Managing the risk

There are millions of dollars of lost revenue every year in the marine petroleum shipping industry caused by cargo handling losses and subsequent claims. Craig Wall, *Operations Manager, Petrus Cargo Assurance Services, provides a step-by-step guide to how the implementation of an effective cargo assurance usage policy can help.*

The dollar value of oil and products that are produced and traded globally every year is astronomical. No one knows the exact amount or value, but whatever the figure is it will be more than some countries' gross domestic product (GDP).

As an industry, the shipping sector accepts without question that significant revenues will be lost due to a combination of handling and measurement errors. Maritime insurance companies charge significant premiums for taking on this risk. A few of the more pro-active companies are trying to reduce the risk by offering lower premiums when a cargo assurance usage policy is used, but most are not.

For each custody cargo transfer operation carried out via shipping activity there is an accepted loss threshold before any type of investigation is carried out by an insurance company. These thresholds are usually:

- Transit from load to disport – 0.15%
- Generic load/discharge – 0.3%
- Ship to ship (STS) transfer – 0.5%

As a result, a minimum of 0.3% of the cargo is factored as handling loss and written off by most traders in their profit and loss (PnL) calculations for each generic trade. And these calculations don't even begin to consider how much cargo and revenues are lost as a result of contamination, delays (demurrage) or handling error. For the major oil producing and trading companies, the actual losses could run to hundreds of millions of dollars every year.

So, where does all this 'lost' oil go? Well, most is never really physically lost – the phenomenon is caused by incorrect or improper measurement in pipelines, shore tanks, oil tankers etc. There are certain areas of the world where misappropriation is an issue; however, at Petrus, we believe that the overwhelming majority of losses are due to measurement and handling errors. The losses are mainly 'apparent' rather than 'real' – in other words, they are 'paper losses'. And the good news is that a substantial margin of this loss can, in fact, be reduced by cargo assurance.

If used effectively, cargo assurance not only pays for itself but adds significant value to business
Source: Petrus

What is cargo assurance?

Put simply, cargo assurance is pro-active operational risk management. The principal risks in question are lost revenue from cargo discrepancies, time losses, off-specification quality, cargo claims and misappropriation (rare, but it does happen) that can run into millions of dollars every year, even for small traders.

Most oil companies employ risk managers who concentrate in detail on the very important aspect of financial risk and exposure associated with the terms and conditions (T&Cs) of their contracts. In some companies, however, the operational risk is not always assessed in sufficient detail or given the same level of importance – yet they both have significant commercial implications. In-house cargo assurance personnel can be extremely valuable in this respect. Indeed, that is why major oil companies such as BP have large cargo assurance departments who assess risk and appoint cargo assurance companies accordingly as a matter of routine.

More and more oil companies (not just the majors) are beginning to understand the importance of reducing their operational risks in order to add significant value to their business. To do this they are appointing external specialists to reduce their risk and, if they are prudent, using the lower risk to reduce their cargo insurance premiums, thus potentially adding even more value.

To put this into context, a typical 50,000-tonne cargo of gasoline is worth some $50mn. Accepted cargo losses for a standard load/discharge operation is 0.5%, which is the equivalent to 250 tonnes, or $250,000. Typical marine cargo insurance policies do not pay out until losses are substantially over the 0.5% level. Thus, the immediate exposure to the PnL is very real. In addition, the cost saving by expediting operations can also be significant. For example, an STS operation is performed at a vessel hire cost of approximately $30,000/d. By expediting the operation and avoiding delays, each 12-hour period saved in time has a direct cost saving of $15,000.

So, it is clear that, if used effectively, cargo assurance not only pays for itself but contributes directly to the bottom line of each trading PnL, adding significant value to business.

Assessing risk and exposure

The easiest way to assess risk is by performing a historical review of trading deals. This can be done confidentially by an outside contractor or, alternatively, by in-house software that tracks losses and claims and should highlight problematic areas. If a particular location or type of operation is regularly producing

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losses near or over the industry accepted loss, then action needs to be taken.

By employing a professional cargo assurance company with a proven pedigree there is a very good chance of reducing potential losses and claims, particularly in areas of the world where the technical skills base may not be adequate. A cargo assurance company representing a client will assess their operational risk and make recommendations on the best way forward to reduce the risk and thus financial exposure. The appropriate action will be discussed and decided upon in conjunction with the client's operations department.

A qualified superintendent will be assigned to the operation. The superintendent, dependent upon his remit, can supervise all aspects of operations from cargo sampling, analysis and cargo measurement through to document issuance, thus ensuring that cargo inspectors, vessels and terminals all conform to industry guidelines, comply with required procedures and are operating in a client's best interests.

Superintendents are skilled professionals with many years' experience and in many cases have been employed as either senior cargo inspection managers, ships officers or chemists. They are treated with respect in both the marine and terminal environment due to their level of knowledge, experience and authority as the direct 'on-site' representative of their client. As a result, operations that require a more authoritative approach and detailed understanding of operational and commercial criteria – such as terminal audits, cargo blending, cargo tank cleaning, additivisation, STS operations and off-specification cargo treatment – are usually monitored by superintendents.

A cargo assurance company is often requested to monitor operations that have a high financial exposure or are in locations which are well known to all within the business as being more prone to operational difficulties and high losses than others. In the event of a claim situation, either through losses or cargo contamination, the company can be called in by various parties (such as underwriters, insurers, charterers and vessel owners) to review all available information. A representative will usually fly direct to the vessel and/or terminal to perform a full investigation. This person will then work closely with the relevant legal team to assess, analyse and help draft a report suitable for litigation purposes if necessary.

Same old problems

Any experienced ship operator will relate to the fact that most problems they encounter are of the same nature year after year – inappropriate sampling, inaccurate cargo measurement, temperature issues, density issues and so on. All of which can result in significant loss in revenue.

We believe that many sectors of the industry involved in cargo measurement – including, but certainly not limited to, cargo inspection – have a number of understandable and inherent difficulties that can contribute to the above issues. These can be summarised as follows:

- Economic restrictions result in moderate income levels for basic (rather than senior) personnel, which means these positions are more suited to young single men.
- Working hours can be long and unsociable.
- The work itself, such as shore tank measurement and quantification, can be physically demanding. If you don't believe how hard it can be, then try climbing several shore tanks at 3am in the rain and wind when you are over 40 years old and you will appreciate why so many personnel leave for 'nine-to-five' professions that have better economic prospects and are based in cosy warm offices.
- As with all such industries, the above conditions often result in a high turnover of staff, which can impact company performance. This makes retaining a fully-trained workforce a very challenging and frustrating task for the hard-working operations manager.
- Cargo measurement is a very important commercial aspect of the business as it directly affects revenue. However, due to the working conditions and economic limitations as outlined above, many companies supplying the personnel have a high turnover of staff. It takes many years to develop all the key skills required to be a professional in any industry, and cargo inspection is no exception to this. In all sectors of our industry, we recognise that without a stable and experienced workforce we will not retain personnel with the full complement of training and experience to perform their function to the highest level. Such personnel require careful supervision at all times.

As a former senior cargo inspection manager myself, I understand and sympathise with the limitations of cargo inspection companies and all other sectors involved in cargo measurement. There are some excellent personnel working hard 'in the field' but, unfortunately, there are still too many who have yet to reach the highest technical level – and therein lies the main and ever present problem.

Petrus Cargo Assurance Services
2nd Floor, Curzon House
24 High Street, Banstead
Surrey SM7 2LJ
t: +44 (0)1737 329200
www.petrus-cas.com