BULK TRANSPORTER

Carbon Footprint

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AN INVESTIGATION commissioned by the International Tank Container Organization (ITCO) into the environmental performance of intermodal tank containers reveals that they leave a carbon footprint that is almost 50% less than that of an equivalent drummed shipment on certain longhaul routes.

The study, which was carried out by the supply chain consultancy group LCP Consulting, concluded that tank containers are the most energy-efficient and environment-friendly way of moving intermediate quantities of bulk liquid materials between and within continents when the journey involves a sea leg. Tank containers were shown to be a much greener alternative than drums and marginally better than flexitanks, another alternative for moving bulk liquids. Tank containers, which are manufactured for a working life of up to 35 years, can be easily cleaned to haul a wide range of cargoes — both hazardous and non-hazardous.

A flexitank, which is authorized only for the transport of non-hazardous liquids, consists of a specially made bulk bag positioned inside a standard freight container. The majority of flexitanks are manufactured as single-trip bags.

ENVIRONMENTAL STUDY

The findings of the investigation were given in a document entitled *"Report on the Assessment of the Environmental Impact of Tank Containers Compared with other Handling Methods"*. The report was authored by Professor Alan Braithwaite, chairman of LCP Consulting, a leading specialist in customer-driven supply chain management.

LCP Consulting employed its own carbon footprinting methodology in the evaluation of the environmental performance of the alternative transport options. Called Carbon-to-Serve, the methodology was developed by LCP in 2008 to overcome gaps that were identified in other carbon emissions assessment tools and to provide a full appraisal of emissions resulting from each link in the supply chain. The methodology was applied to a range of industries over the past year to provide an evaluation of not only emissions in the context of the overall supply chain but also the options for change.

The evaluations in the ITCO-sponsored study were based on a representative supply chain between the Shanghai region of China and the Ruhr Valley in Europe and, where appropriate, the return journey. Both the tank container and flexitank considered in the study had capacities of 24,000 liters (6,340 gallons) while the drummed shipment comprised 80 drums of 213 liters (roughly 55 gallons) each loaded in a 20-foot freight container for a total payload of 17,040 liters (4,500 gallons). In addition to the delivery of the consignment itself, the LCP Consulting end-to-end assessment took into account aspects such as the manufacture of the respective container, empty leg transportation, cleaning, and waste disposal.