



Application Brief: Metal Stamping Facility Crane Collision Monitoring

INDUSTRY: Materials Handling

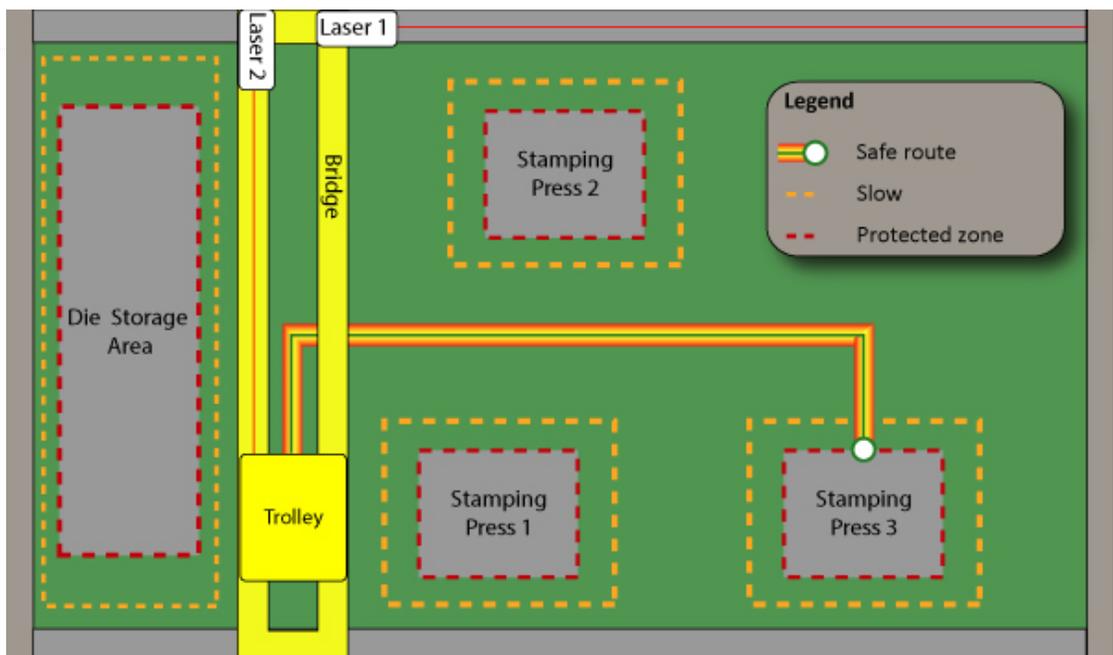
APPLICATION: Metal Stamping Facility Crane Collision Monitoring

SUMMARY: Consider the potential safety concerns, downtime and costs faced when an overhead crane, such as the cranes that handle die changes at a metal stamping facility, collides with equipment on the production floor. Many of these facilities have massive stamping presses, with low overhead clearance and difficult sight lines above the presses. The objective in this scenario is to prevent risky materials handling activities, like maneuvering a crane with a suspended load over very tall machinery with difficult sight lines. Laser-View Technologies has helped solve this very problem in metal stamping facilities, and other industries, with the right combination of materials handling expertise, Dimetix laser distance sensors and a Crane Sentry® controller that provides the ability to set protected zones around machinery or any other designated areas.

Overview



205 Byers Road
Chester Springs, PA 19425
Phone: 610-497-8910
Fax: 206-338-4281
Email: info@laser-view.com



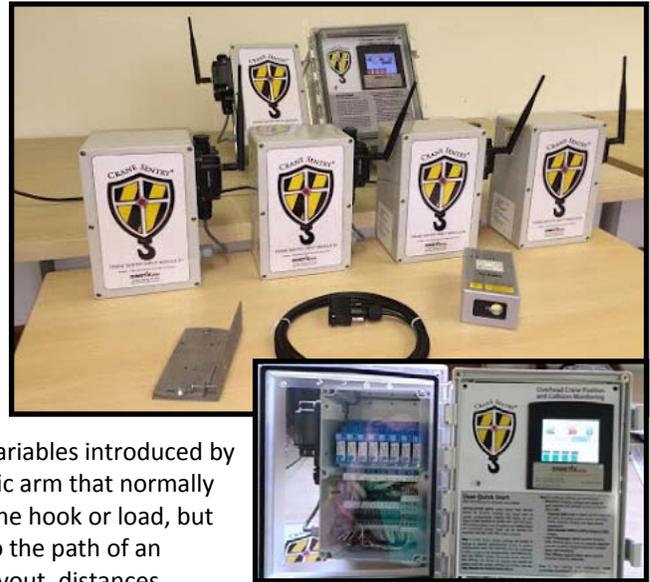
Metal stamping press die in transit to stamping press 3 on a typical production floor, showing overhead crane, equipment, and areas monitored and protected by a solution consisting Dimetix laser distance sensors integrated with a Crane Sentry controller. In the example shown, Crane Sentry prevents the high risk "direct route" over Stamping Press 1.





Challenge

It's not difficult to imagine what would happen if an overhead crane carrying valuable materials or a costly die collided with a press or other equipment located in the production area. Laser-View Technologies has helped solve this very problem, both in metal stamping facilities and in other industries. Many of these facilities have massive machines, with low overhead clearance and difficult sight lines above the equipment. Also consider the added complication of the variables introduced by autonomous equipment, such as a robotic arm that normally remains below the level of the bridge crane hook or load, but which can suddenly change elevation into the path of an oncoming crane. Although the physical layout, distances separating machine work centers, and other variables that must be accounted for change from facility to facility, the best solution is always the same: Prevent a potential collision from happening.



Solution

The objective in this scenario is to prevent risky materials handling activities, like maneuvering a crane with a suspended load over very tall machinery with difficult sight lines. The Laser-View Technologies solution includes Dimetix laser distance sensors, which for this application typically would be mounted near the Crane Sentry® controller on the crane bridge aimed at flat target plates mounted on the wall and trolley. An optional master wireless I/O module could also provide the ability to relay digital output signals provided by the customer to the Crane Sentry controller and react to variables on the production floor, such as a robotic arm that normally remains below the level of the bridge crane hook or load, but which can suddenly change elevation into the path of an oncoming crane.

Results

As a result, the Laser-View Technologies solution, consisting of Dimetix laser sensors integrated with a Crane Sentry controller, prevented both unintentional entry of the bridge crane into protected areas and risky materials handling activities like maneuvering a crane with a suspended load over very tall machinery with difficult sight lines, but was also able to permit overhead crane entry into protected zones as necessary to allow positioning of machine dies during die changes.

Key Application Notes

- Multiple communications options
- Simple installation, low maintenance
- Color touchscreen data entry & display
- Teach or manually enter set points
- Six configurable relay outputs
- Wireless interface module

For more information on the Crane Sentry family of laser distance sensor-based overhead crane position and collision monitoring systems, please visit our Website at www.laser-view.com, email us at info@laser-view.com, or call 610-497-8910.