

Australia's Intermodal Solutions Group's, containerized bulk handling systems gives a new dimension to railway bulk cargo movement

Railways Review, takes a look at the innovative bulk container technology that can facilitate seamless movement of urea through railways between the loading and consumption centers.

The advent of containerization ensured seamless movement of cargo, through curtailing lead times by bypassing the need for multiple handling of the cargo. This has been made possible, as the containers move through multimodal transportation infrastructure. This is right from the starting point, from the processing plant or warehouse, where



the shipment gets loaded on truck or railway wagons right up to the unloading gateway port for its further shipment to the consumption centers. Containerized cargo movement has been extremely beneficial while transporting the shipment through intermodal link as well. However, usage of containers till now on a broader scale has been for transportation of cargoes in break bulk form.

ISG (Intermodal Solutions

Group), based in Australia suppliers of logistical, storage and ship loading systems is now offering an integrated solutions for storage of bulk cargoes around the world. This is through using patented bulk containers and their patented revolver (tippler) systems to the fertilizer industry for transportation of urea. The bulk containers can also be used for movement of mineral ores, food grains, coal, iron ore too.

ISG has clients in over 20

countries using their CBH systems and have been in this business for almost 20 years. The company has sold 27,000 containers till date. The global company has agents in South Africa, Tanzania, Mexico, Brazil, Peru, Chile, Argentina, Kenya, USA, Canada, and a strong team in Australia and New Zealand.

According to **Mr. A.M. Srikanth, Country Head India- VS&B Containers Group/ Chennai**, the exclusive agent for ISG

Containers are loaded at the mine site moving via rail or road



Australia in India, offer CBH (Containerized Bulk Handling systems), solutions in India, “These containers are extremely beneficial for transporting them on open flat railway wagon rakes if there is a shortage of covered BCN wagons, generally used by Indian Railways for transporting food grains, and urea.”

“The bulk containers can have multiple usages both for transporting the urea through the wagon rakes. Besides, they can be used as storage for the urea in railway goods sheds or sidings especially in locations, where there are constraints for storage. Being used as storage systems, it eliminates the

usage of the conventional dust and labor intensive sheds. It also avoids pilferage, wastage and encourages go green initiatives. The importance of storage of urea in the bulk containers is also as because the commodity is sensitive to moisture while storing in bulk sheds. The ability to store and transport also completely does away double handling, while loading the urea on the wagon rakes once they have arrived from the warehouse.” Mentions Mr. Srikanth.

Informing on the sequence of usage of the bulk containers and how it curtails the lead times in the distribution supply chain, Mr. Srikanth explains, “The bulk containers of ISG



The new ISG Grain Containers in operation



At the port containers are loaded on a truck and taken around the ship for loading



are loaded at the production facility, either by loading chutes or conveyor belts into the container roof hatches. Once loaded, the containers are sealed and the lid is not removed again until the bulk product is ready to be emptied. The containers are transported by road or railway wagon rakes to the loading ports, where the cargo is emptied into the vessels from the containers for further shipment.”

When the ship arrives the containers are moved around to the quay side and lifted into the ship's hold. The lid is automatically lifted off the container and then the

tipper rotates the container 360 degrees in less than 60 seconds, (though it could be faster, depending on the density of cargo handled). emptying the fertilizer into the ships hold. The lid is then replaced and the containers are taken back to the processing plant to start the loop again.

At the river ports some of the customers have got bagging facility so the bulk product is unloaded, using the container tippler into the bagging shed through a chute arrangement which then delivers the product into the bags for distribution on the river routes. At the ocean ports, some customers use the

current port facilities with the addition of the container revolver.

“This makes the containers to be highly compatible if the urea cargo has to be moved through the coastal river route or the sea route, if the containers have been railed in at the port or the nearby container freight stations.” He says.

TECHNOLOGY & FUNCTIONING

The ISG patented bulk containers hold 26.580 kg or 35 cbm of product. The lid can be removed for loading or hatches can be placed on the lid for chute loading. The corner castings design stops



Tippler loader

any product being poured into the corner casting thus, saving on any clean up requirements and crane down time. The internals of the containers are painted with special paints to stop corrosion. "The revolver is the only item required at an unloading facility and can be attached to any STS, ships or mobile harbor cranes or reach stacker. Lid lifter using the ISO patented lid lifter, the system is automatic and eliminates labor and product loss." adds Mr. Srikanth.

Citing an actual usage case of the bulk containers he informs, "YPFB in Bolivia required a system to move their bulk urea from Bulobulo in the Bolivian

jungle 900 kms to Quijarro area Gravelal Port on the Tamengo channel close to the Brazilian and Bolivian Border. The containers are loaded in Bulobulo and railed to the river port and unloaded using the tippler and reach stacker into the chute for the product to be bagged. Once the product is bagged, the fertilizer is distributed through the river port systems. The urea is moved by barges down as far as Argentina going through Paraguay and Uruguay unloading as they go. Once the containers are unloaded, the empty containers are returned to start the loop again."

He concludes saying, "The ISG systems can be purchased as

CAPEX or the system can be leased as OPEX giving the customer's project an option to suit their budget. It could revolutionize the way bulk cargoes are transported in the India as the ISG punch line says, Mined, Sealed & Delivered." **RR**



For more details on ISG, kindly visit their website www.pittoship.com and their contact details in India are :

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