



Application

Reliable, Cost Effective Brake Solution for Overhead Bridge Crane Retrofits

Product Used

A/H ERC air over hydraulic brake conversion systems

Problem

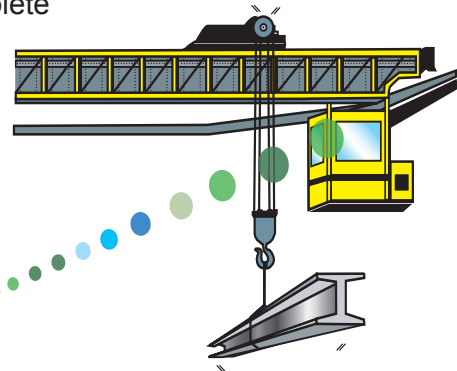
Many existing bridge cranes have hydraulically applied, spring released braking systems with fluid reservoir bleeders. These systems have been in operation for 40 to 50 years or more and need to be replaced in order to increase the crane's capacity, or to add remote control operation to the system. Older style crane brake systems traditionally had only manual cab operator controls which tie up extra manpower during operation. These braking systems must be modified to use radio or pendant type remote controls to increase crane productivity.

Solution

A type A/H -ERC air powered, hydraulically actuated, electric remote control system can be used to retrofit an existing type H hydraulic brake. This conversion would add a pre-assembled A/H ERC panel, a motor and compressor assembly and a two-way hydraulic check valve. This system provides two levels of service braking. Low power braking is used when the bridge motor is running and the operator signals for braking. This form of braking is automatically applied when the bridge drive control is switched to the neutral position. High power braking is automatically applied when power is lost and emergency braking is needed. Pressure for each of the braking levels is adjustable in order to provide optimum performance. The braking torque step between high and low power will remain constant even as the brake pads gradually wear and need adjustment.

Benefits

- Elimination of a second operator during operation of the crane with remote control would save in labor costs. The actual amount of savings would vary depending upon percentage of usage.
- Savings of over 20% could be expected by using the existing brake parts when retrofitting to an A/H-ERC Brake System, as compared to replacing the complete brake system.
- The ETH brake may reduce maintenance costs due to the simplicity of the design and the reduction in air & hydraulic tubing, fittings, etc..
- Both the A/H-ERC and ETH style brakes are manufactured at our Michigan plant, allowing quick delivery of equipment and/or replacement parts.
- Both systems are available in standard AC or DC voltages.



AppNote.AOR
10/07 Z340

