

BULKED UP

Transport of dry goods is usually carried out by tipping tankers. Not too much changes in this relatively conservative corner of haulage, finds Steve Banner

Switching to carbon fibre composite tanks could provide British hauliers running dry bulk tipping tanker semi-trailers with a useful payload benefit among other advantages – if only they could be persuaded to make the change. So says Adam Butters, business development manager at Spitzer Eurovac, which distributes Spitzer dry bulk tanker trailers in the UK. While composite tanks (example pictured below) are popular in mainland Europe, British operators take a more conservative approach, in his experience.

“Admittedly a 60m³ composite tanker trailer is 10% more expensive than one with an aluminium tank, but it will carry 300kg more at 44 tonnes,” he states.

The other advantages referred to include a reduced risk of internal condensation affecting the product being carried, he says. Rival Feldbinder has addressed this problem by pumping dry air through its aluminium tanks, which drives out any moist air that may be present.

Carbon fibre tanks can withstand higher internal pressures than aluminium tanks, says Butters. “We’ve had one fail at 9bar, but only because one of the lids blew off,” he says. “An aluminium tank will reach nowhere near that level.” And carbon fibre tanks can handle hotter loads than their aluminium counterparts. “They can cope with up to around 90°C as opposed to 50°C,” Butters adds.

Concerns about the reparability of carbon fibre vessels are groundless,

he says – “there are plenty of people around with the necessary skills” – and they should not require repairing all that often, he stresses, given how robust they are. “I know of one incident when a forklift truck accidentally backed into a carbon fibre tank when it was resting on the ground,” says Butters. “The forklift bounced off it.” And a carbon fibre vessel’s thickness is easy to maintain, he continues. “All you need to do is use a gel coat internally,” he says. “It’s smooth inside, with no seams.”

Despite the case he has made for carbon fibre, 99% of the semi-trailers Spitzer Eurovac supplies are equipped with aluminium tanks. It can also offer glass fibre tanks which are used to transport slurry. Steel tanks are not an option, Butters says. “They’re too heavy and just not cost effective,” he remarks.

UNDERCARRIAGE

A high-strength steel chassis could be, however. General Service can supply a tipping dry bulk tanker trailer with an



aluminium barrel and a chassis made from steels such as Hardox and Domex, says Tankquip director and owner, David Stanley. His company represents the Italian manufacturer in the UK.

“It’s €3,000 cheaper than an all-aluminium tipping tanker trailer, and the difference in weight is minimal,” he explains.

British operators, however, seem no more inclined to switch away from all-alloy trailers than they are to switch to tippers with composite barrels, he believes. They might be willing to go the composite route if a payload advantage of, say, 1.3 tonnes was on the table, he adds; but that is not the case.

The way that non-tipping trailers are constructed makes it impossible to build one with a barrel made from one type





of material and a chassis from another, adds Stanley. That is because they are of integral construction – a monocoque in effect – and chassis-less.

DISCHARGING

Tipping tankers remain popular among operators, he says, because of the ease and cleanliness of discharge. "It's not always easy to blow some of the heavier granular products out of non-tipping tankers," he observes. "Furthermore, if you are blowing out flour, then you don't want to end up blowing out dollops that are two or three months old and have got stuck."

Because the trailers are invariably tipping on hard standing, there are fewer concerns with stability than there are with tipper semi-trailers dumping waste at muddy landfills.

Proper control of the way in which product is discharged is essential, no matter what type of dry bulk trailer a company operates. Feldbinder has developed FFB Smart Silo Control Hub for non-tipping tankers. Referred to as Silo 4.0, it uses a CAN-Bus to help consolidate the mechanical, pneumatic and electro-mechanical

controls governing air distribution and conveyance of the load into a single control system operated by the driver using a touchscreen (pictured below) or possibly a smartphone app.

"The shut-off flaps, air intake, material conveyor and loosener can be attuned to one another using the touchscreen menu, and standardised unloading under unchanging vehicle settings is possible for fixed unloading sites," says the company. "The user can save the ideal settings and use them to unload at the same site in the future." That can prove invaluable if the truck's regular driver is on holiday or goes sick, and an agency driver has to be brought in.

Silo 4.0 can be linked to a telematics system so that the user can see when and where loads were delivered and the quantities involved. Geofencing can be used to prevent unloading at the wrong unloading points. Says Benjamin Ney, head of logistics at German agricultural co-operative RAISA: "Silo 4.0 makes it possible to process and send invoices within minutes."

A small number of non-tipping tankers equipped with Silo 4.0 are now on trial in the UK, transporting cargos such as cement and various lime products. A version could be developed for tipping tanks, says Feldbinder's UK sales manager, Shaun Hurst, but the tipping mechanism would probably still be controlled separately.

Feldbinder has also been busy developing automated man-lids for tankers hauling powdered loads, with the aim of reducing the risks associated with working at height and manual handling. The development means that the driver does not have to go on to the

tank top to lift the man-lid. Instead, it can be operated from ground level, with the driver remaining safely on the loading gantry while loading takes place. A seal which inflates and deflates ensures that the lid and tanker remain pressure-tight, says the company. Feldbinder Auto only adds 15kg to the tanker's weight, with no change to its overall height.

Says Hurst: "Tanker vessels haven't changed all that much over the years. The fundamental design has been pretty consistent. It's the technology that surrounds them – Silo 4.0 for instance – that has altered."

DELAYS

In the aftermath of the COVID-19 pandemic, transport companies are having to wait many months before the trucks and trailers they have ordered arrive, thanks to a shortage of components, materials and labour.

Spitzer has plants in Germany, France and Hungary, with most of what Spitzer Eurovac imports sourced from the French factory. "We're working on 12-month lead times," says Butters.

Producing trailers for stock is not really an option. "Each of our customers wants something slightly different, so everything Spitzer produces for us is bespoke," he says.

General Service is doing somewhat better, reports Stanley. "We're looking at delivery in around seven or eight months," he reports. Prices are rising, but so far Stanley's customers have not been affected too severely. "We've seen an increase of no more than 5% over the past year," he says.

Says Feldbinder's Hurst: "Our delivery times are typically around eight or nine months, although we may be able to supply some models a little bit earlier." He agrees with Butters that there is little point in building for stock; most operators in the sector have precise requirements that could not necessarily be satisfied by a stock tanker. **TE**

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