

inBulk

TECHNOLOGIES

CASE STUDY

Material	Fly Ash
Application	Concrete/Construction
Bulk Density	800kg/m ³
Flow	West Burton Power Station, - Heathrow Terminal 5
Date	May 2003 - Ongoing
Unit	30' H Type unit in Aluminium

When Rugby cement needed to move 135,000 tonnes of fly ash a distance of 300km by rail, for the UK's largest construction project, they turned to **inBulk Technologies**.

Rugby Cement, (part of the RMC Group and now part of Cemex) approached InBulk in 2001 looking for an intermodal solution for deliveries of fly ash from the Power Station to the construction site at Heathrow. Under conditions of the contract road transportation was not an option due to congestion and environmental issues for all supplies. Rail solutions therefore had to be explored.

Previous intermodal units that were available on the market had low volumes, slow performance and residue issues, compared to road tankers and therefore not attractive to Rugby.

Following 2 rounds of trials, the InBulk design was chosen ahead of other possible manufacturers.

Forty 30' aluminium units were delivered to be employed in a continuous delivery cycle, which sees fly ash collected from West Burton Power Station in Nottinghamshire, and delivered to the multiple batching plant at the T-5 site.

On arrival by train, the ISO-Veyor is transferred to a skeletal road trailer for the final mile journey to the busy construction zone. Up to 3 times a week, the Rugby train arrives with 24 empty units. The standard EWS rolling stock provides space for two 30' units.

The ISO-Veyors are quickly and efficiently filled at the Power Station. 4 units are positioned under the silos at once. Once the hatch is opened, loading is fully automatic and controlled centrally.

Product contamination and spillage is eliminated because the product is never handled again until discharge into the final process.



On arrival at the Colnbrook Logistics centre, the Rugby train moves into the siding to allow the transfer to road vehicles. The ISO-Veyor can be moved and stacked by any existing ISO-container handling system. This can be performed easily by a reach stacker or SLT.

Once the unit is in place, a discharge hose is attached between the ISO-Veyor and the batch plant silo. An air hose from the tractor compressor is all that is required for fast, dense phase conveying at 2 barg.

On return to Colnbrook, empty ISO-Veyors are either loaded directly to a waiting train or stacked for storage.

Within hours a loaded train is ready for departure to West Burton once more.

Key figures:

- 4000 discharges (over 130 trips per unit)
- 135,000 tons of fly ash
- 1,500,000 road miles saved
- 62 times around the world!

The Fly Ash Project, illustrates several key benefits to the industry:

- Fully intermodal – Capable of any combination of road, rail or ship
- Easy to Fill – Can be filled in same way as road or rail tankers
- Easy to Handle – Standard ISO frame allows for standard container lifting equipment
- Easy Horizontal Discharge – Simple connection to 2 barg compressor provides discharge rate of 1 tonne per minute
- Provides flexible weatherproof storage and reduces dependency on silos
- Creates platform for driver controlled deliveries

Overall ISO-Veyors minimise product handling, eliminates contamination, maintains product quality and also protects environment from accidental material spillages. Taking these factors together, ISO-Veyors can significantly reduce the requirements for intermediate handling, reducing the requirements for silo construction and dramatically enhances the overall efficiency of the supply chain.



Shaw Lane Industrial Estate
Doncaster
South Yorkshire DN2 4SE

T +44 (0)1302 321313
F +44 (0)1302 55 4470

1 Redwood Crescent
East Kilbride
Glasgow G75 5PA

T +44 (0)1355 575000
F +44 (0)1355 579600

enquiries@inbulktechnologies.com

www.inbulktechnologies.com

