Tank repair - time to speak a common language?

Would a common approach to repair estimate coding bring benefits to the tank container industry as it has already done for the dry freight sector?

In the late 1980s, the ISO CEDEX (Container Equipment Data Exchange) codes were established as a common electronic language for container operators, lessors, surveyors and depots. The launch of CEDEX created a universal "dictionary" to translate different items on a repair estimate, as well as the movement of equipment into and out of depots, into a standard format, enabling data to be transferred by EDI between the different parties and their varying computer applications.

The concept was that anyone receiving a coded estimate could easily understand exactly what the damage was to which part of the container, along with the estimated cost and time of repair. With a few notable exceptions, CEDEX has since been widely adopted by the global dry freight container community, helping to automate the transfer and authorisation of repair estimates and reducing duplication of data entry and human errors.

Because container owners now compare "apples with apples" through a common repair estimate format, proponents say that CEDEX has reduced the need for inspectors to manually sample estimates and enabled the development of more automated tariff checking. As well as streamlining day-to-day operations, the industry's decision to adopt this common language has also allowed container owners to improve their control and understanding of estimate pricing, with larger business benefits.

Tank benefits

But although CEDEX codes already exist for tank containers, this sector of the industry has so far failed to adopt any common approach to repair coding. Why is this and is it now time to revisit the issue of a universal coding system for tank containers?

Intermodal asset software provider Real Asset Management (RAM) is one supplier that believes the tank container industry would benefit from moving more to a common coding approach. The company, which supplies business management software both to the dry freight and tank industries, says that it sees a large discrepancy between the two sectors over the coding issue, with cost and efficiency implications.

"At present, we feel that the lack of standard coding is hindering some customers when it comes to the maintenance and repair of tanks," says RAM's managing director Keith Dolby. "Unless the client pays for bespoke EDI links with all the relevant depot systems, repair data has to be entered manually, which, of course, results in errors when large amounts of data are involved.

Tank containers have around 1,000 individual components, but CEDEX could generate enough codes to cover all the requirements

"While RAM is happy to provide this bespoke development, the reality is that many smaller tank organisations will put this issue on the back burner and miss out on key benefits. This is not what we want for our customers, but unfortunately the issue is out of our hands."

"RAM's Repair4000 system produces valuable data, such as how often repairs are carried out, the average cost of each repair type and which depots are the most cost effective. We would like to see our tank customers get the same benefits from Repair4000 as our container customers and believe that the lack of a common coding platform is currently hindering this," says Dolby. He argues that the industry as a whole would benefit if it could work together to define and agree upon universal tank coding. "It would enhance the flow of data, not just for our customers, but all tank operators, lessors and depots."

Complex issue

One of the issues that inevitably crops up when broaching this subject is the greater complexity of tank containers compared with dry freight boxes, particularly in the area of valve design. Valves have a large number of replaceable components which would all have to be given a unique character or numerical reference.

Moreover, universal coding would have to include information on valve type (top and bottom valves are not interchangeable), manufacturer and spares cost according to make of valve. This is not something that CEDEX has to do for dry freight boxes, where there is no differentiation between manufacturers - a panel is just a panel.

But none of this presents an insurmountable problem, observes John Evans, managing director of John Evans International (JEI). His company offers a number of different computer-based solutions for managing repairs and surveys, including hand-held units for inputting data in the field.

"While tanks are of course more complex than dry freight boxes, averaging up to around 1,000 individual components, CEDEX could generate enough codes to cover all the requirements," Evans says.

And the complexity of tanks pales into insignificance next to reefer containers, which have up to 35,000 individual components differing from manufacturer to manufacturer, making it simply impossible to uniquely identify all the parts.

"From a mathematical perspective, there are certainly enough combinations in CEDEX to uniquely identify all tank container components and damage codes required," confirms Evans. Whether these can all be presented in a mnemonic way, however, is not quite so clear. As Evans points out, many of the dry freight CEDEX codes can be interpreted pretty easily by a layman (PNL for panel, for instance), improving the system's ease of use. Could the same be achieved with a component on a Fort Vale footvalve?

There are also some common practices in tank estimate reporting that do not exist in the dry freight sector, such as the use of the "clock face" diagram to indicate location and type of damage on dished ends. Whether such an established and practical approach could continue to run alongside a universal code is another question.

Some tank companies, particularly those with mixed leasing fleets, have already decided to adopt CEDEX. Says Colin Rubery of leasing company GE SeaCo. "We pretty much use CEDEX. Some years the odd tank slips through, but generally the system works just fine," he says.

CEDEX can be quite complex, he confirms, and depends on the ability of the estimator to use the right codes. GE SeaCo uses a combination of 30 damage codes and 30 repair codes.

All estimates are about money, of course. "What we are interested in is the total cost and who is paying. These codes help determine where the costs are going to be allocated," adds Rubery.

Lack of agreement

But while CEDEX is used by some individual companies, it is the lack of common agreement to use this (or any other) coding system as an industry standard that is the real issue. Some observers maintain that the higher margins that have been enjoyed in the tank container sector as a whole, from depots upwards, have helped to accommodate the *status quo*, with less financial and operational pressure to tackle this as an industry-wide issue.

