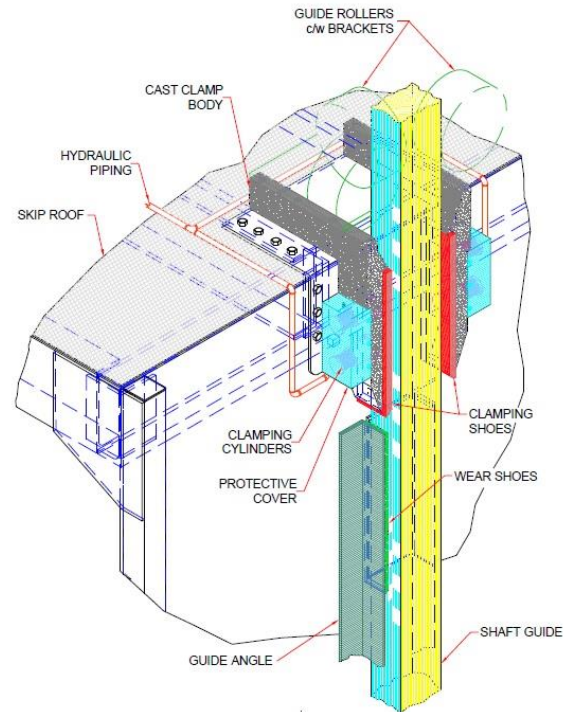




SKIP HOLDING SYSTEM

Eliminates spillage caused by rope stretch

- Holds skip steady during loading
- Controlled release allows skip to smoothly take up rope stretch
- Reduced shock loading increases rope life
- Lightweight skip mounted clamps
- Single clamp set only (per skip) required for multiple level loading
- Very rapid clamping time
- Automated system, interlocked with hoist controls



General features

Standard dual clamp system - both holding clamps are roof-mounted on the skip bail.

Clamps are hydraulically activated and powered directly from a closed-loop hydraulic unit.

Hydraulic unit cabinet mounted below bail roof surface.

Holding system is battery powered. No external connections required.

Communication between the hoist circuit, loading station circuit and the "on-board" Lock-N-Load circuit is done via wireless connection, with the transmitter being part of the skip-mounted hydraulic unit, and the receiver being mounted at each loading station location.

Cycle time for clamps applied is to be within 2 seconds. Cycle time for clamps released, is to be within 5 seconds.

Skip is clamped directly to shaft compartment guides.

All holding components are located on the skip.

Weight addition to the skip for a complete system is 1,150 lbs (520 kg).
This includes reinforcing members for the skip

Sequence of Operation

The system is activated when the skip is parked at the loading station discharge chute. Sequence of operation is as follows:

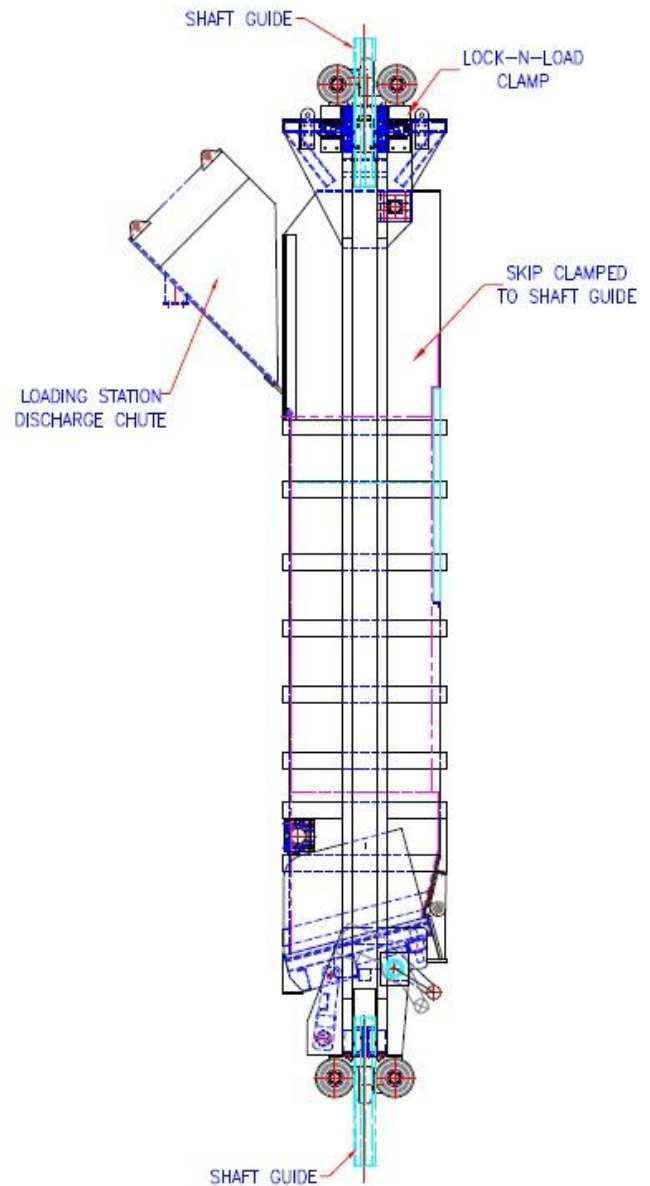
1. Skip in position is recognized by a shaft-mounted proximity switch
2. Skip-in-position switch signals hoist to apply brake and locks-out hoist control
3. Hoist brake applied signal causes Lock-N-Load clamp to apply to shaft compartment guide
4. Clamp applied signal causes skip loading station door to open and muck flows into skip
5. Loading station bin empty signal (from load cell) causes loading station discharge door to close
6. Signal from discharge door closed, initiates Lock-N-Load clamp release
7. Clamps fully released signals hoist brake release
8. Hoist brake release signal permits operation of skip hoist.

Lock-N-Load systems utilize the very latest technology to help improve safety and productivity when loading skips.

Very fast clamping times (less than two seconds) provide for rapid functionality of the skip holding system.

The ultra lightweight clamps minimize total system weight.

Proportional control valves provide for a controlled clamp release on system deactivation as the skip takes up the resultant rope stretch.



*Lock-N-Load Cage Clamp
(illustrative purposes only)*