A rotary plough feeder is a heavy duty machine for reclaiming stored bulk materials. The feeder is designed to operate in a tunnel beneath a storage pile. A slot opening, running the length of the tunnel allows the stored material to flow onto a reclaim shelf. The stored material is prevented from flowing over the edge of the reclaim shelf by designing the shelf to intercept the angle of repose. The ploughing mechanism, the key to the system’s operation, consists of curved arms revolving on a vertical axis that sweep the stored material from the shelf onto a belt conveyor. The plough feeder can continuously traverse or position at any point along the reclaim shelf for maximum flexibility.

A travelling stacker, tripper or shuttle conveyor discharges the incoming material to the storage pile above the reclaim conveyor and rotary plough feeder. The stocking system can be either an open structure or one that completely encloses the storage pile. The use of a travelling stacker eliminates the need of an “A” frame structure. However, should covered storage be required a separate building enclosing both storage pile and stacker can be provided.

Separation of incoming materials, irrespective of quantity is easily handled by the plough feeder system. Incoming materials are stored in separate sections of the storage area through selective positioning of the stockpiling equipment. Using the Frigate designed retractable arm plough feeder, the desired stored material can be reclaimed independently without disturbing any of the other materials in the storage pile.

Reclaiming from separate storage piles of uniform analysis in varying proportions by individual feeders will provide a feed that when mixed together, will produce the desired product mix.

The output tonnage of the rotary plough feeder is controlled by varying the plough rotor speed. This can be accomplished by numerous types of adjustable speed drives built into the machine to meet any specific requirement. The mechanical, variable speed drive is most economical as it requires only local manual adjustment.

First-In-First-Out with 100% live storage. This virtually eliminates the danger of spontaneous combustion when handling materials such as coal. The long slot-type opening in the tunnel wall and the undercutting action of the rotary plough feeder eliminates material bridging and rat-holing often experienced with other type of feeders.