



Contribution ID: 91

Type: Oral Presentation

Development of Pyro-waste Treatment Process Technology

This paper is to review the status for developing the systemic waste treatment and storage/transportation process by reduction of the final waste volume, fabrication of durable wasteforms applicable to disposal environment and the safe packaging and storage system.

Systemic framework of technologies for treating waste filter, metal waste and waste salt from KAERI pyroprocessing was established by a series of experiments from bench scale to engineering scale. As some activities for development of key technologies, the off-gas treatment process in hot cell was performed to demonstrate some materials/process and the de-cladding hull was analyzed for finding proper process for the metal waste.

Next, engineering-scale salt purification process was performed to obtain the information on performance of eng-scale process. Also, a series of wasteforms related with pyro-waste from KEARI pyroprocessing was fabricated by using some synthetic materials and specific Lab-scale equipment.

Summary

This paper is to review the status for developing the systemic waste treatment and storage/transportation process by reduction of the final waste volume, fabrication of durable wasteforms applicable to disposal environment and the safe packaging and storage system.

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Track Classification: High Level Wastes and Spent Fuel (durability, ceramics and glasses)