

Sliding frame reclaiming device designed to keep your facility running smoothly with a constant flow of material.



Features/Advantages

Operation

Jeffrey Rader stoker reclaimers use multiple moving ladder assemblies in the bottom of a bin to move material gently from the loading/infeed area to the discharge section of the stoker. These units can be used as above-ground discharge bins, in-ground open pile reclaimers, truck and rail car receiving bins, etc.

The ladders are moved by a hydraulic system, which can be arranged to either push or pull them. A push system will have the cylinders arranged at the infeed end of the bin while a pull system will have the cylinders arranged at the discharge end. The hydraulic pumps and motors are normally located nearby in a convenient location.

The ladders are of a special design that can move material in one direction on the stroke of the hydraulic cylinder attached to the ladder. At the end of the stroke, the cylinder is reversed and the tapered trailing edge of the ladder moves below the material. The shape of the ladders and presence of anti-return bars ensure that the material stays in place until the next cycle. Once the end of the reversing cycle is achieved, the cycle repeats and again moves material towards the discharge opening.

To achieve a consistent discharge, the operation of the ladders are sequenced so that while one ladder is moving to discharge material, the adjacent ladder is returning to its starting position to begin moving material when the first ladder is at the end of its stroke. The number of ladders used depends on the required feed rate and size of the bin to be discharged.

As the ladders move the material towards the discharge opening, the material will encounter adjustable gate bars that help to break up the material. The gate bars act as a shear-opening metering gate to provide further adjustment to the discharge rate. The bar configuration and spacing reduce the shear forces and power required compared to a continuous-edge gate.

After the adjustable gate bars, an optional rotating spike roll assembly helps to break up additional clumps or ice lumps that may be present in the material, as well as finishing the leveling process of the material. Following that, the material falls by gravity into the discharge takeaway device, normally a metering screw conveyor.

Advantages

- Material cannot permanently bridge to hamper the discharge operation.
- Material is moved gently, preventing dust and minimizing degradation into fines and pins.
- Ensures first-in, first-out movement of material for consistent turnover.
- Provides reliable, safe operation with very low wear and tear of moving parts inside the bin.

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