secondary construction materials made from municipal solid waste incinerator bottom ash.

#### High potential for new applications

Due to continuous developments in our plant technology, new areas of application for secondary construction materials are constantly emerging. By using hydro-mechanical treatment, 3D screening techniques and MERIT technology, for example, we can produce application-specific construction material qualities that are already used in concrete and asphalt in the Netherlands.

#### secondary-aggregates.remex.de

Details about production, recycling and application of incinerator bottom ash and recycled aggregates can be found on our dedicated website.





#### Sustainable benefits of secondary aggregates

The utilisation of processed mineral waste as a construction material contributes to environmental protection in several ways. In particular, secondary aggregates are known to create ecological added value in the following areas:



#### Landscape conservation

The use of secondary aggregates reduces the consumption of natural resources such as gravel, sand and natural stone. This extends the life span of natural excavations.



#### Landfill relief

The processing and recycling of mineral waste into secondary construction materials avoids landfilling and saves landfill volume.



#### Climate protection

The processing of mineral waste makes a relevant contribution to climate protection. This is because the recycled metals recovered during the treatment process improve the  ${\rm CO_2}$  balance of metal production.



## Our secondary aggregates at a glance

#### Incinerator bottom ash



REMEX uses the latest recycling technologies to produce high-quality secondary aggregates from the bottom ash of municipal solid waste incineration plants.

#### Recycled aggregates



In our recycling plants, the input materials for the production of recycled aggregates are mineral waste from construction and demolition, and road rubble.

### Secondary landfill construction materials



Whether sieved track ballast or road rubble containing tar: there is a wide range of mineral waste that can be used as substitute landfill construction material after appropriate treatment.

#### Recycled track ballast



Recycled ballast consists of processed worn track ballast. It is reused as a high-quality construction material in the track bed as well as in earthworks, road and landfill construction.



REMEX specialises in the professional management of mineral waste and the recovery of resources it contains. Through its recycling activities, the company has a proven track record in reducing the consumption of gravel, sand and natural stone and improving the carbon footprint of metal production. REMEX is an international leader in the development of innovative recycling technologies and ranks among the largest manufacturers of secondary aggregates in Europe. REMEX is a  $member\ of\ the\ REMONDIS\ Group,\ one\ of\ the\ world's\ leading\ recycling,$ service and water companies.



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