Cyclife assets

Cyclife operates three facilities dedicated to the treatment of low-level radioactive contaminated metals generated by nuclear industry. Two of the facilities operate melting furnaces.

Cyclife studies each specific request to find the best sustainable waste route, in line with the waste hierarchy:

- Decontamination
- Volume reduction of a factor of 10 to 15
- Recycling

Cyclife solution will improve your savings by minimizing interim on-site storage and space capacity in the final repository

Process

1. Collection and receipt of materials and waste packages
2. Sorting and preparation of the material
3. Size-reduction of large components
4. Direct clearing and recycling by melting
5. Preparation of the final waste packages and transportation to disposal solutions

Acceptance

Maximum activity / dose rate

- Total emitters $\gamma < 20,000 \text{ Bq/g}$
- Total emitters $\alpha < 370 \text{ Bq/g}$

The combined capacities of the facilities is 8,500 tons of contaminated metals yearly.

Specificities

Decontamination
High efficiency decontamination. Mechanical decontamination with decontamination factor up to 100

Size
- Large components: up to 30 meters length and 400 tons

Metallurgical Nature
- Ferrous and non-ferrous material: aluminum, copper lead and special alloys
- Decontamination and clearance (not melting): titanium

Recycling
- Valorization within conventional or nuclear industry, in compliance with the European Commission’s recommendations, RP 89, Table 3-1
- Contaminated metals with up to 100 Bq/g initial activity can be subject to clearance after treatment

Packaging and transportation
- Multi-modal transportation solutions available
- Large components can be received
  - by sea or by road
  - Sealed (unwrapped), wrapped or in special over-packed, depending on the level of contamination
- Residues can be packed in drums or boxes as per customer request; returned loaded in ISO containers as standard
METALLIC WASTE TREATMENT, MELTING AND RECYCLING PROCESS

Reception and Inspection

Sorting

Size reduction

Blasting

Melting

Crushing

Free Release >95%

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