

HOISTING APPARATUS AND CONVEYORS

addition, detailed weekly inspection of the entire crane is recommended

Hooks should be tested by X-ray or similar means. Under no circumstances should a hook be heated to reduce a permanent set, rather, the hook should be replaced.

A crane operator never should attempt to make repairs himself but should report to his foreman any condition that might make the crane unsafe to operate. Certain faults so detected may be so dangerous that the crane should be shut down at once and not operated until the faults are corrected.

Following is a list of unsafe conditions to be followed mainly by operators* of overhead traveling cranes (see next section).

- Bearings loose, worn
- Brakes shoe wear
- Bridge alignment out of true (indicated by screeching or squealing wheels)
- Bumpers on bridge loose, missing, improper placement
- Collector shoes or bars worn, pitted, loose, broken.
- Controllers faulty operation because of electrical or mechanical defects
- Couplings loose, worn
- Drum rough edges on cable grooves
- End stops on trolley loose, missing, improper placement
- Footwalk condition
- Gears lack of lubrication or foreign material in gear teeth (indicated by grinding or squealing).
- Guards bent, broken, lost
- Hoisting cable broken strands
- Hook block chipped sheave wheels.
- Hooks straightening
- Lights (warning or signal) burned out, broken
- Limit stops functioning properly
- Lubrication overflowing on rails, dirty cups
- Mechanical parts (rivets, covers, etc) loose
- Overload-relay. frequent tripping of power
- Rails (trolley or runway) broken, chipped, cracked
- Wheels worn (indicated by bumpy riding).

Overhead traveling cranes

An overhead traveling crane (Fig 18-7) may be operated either from a cage or from the floor. In the latter case, control devices may be either pendant pushbuttons or pull



Fig. 18-8. Operator controls 10-ton overhead crane from shop floor. Unit on his belt sends radio signals to a receiver in the crane cab, which in turn actuates conventional magnetic controls of the crane.

Courtesy Telemotive Division, Dynascan Corp

ropes. The control handles should be clearly identified by signs and by shape or position so that the operator, without taking his eyes off the signalman, can tell by the "feel" which motion he is about to control. Like-

*Adapted from a list furnished by Electric Controller and Manufacturing Company