



## Metallic Septa Filters for Fuel Pool Cooling

<b>Customer:</b>	Commercial Nuclear Power Plant
<b>Application:</b>	Precoatable Filter Demineralizers
<b>Products:</b>	Metallic Septa for IX Resin
<b>Primary Motive:</b>	Maintain Reliability and Customer Service
<b>Location:</b>	Customer in the Unites States, USA
<b>Project Date:</b>	2024
<b>Division:</b>	Ashland, USA



### Customer Overview:

Customer is a commercial Nuclear Power Generation facility located in Customer in the Unites States.

### Customer's Requirement:

The customer's filtration system was approaching the end of its operational life, having performed reliably for over 15 years. The original equipment manufacturer (OEM), a publicly listed company, had withdrawn from the metallic filter element market due to its cyclical nature, leaving the customer without a direct replacement source a competing supplier assumed a monopolistic position and significantly increased pricing while offering minimal technical support. This created a challenging environment for the customer, who faced both rising costs and a lack of responsive service.

### Project Overview:

The first tubesheet full of Porvair filters were used in this plant's Radwaste processing system and required the precoatable version of our Septa MC filter. This version is optimized to hold ion exchange resin and provides both filtration and demineralization within the same vessel.

After operating well in radwaste, they then purchased another bundle of filter/ demineralizer Ion Exchange precoatable filters for their FPC (Fuel Pool Cooling) system.

### Product and System Information:

Fully sintered monolithic 316L stainless steel septa

Length: 2.0"

Removal Rating: 64µm absolute

Max temp: 5000°F

Min Collapse Pressure: 100psig

Min Tensile Strength: 200psig

100% Bubble Point Tested

### Other Applications:

Porvair's Backflushable Metallic Septa are suitable for deployment at most commercial nuclear power generation facilities worldwide. These durable metallic filters are ideal for use upstream of demineralizer beds and are fully precoatable—making them especially effective in systems where filtration and demineralization occur within the same vessel, such as filter/ demineralizers.

Typical applications include:

- Fuel Pool Cooling (FPC)
- Reactor Water Clean-Up (RWCU)
- General Radwaste Systems
- Condensate Systems where process conditions dictate the use of metallic versus polymeric filters.

Porvair Metallic Septa are also well-suited for Control Rod Drive (CRD) systems, where water serves as the actuating fluid for the operation of the control rods.

Porvair also supplies metallic filtration solutions for Condensate, Resin Traps, Resin Vessel Laterals and Underdrains and able support the higher condensate flow rates in facilities undergoing Power Uprate conversions.