

Application safety light curtain

For a safe work, so that you come home unharmed

A metal foundry produces flywheels for vehicle construction, among other things. After metal casting, the blanks are machined to produce a ready-to-assemble component.

With a view to optimizing production, a robot was integrated for automated loading of a furnace belt. The transport racks or pallets are set down at separate removal points using a forklift truck and fed into the process via roller conveyors so that the robot can pick up the components and place them on the furnace belt. Access to the robot's danger zone or movement area must always be secured. Protective grilles or doors were ruled out for this purpose, as operating the doors would have meant too much loss of time and the installation would also have been too complex.

Instead, the decision was made to use the safety light curtains **OY32** (performance level e or category 4) from ipf electronic. The systems with a resolution of 30 mm (hand protection) are designed to secure the access points at the transfer stations from both sides (assembly and robot side). They thus protect the danger zone from being entered and also ensure collision protection between the robot and, e.g., a forklift truck. If the robot picks a component from a pallet and thus interrupts the inner light curtain, the process remains active. However, if the outer light curtain is interrupted, this leads to an instant shutdown of the robot. The same happens if the robot does not interrupt the inner light curtain and a person nevertheless attempts to enter the robot's operating circuit. The safety light curtains therefore ensure efficient system operation - without compromising on system safety.



Automated loading of an oven belt Image: ipf electronic