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MELTING OF CONTAMINATED METALS FOR CLEARANCE AND RECYCLING – 30+ YEARS OF PRACTICAL EXPERIENCE

Treatment of contaminated metals by melting in Sweden started 1987 as a joint initiative by the licensee at that time (Studsvik) and the regulators in Sweden. Since 2016, the metal treatment facility is owned and operated by Cyclife Sweden, a company within the EDF Group.

Over the years the facility and the operations has developed, including extensions of the cutting and segregation areas, a larger furnace hall, installation of abrasive decontamination units as well as advanced equipment for treatment of large components. The treatment methods have been extended and enhanced over the years, as well as the type of metals possible to treat aiming for clearance.

The installation of the advanced mechanical decontamination technology in year 2000 increased the potential for clearance of contaminated metals after treatment significantly to the benefit of the licensees in the countries sending scrap metals and redundant large components to the Swedish facility for treatment. Their common objective has always been to reduce the amount of radwaste for disposal as radioactive waste. As an average, more than 95% of the metals sent for treatment have been subject to clearance.

One of the largest projects performed was the shipment of 15 Magnox boilers from the UK for treatment in Sweden. Other projects which have been discussed broadly are the PWR steam generator treatment campaigns.

This paper will summarise the experiences from more than 30 years of operational experience, how the introduction of the waste hierarchy and focus on sustainability have affected the decisions within the nuclear industry etc. The paper will also discuss how to optimise the management of large components and scrap metals in power upgrade and decommissioning projects to make management of the contaminated materials even more sustainable and the projects more cost efficient.

Do you wish to participate as a Young Professional?

No

Speaker's title

Mr

Affiliation

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Do you wish to be considered for a Young Professional grant?

No

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