REMEX tailing pile recultivation

Nature as role model

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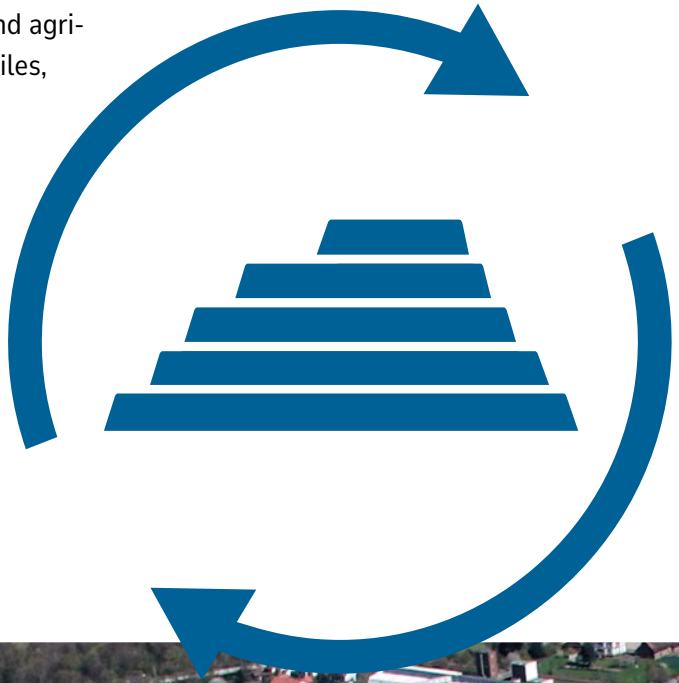
Innovative concepts for tailing pile recultivation

REKS

REKS GmbH & Co.KG is the REMEX Group's specialist for tailing pile coverage > **reks.de**

For more than a century, potash salts have been mined deep underground in Germany for use in industry and agriculture. The mining operations create tailing piles, which our associated company REKS plays an important role in recultivating.



In Germany, potash tailing piles can be found, for example, in the Hanover area, in the Harz region and in the Werra valley. Comprehensive expertise and resources are required for their environmentally sound coverage and renaturation. The solutions offered by the REKS joint venture, a partnership between REMEX and K+S, help to transform the sites into ecologically valuable areas that can subsequently be used again.

Construction materials for recultivation
Depending on the method of covering, different minerals can be used to cover the tailings piles. The materials are applied in defined layers, which can fulfil different functions depending on the covering process (e.g. as sealing layers or substrates for plant growth), thus contributing to an efficient reduction of the saline pile water. The resource-conserving use of materials promotes the sustainability of the project.

The most important construction materials that are suitable for covering tailing piles and are available in sufficient quantities are, in addition to soil, processed construction and demolition waste and ash/slag from industry and thermal processes. Depending on demand and availability, these materials are used in the respective processes to ensure sustainable and stable tailing pile coverage.

Legal framework
The recultivation of tailing piles is subject to strict legal requirements. Regulations on soil composition, water management and landscape design, among other things, must be observed. Official approval processes and regular inspections ensure that all measures are implemented in an environmentally friendly and sustainable manner.

Covering methods

Find out more about the different methods and materials for covering tailings piles at our subsidiary REKS.

Secondary construction materials enable environmentally friendly recultivation of tailings piles

Realisation of a natural habitat

The planning and implementation of tailing pile recultivation projects spans many years and involves a wide range of measures that vary depending on the specific site conditions. The following aspects are crucial for successful covering and renaturation include.

Site-related design
Modelling of the surface of the tailing pile to reduce erosion and water seepage.

Suitable construction materials
Choice of materials depending on the covering method for sealing and minimising seepage water formation.

Sustainable vegetation
Selection of plants suitable for the location to stabilise the surface and promote biodiversity.

Monitoring and aftercare
Measures to ensure that the recultivation objectives are permanently achieved.

Modern concepts for the recultivation of tailing piles use secondary materials for innovative landscape design. The collaboration between engineers, ecologists and geologists creates solutions that combine ecological and economic requirements.

Successful restoration example

Recultivating tailing piles transforms unused land into valuable space that benefits both nature and society. The exemplary Sigmundshall tailing pile project demonstrates how targeted measures can be used to sustainably transform an area. The systematic use of covering materials and adapted vegetation has significantly reduced the formation of pile water and transformed the site into a nearly natural landscape. This has created optimal conditions for the reintroduction of flora and fauna and made an important contribution to improving the microclimate.

REKS projects

Details about the Sigmundshall project, also known as ‘Monte Kali’, can be found on the REKS website.

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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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