

Nuclear Waste Management

Engineering, Treatment, Processing, Volume Reduction and Decontamination

Waste management and treatment solutions for the reduction of both overall waste volume and storage costs by optimal segregation, waste processing and packaging

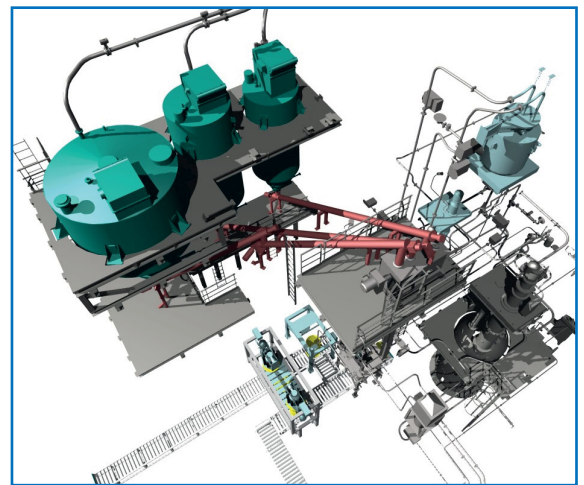
Challenge

The every day operation of nuclear power plants involves the handling of different kinds of contaminated materials. Generated waste that does not get processed leads to high volumes of nuclear waste. Undocumented, mixed or unsorted wastes do not get accepted at nuclear waste repositories. Simple separation of contaminated material does not suffice and generates large volumes of waste. As repository costs are influenced directly by the activity inventory and waste volume, high activity and volume result in high disposal costs.

Solution

Achieve efficient separation and volume reduction of radioactive waste with proven technologies from our extensive technology portfolio. Liquid, solid and gaseous waste treatment as well as conditioning and legacy waste treatment are optimized with our specialized systems. We design, engineer and realize complete treatment facilities, according to customer needs.

The waste treatment equipment logs data to provide all information needed for correct waste documentation and simplified repository acceptance. Unique decontamination and waste management processes and equipment decrease the level of contamination and can even result in free release (if applicable according to regulations).



3D model of waste treatment systems (extract from waste treatment building design)

Customer benefits

- Reduces repository storage costs
- Separates waste in the way best suited to reduce volume
- Compacts waste for even more volume reduction
- Reduces the amount of contaminated metal and machine parts by decontamination
- Documents waste to ensure acceptance at the repository

Your performance
is **our** everyday **commitment**

Technical information

Processing of radioactive waste water

- Evaporation
- Centrifugation
- Filtration/ion exchange
- Membrane technologies
- Pre-treatment (biological treatment, precipitation, oxidation)

Processing of liquid waste

- In-drum drying
- Cementation
- Macro-encapsulation

Processing of solid waste

- Sorting and shredding
- Compaction or super compaction
- Drying
- Handling devices for drums and waste containers

Decontamination of small machine parts

by:

- Ultrasonic baths or immersion baths
- Decontamination booths with high-pressure devices



Super compactor for maximum volume reduction of solid waste (average compaction factor of 5)

Key figures

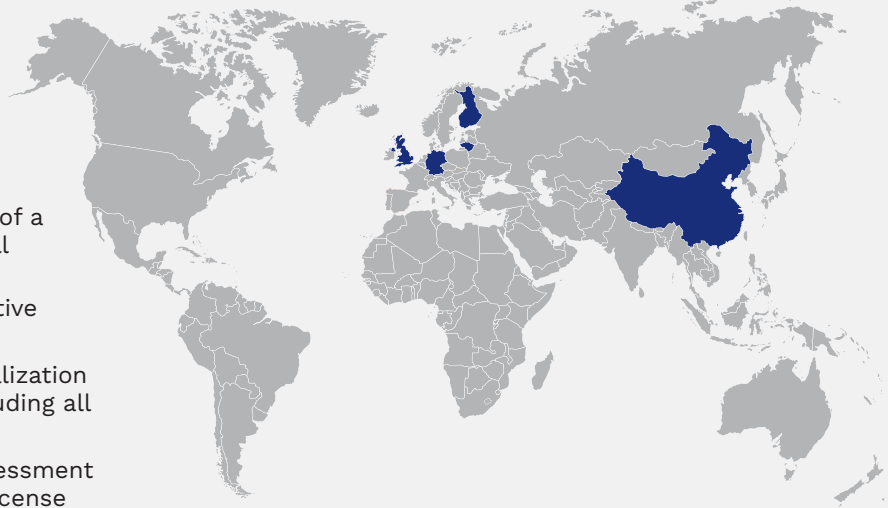
102 solid waste treatment references

64 waste water treatment references

7 complete waste treatment facilities

References

- China: design and engineering of a complete waste treatment building
- Finland: design and engineering of a complete waste treatment building
- Germany:
 - Detail engineering and realization of a solid waste storage facility with all necessary auxiliary systems
 - Design and supply of new radioactive waste treatment building
- Lithuania: detail engineering and realization of a solid waste storage facility including all necessary auxiliary systems
- United Kingdom: general design assessment as a pre-condition to site-specific license



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