

Cogen Power Plant Monorail Design for HRSG Harp Replacement

Description

Industry: Energy & Power (Cogeneration) | **Service:** Lift Planning & Rigging Engineering, Structural & Mechanical Engineering

The Challenge

A cogeneration power plant required the removal and replacement of heat recovery steam generator (HRSG) harps. The project presented two distinct challenges: first, the harps came in a variety of sizes and geometries, making a single-design monorail approach difficult; and second, the monorails had to be installed and operated in extremely confined and crowded spaces while avoiding existing structural supports and access systems.

The Solution

Versatility was the key engineering requirement. DSE designed a single lifting beam capable of accommodating the full range of harp sizes through a system of interchangeable brackets. Each bracket was engineered to connect quickly to both the lifting frame and the specific harp type, minimizing setup time during the outage.

The monorail beams and their supports were positioned and designed to allow the hoists to reach each harp correctly within the tight quarters, while also providing the clearest available removal and installation path. The result was a system that could be used across all harp types at the facility without requiring a separate monorail design for each one.

Result

All harps were removed in a timely manner. The interchangeable bracket design proved so effective that it has since been adapted for use on other projects where multiple harp design variations are present.

Contact DSE to discuss HRSG maintenance engineering and monorail design.

Category

1. Blog
2. Energy & Power
3. Lift Planning & Rigging Engineering

Date Created

April 20, 2026
Author
marcdossantos

default watermark