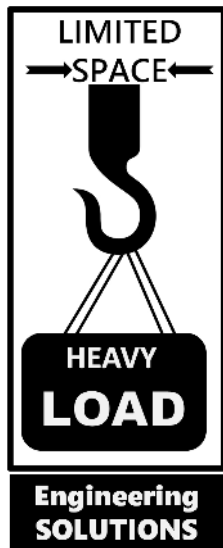


# DSI ENGINEERING – COGEN POWER PLANT

## MONORAIL DESIGN FOR HARP REPLACEMENT [W10232]

**CHALLENGE:** The variety of harp geometries proved challenging for uniform monorail usage. In addition, the monorails had to be placed in very confined and crowded spaces. Main structural supports and access systems had to be avoided.

**SOLUTION:** Versatility was essential in the engineering design required to accommodate for the space constraints and variability of harp sizes.



The design solution incorporated a modification of a single lifting beam for use with a multitude of harp sizes. Multiple harp sizes required a versatile lifting beam and bracket design.

A system of interchangeable brackets was designed to accommodate each harp type. The bracket designs were made to allow for a quick connection to the lifting frame and harps.

The monorail beams and their supports were designed to allow for proper positioning of the hoists to the harps in tight quarters and were designed to allow for the easiest removal/installation path. This enabled the access of various monorail beams for the straightforward removal of old harps and installation of new harps.

The harps were removed in a timely manner. The lift bracket design proved to be successful and is being used on other projects because it allows for so many harp design variations.



Figure 1: Heat Recovery Unit Side Casing



Figure 1: Heat Recovery Unit at Stack