framatome

CE Design Spent Fuel Handling Tool

Innovative design increases efficiency

Challenge

Offload and reload of fuel are two activities performed every outage on critical path. This requires a coordinated effort from refuelers on the reactor side and refuelers on the spent fuel side to move each fuel assembly. Some sites are challenged to move fuel assemblies on the spent fuel side as efficiently as on the reactor side causing a bottle neck during offload and reload. One of the main contributors to the inefficiencies is due to poor water clarity from water dripping off the flanges of the legacy spent fuel handling tools.
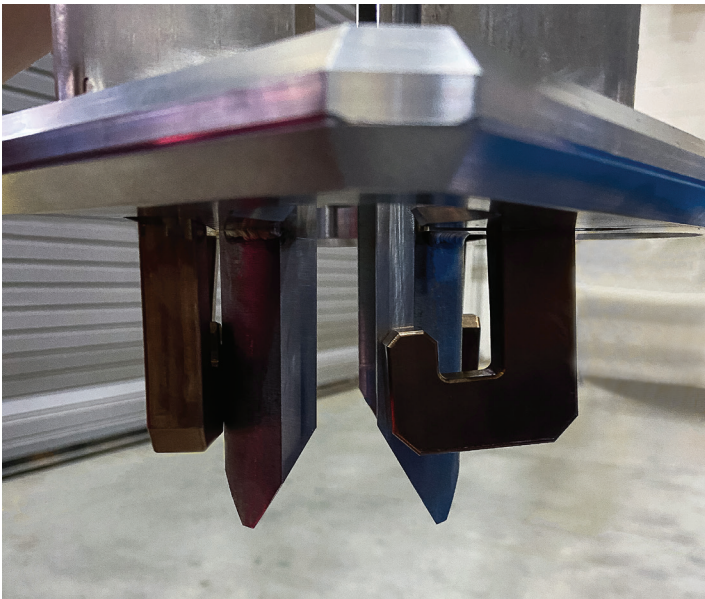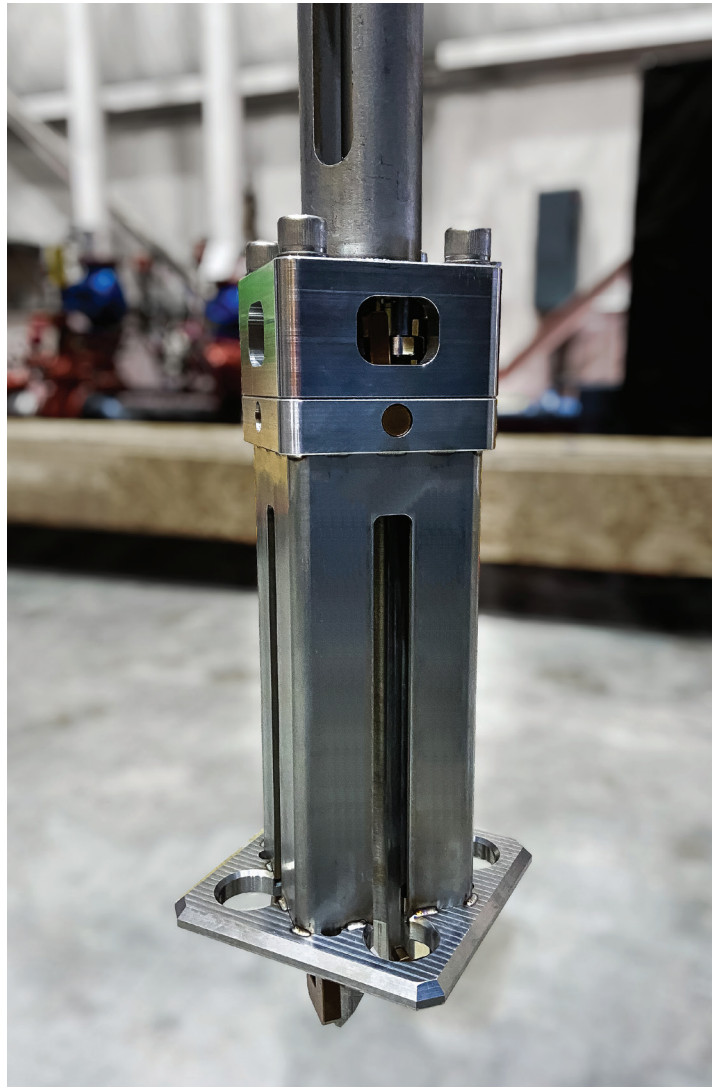
Solution

The new Framatome spent fuel handling tool eliminates dripping water by relocating the mating flanges towards the top and bottom of the tool. This allows the tool to be taken from full down to full up without a set of flanges coming out of the water, thus eliminating water dripping and improving water clarity. The tool also features other time-saving features such as the simplified locking grapple lever that can be taken from grapple open to grapple close in one smooth motion. The tool is configured such that when it is landed on a fuel assembly, the grapple may be actuated immediately without the additional step of raising the tool to float the grapple as is required with legacy tools.

Customer benefits

- Offload/reload time savings
- Estimated critical path time savings of two hours
- Improved water clarity
- Simplified operation
- No periodic maintenance

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