By contrast, the dry freight sector had more of an incentive to weed out fundamental process inefficiencies. As Evans points out, computer technology when CEDEX was first launched was far less advanced than now, so there was a real benefit in minimising the amount of data being transferred by using common codes. This is not such an issue today.

But leading players like Stolt Tank Containers (STC) will need some persuasion to move away from their dedicated systems, in STC's case its Webhub network. "We work with 120 depots globally and they all use our system; we are not considering changing," the company says.

RAM, for one, argues that a distinction needs to be made between the coding issue and the systems issue. It says that moving to a common coding platform would not preclude individual companies from using their own management systems. However, it would enable the development of a clear common language, rather than the current *lingua franca*, that could support the creation of a common EDI platform or be in-

tegrated within bespoke management systems.

Depot difficulties

Where do the depots stand on this? Because there is no common coding system, repair depots often have to run multiple systems - their own, plus their customers'. Chris Preston, director of UK-based Haztank comments, "Depots have their own systems that they have developed individually. These don't integrate with the owners' systems and so every tank is entered twice." Haztank has a basic DOS-based system that, says Preston, "does what it does," that is, to show where the tank container is in the depot and allow invoices to be created.

Haztank finds the double-entry approach an annoyance and would prefer to have one system, but wonders whether a single system could manage both the simplified information needed by the repair depots and the often quite detailed data demanded by leasing companies. "Leasing companies' software is often complex and can be slow, especially when you are dealing with the USA or China," he notes.

Koen van den Broeck, head of Van Loon's repair department in Antwerp, argues that one of the main challenges is that staff are increasingly being eliminated through redundancy. "In the past, we used our own estimates and faxed them to the owners," he states. Now, however, Van Loon is required to go into other companies' bespoke systems.

But for any system to work properly, each individual who deals with it must be capable of entering and deciphering the data. Van den Broeck believes that technical competency has declined in many companies, leading to an increased lack of understanding regarding tank repair issues. Because the operators are no longer updating their data, he argues, interpretation of tank repair codings has declined, leading to delays in getting authorisation for any required work.

As van den Broeck notes, costs to repair depots have also risen because they are now responsible for entering details into their customers' systems. "This is an added cost to us," he says.

And inaccuracies can easily occur with, for example, more containers actually located in a depot than are indicated on the operators' software when different people are using different systems to try and enter the same data.

From the repair depot's perspective, accurate pre-advice is also needed to ensure that any tank container gets properly placed since demurrage charges can apply if a container gets put in the wrong stack. A good way of working, feels van den Broek, is to have a baseline estimate and a lump sum price agreed in advance. Then any repairs up to that baseline price could be agreed and repaired without any further action. "This approach works well and can speed things up," he comments.

"There is a need for change but we cannot just destroy our own system since our invoicing passes through it," notes van den Broeck. Preston agrees: "Depots would want to know who is going to pay and not everyone is bothered. We could make more use of an integrated system. But for it to be effective it would probably be expensive."

Many systems today are based on the old Sea Containers approach, where there was a 47 point repair estimate. For example, code 17 means "corroded" and since estimation needs to be quick, this works very well. "As long as everyone knows that code 17 means 'corroded' we are nearly there. What we don't want is a system that has code 21 as 'corroded' because that's where mistakes and confusion arise."

Data presentation

The other challenge facing any system - whether bespoke or off-the-shelf - is how the data should be presented. The use of "shorthand" codes undoubtedly speeds up a surveyor's work when estimating damage in the field. However, the increased lack of detailed technical knowledge highlighted by Van Loon would seem to indicate a danger that numerical codes could be misinterpreted, leading to queries and misunderstanding over estimated costs to repair any damage.

From this perspective, any unified approach to coding could only benefit the tank container repair system as a whole provided it enabled data to be input in clearly understood and agreed codes that could be translated on estimates and reports into brief plain language statements for use and authorisation by non-technical staff.

To meet the diverse needs of all parties, any universal system would also have to be capable of providing detailed data for the operators and lessors that could be hidden and not accessed by the repair depots, since they need more limited data combined with the ability to properly invoice clients. It would also need to provide a high level of security to ensure data integrity and may need to be web-based.

However, the current reliance on bespoke systems may carry the seeds of its own destruction because the original computer coding and programming that goes into these systems is designed to meet individual needs that may no longer be relevant. The high cost of maintaining bespoke systems, especially as the size of any connected database grows, increases rapidly in terms of updating and maintaining the hardware and software and also in terms of staff training.

Ultimately, this may be a key driving factor behind a change from individual bespoke systems using their own coding, duplicated at every tank repair depot, into a single unified code structure. The process would definitely need to be facilitated by one or more industry organisations, such as the International Tank Container Organisation (ITCO) or the Container Owners Association (COA). Certainly, the backing of the Institute of International Container Lessors (IICL) was a key factor in creating industry unanimity to get CEDEX up and running in the dry freight sector.

But two other key factors also drove the rise of CEDEX for the dry freight industry. The first was a champion, in the shape of Transamerica Leasing. The second was a clear commercial opportunity, in the shape of the industry EDI communications system created by Mark North through Cedex Services International.

The question now is: will a similar combination come together to further the cause of a common language for tank container repairs? ❑

Tank repairers could derive major benefits from a common approach to component and damage coding (Picture courtesy Hoyer)