



CASE STUDY

Power generation gas turbine retrofit

Enhanced acoustic attenuation; improved system longevity

Rochester Public Utility, Rochester, Minn., found its Westinghouse 251 gas turbine exhaust system in need of replacement. The utility contacted Dürr Universal to inspect and recommend a solution for the aging exhaust system.

Leveraging its broad experience with similar systems, the field service team from Dürr Universal provided a complete inspection and assessment. Upon approval from the utility, engineering work began immediately for the exhaust system, which was followed by manufacturing and installation, all of which was executed within budget and the established timeframe.

Dürr Universal's knowledge of the turbine power output of the Westinghouse 251, coupled with its understanding that peaker power stations need to cope with severe cyclical service, enabled it to offer a structural design that would serve Rochester Public Utility safely for the long haul.

HIGHLIGHTS



[Retrofit gas turbine peaker unit](#)

[Enhanced acoustic attenuation](#)

[Utilized existing footprint](#)

[Improved longevity](#)

[Single-source point-of-contact](#)

[Design maintains overall system performance](#)

[Retrofit exhaust system outperforms original equipment](#)

Gas turbine air management solutions

Fulfilling the promise of single-source point-of-contact

PROBLEM

Years of operation caused considerable deterioration to the inside liner sheets and exhaust baffles of this power generation peaker unit.

SOLUTION

Dürr Universal replaced the complete exhaust system on a Westinghouse 251 gas turbine for Rochester Public Utility. The scope included expansion joint, flow transition, silencer baffles, stack, new ladders, and service platforms, as well as demolition and system installation.

The design of the new system enhanced acoustic attenuation, improved longevity, and helped maintain overall system performance. The project team worked closely with Rochester Public Utility to minimize any risks during the outage. The scope of the project required a strong focus on the interface of critical dimensions associated with utilizing the existing footprint, ensuring every project stage met the engineered specifications, and that all production schedules and cost parameters were met.

RESULTS

As the most-trusted name in gas turbine air management, Dürr Universal was the single-source point of contact for Rochester Public Utility, which made for a smooth transition throughout all stages of the retrofit project. The complete engineered retrofit inlet and exhaust systems from Dürr Universal outperform original equipment for both simple and combined cycle power plant operations.



Dürr Universal designed and manufactured this exhaust system for a Westinghouse 251 gas turbine power generation peaker unit. The original unit experienced significant deterioration to the inside liner sheets and exhaust baffles.



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