

Bucking the trend: RAM Spreaders unveils revolutionary railcar emptying system



RAM Spreaders has introduced a new pit-to-port rail system that uses top lift Revolvers to handle ore. This is a revolutionary alternative to expensive bottom dump or rotary railcar dumpers, which are expensive and involve long lead times.

The system includes a large gantry that straddles the rail tracks at the receiving stockyard, and the crane across the gantry literally picks up a 20ft or 40ft container that is carried by the railcar, lifts it across to the required part of the stockpile, and empties the contents of the container onto the stockpile before returning it to the train. The gantry then moves along and collects the container from the next railcar and repeats the process. Each cycle takes only two minutes, and a capacity of 800–1,500tph (tonnes per hour) can be achieved with each gantry. The system is modular, so capacities can be increased with the addition of more gantries.

The containers themselves are fitted with lids, to prevent the escape of fugitive dust at any part of the process, as well as while travelling to the receiving stockyard. The containers can be transported by both trains and lorries, so the system works equally well with road and rail.

Traditionally dry bulk is offloaded from rail wagons by rotary

SYSTEM SPECIFICATIONS

65-tonne lifting capacity
Two-minute cycles
1,000tph range (800–1,500tph)
Modular — add more gantry to get higher rates: five gantries = 5,000tph
Cost less than US\$3 million vs US\$100 million for rotary rail car dumper
Fast delivery = six months
Flexible: if one machine breaks down then others keep working
Dust suppression fitted to gantry which allows spraying when not unloading

railcar dumpers or bottom dump wagons. Both of these solutions require extensive capital investment and long lead times as well as being fixed in place allowing limited flexibility.

An additional benefit of the system is that it can be fitted with dust suppression equipment, making it even more



environmentally friendly. The dust-suppression mist forms a light 'crust' on the stockpiled material, preventing the escape of dust.

Customers so far include a West African iron ore operator; an Egyptian coal-fired power station; a South African coal-fired power station; and an exporter of copper conns (inside a shed) from Chile. It is also being used to stockpile iron ore in the Congo.

The new system was developed for clients who needed a

solution in place quickly but at a reduced capital cost. It is also ideal for use where there is available container rail equipment, but less equipment for handling bulk wagons.

All of the equipment used is standard off-the-shelf container handling equipment, and each gantry crane is capable of handling 1,000tph. Customers requiring faster rates can add further equipment. The system is <10% of the cost of conventional rotary rail car dumpers.

