

*Overhead Weighing
Application Story*

Elevating Safety with the MSI Clamp-On Load Cell

Overhead Weighing's Best Kept Secret

Cranes and other overhead equipment are often used in manufacturing to transport products and it's no different at Rice Lake Weighing Systems. We use multiple overhead lifting systems to transport steel I-beams, truck scale modules and more throughout our manufacturing facilities.

We ensure safety and efficiency in lifting processes by using our MSI Clamp-On load cell to measure wire rope tension on overhead lifting equipment. The Clamp-On load cell easily integrates with pre-existing systems, so we can have a more convenient, versatile option. The installation is also very quick and requires minimal downtime for the equipment.

At Rice Lake, we installed a Clamp-On load cell on a wire rope bridge crane used to transport truck scale modules throughout the production facility to protect the crane from loading above capacity. As the name implies, installation is as simple as clamping the load cell near the dead end or termination point of the wire rope. Immediately after installing the Clamp-On, we used the MSI-8004HD remote display to calibrate the Clamp-On load cell, ensuring it would measure accurately. Once calibrated, the Clamp-On system is able to use weight-based setpoints and communicate with remote electronics to let our operator know when they are nearing potential overload of the crane's safe lifting capacity.

MSI Clamp-On load cell, when used in conjunction with the MSI-8004HD and MSI-7000HD, can alert crane operators when a load is nearing maximum capacity



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In cases where we are nearing maximum lifting capacity, we use a MSI-7000HD transmitter to communicate with our MSI-8004 LED remote display interfaced to an audible alarm to provide operator alerts based on unsafe load conditions. Our product manager for MSI overhead weighing solutions explained how the alarm works with the Clamp-On. “The remote display is green when the weight is safe for operations. Our overhead crane has a 10,000-pound capacity. When the weight is over 9,000 pounds, the display will change to orange as a warning. When the weight is over 9,500 pounds, the display changes to red and the alarm will sound to let the operator know they are very close to the maximum capacity. The operator will then stop what they are doing to lighten their load or risk damaging the overhead crane.” Although not used in our application, we also have the option to tie in relay outputs to limit hoist functions in an overload condition.

MSI Clamp-On load cells are designed to be used with crane rigging, clevis and overhead weighing applications. The Clamp-On load cell is ideal for operations currently using cranes, as well as crane manufacturers and original equipment distributors in the crane and overhead material handling industry.

The seamless integration of the MSI Clamp-On load cell with our crane is a safe and convenient solution for Rice Lake Weighing Systems. Using the Clamp-On load cell firsthand allows us to better understand our product to ensure it is the best solution.

