Cast Dross Pans

ALUMINIUM PROCESS
Dross removal

METAL TEMPERATURE
750°C (1300°F)

PREVIOUS MATERIAL
Mild Steel

NEW MATERIAL
AISI 8630 Cast Steel

PREVIOUS SITUATION
Previously, the customer used dross pans welded with mild steel. These weldments had a six month average service life. The failure mode of these pans was excessive warping which inhibited dross extraction and/or weld failure.

Previous welded mild steel dross pan

PYROTEK SOLUTION
The Pyrotek dross pans were designed to match the customer's desired dimensions considering their process and equipment dimensions. Our design experts selected AISI 8630 cast steel for its castability and strength properties. In addition, the following features were added to the design as countermeasures to the existing failure modes.

- Increased wall thickness to resist warping.
- Mid elevation stiffeners to resist warping.
- Continuous rim to resist impact stresses.
- Internal corner radiuses to improve dross removal and reduce stress concentrations.

Pyrotek cast steel dross pan

PROCESS IMPROVEMENTS
- Increase pan life by 700 percent with cast steel and robust design.
- Decrease dross cooling time by 40 percent due to increase in pan mass.
- Decrease production load on rotary cooler from faster cooling in the pans.

ESTIMATED SAVINGS

	OLD DESIGN	NEW DESIGN
Pan Cost	USD$1850	USD$8345
Service Life	0.5 years	4 years
Cost Per Year	USD$3700	USD$2086
Number of Pans in Use	12	12
Total Cost Per Year	USD$178,000	USD$100,000
Total Savings	**USD$77,460**	