



INDUSTRY Energy

CUSTOMER Reworld

LOCATION Primarily Eastern and Central United States

BACKGROUND **Reworld is a regional power utility that utilizes landfill material as a fuel source. Their 15 waste-to-energy facilities produce an average of 30–90 MW per site, while also providing sustainable commercial waste solutions.**

Originally Covanta, the company rebranded as Reworld in 2024 after introducing several new service lines and expanding its geographic footprint.

Waste-to-energy (WtE) is the process of transforming non-recyclable municipal solid waste (MSW), industrial byproducts, or organic waste into usable energy forms such as electricity, heat, or fuel instead of sending it to landfills. This approach addresses two major challenges: the growing global waste problem and the need for sustainable energy sources. Every piece of non-recyclable waste contains stored energy, which can be recovered through specialized technologies, shifting from a linear take-make-dispose model to a circular economy.

PROBLEM TO SOLVE **Steam air coils were being fouled by carryover from the garbage pit, which resulted in diminished heat transfer and led to decreased boiler efficiency and output.**

Reworld was using steam air coil preheaters to preheat the combustion air entering the main burner. However, Reworld's steam air coils were being fed with ambient air from the plant's garbage pit and waste particles were clogging the coils, adversely affecting airflow, temperatures, and burner efficiency. Filtration was not viable in this application, fin design did not allow for complete cleaning, and attempts to wash down coils resulted in bent fins—all causing a reduction in heat transfer and frequent costly shutdowns to clean the coils.

ARMSTRONG'S SOLUTION(S) **Armstrong International's experts created a custom coil design that addressed the cleaning and clogging issues at Reworld's facilities.**

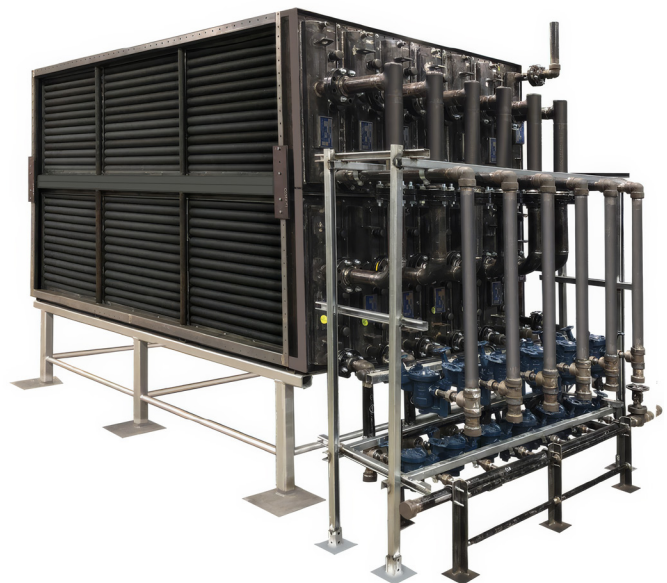
- | Switching to carbon steel strengthened the fins
- | Reducing Fins Per Inch (FPI) resulted in reduced airside fouling
- | Arranging tubes in-line vs. staggered opened a straight pass-through for contaminants
- | Heat transfer surface area was adapted for the new design to maximize performance

Solving the complex requirements of Reworld's facilities with tailored package solutions.

Armstrong worked closely with Reworld, developing a deeper understanding of the facilities' problems and areas that needed improvement. This insight, combined with Armstrong's expertise in steam and condensate, engineering and manufacturing capabilities, and best piping practices, resulted in plug-and-play package solutions, custom designed to reliably address the company's needs.

SIGNIFICANT RESULTS **Armstrong's highly customized, plug-and-play solutions deliver ongoing benefits for Reworld.**

- | Exiting air temperature increased and steam use reduced by 10%
- | With two of three units replaced, overall facility output increased by approximately 2%
- | Easier access for cleaning and inspection
- | Increased efficiency
- | Single-source vendor providing a complete system solution—including steam coils, outer casings and pre-piped specialty steam components—resulted in higher quality and fewer coordination issues
- | Complete solutions for supply piping packages, condensate piping packages, outer casing and coils resulted in proper piping techniques, proper steam supply, proper condensate drainage and return, and easy access to maintenance for traps, valves, etc.



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