

Is it time for dedicated energy tracking?

It is complex to track energy savings because no single department or person in the liner organisations is responsible for the total energy costs today. Might that change?

By Sales & Marketing, MCI Tinglev

An interesting observation has been presented to us by customers on occasions: Energy savings, whether as a result of efficient reefer units, low tare weight with resulting lower bunker consumption, or even good box insulation, are difficult to get credit for or even monitor because no single department within the liner operations is today responsible for the total energy consumed.

Typically, energy savings and CO₂ reductions occurring on board vessels are the responsibility of the 'vessel operations department', where as in the terminals it is part of the terminal department's responsibility, and intermodal movements (by rail or truck under genset power) is looked after by the land based operations department.

In many cases, the operator or owner of the container does not pay directly for the power consumed, for instance, when loading reefers onto slot or alliance partner vessels and terminals not owned or operated by them. In many cases, the shipper or consignee pays the inland pre and post carriage.

Nonetheless, the cost differences depending on the energy efficiency of the unit are there, no matter who pays for the individual parts of the transport. The same applies to carbon emissions - as 'CO₂' does not care who pays...

Someone suggested maybe it is time for a 'reefer energy/CO₂ emissions tracking department' - or a Chief



Reefer weight is one important objective when talking energy savings - others are minimizing the customer's idle time and ensuring more nautical miles per dollar by optimum bunker operations

Energy Officer - a new kind of "CEO" within the liner operations department? At MCI, we find the idea very refreshing as it would stress the importance of focus on both Total Cost of Ownership and carbon footprint reductions.

In our regular meetings with shipping lines, it is becoming clear that while cost reductions are very important - and a major reason why some shipping lines are doing better today than a few years ago, when freight rates were at the same level as they are now - carbon footprint reductions are very much on their agendas too.

Shippers and consignees are increasingly demanding carbon footprint transparency. The annual "Environmental & Sustainability" reports become more and more detailed. For some large companies, they have grown in content and size equalling

40-50% of the annual financial reports.

In the words of General Electric (GE) CEO, Mr. Jeffrey Immelt at the Energy 2.0 conference, in the Massachusetts Institute of Technology: "Environmental thinking is no longer the purview of isolated, far-left thought. It is now a mainstream economic discussion. It is pervasive in almost every country in the world..."

In this edition we are pleased to give you insight into how the implementation of SuPoTec® (Sustainable Polyurethane Technology) has led to sustainable decrease of CO₂ emissions. Finally, a glimpse of where our Star Cool service people conduct training sessions around the world.



SuPoTec® leads to substantial

It was not an easy change in the production process, but already in 2010 the new insulation foam SuPoTec® led to huge environmental improvements in the MCI Sustainability Report. 2011 will be the first full year with SuPoTec® in MCI Qingdao.



In 2007 Maersk Container Industry had a greenhouse gas emission of 313 kgs of CO₂ equivalents per 1,000 USD turnover. In just three years, this number has fallen significantly to 136 kgs of CO₂.

The impressive environmental improvement was reached just in the last 10 months of 2010 – and is due to one major change in the MCI production in Qingdao, China: The innovation of the new CO₂ neutral insulation foam

SuPoTec®, which is now used in all MCI reefer containers and all Star Cool reefer units.

“At MCI we are committed to environmental change, and with SuPoTec® we have taken a huge step towards a more sustainable future. We know that climate changes are an important issue globally, and we as a global company want to lead the market in change and innovation on this front, too,” explains Project

Manager Mr. Henrik Madsen from Maersk Container Industry.

“From now on all our customers are contributing to environmental sustainability as SuPoTec® is the only insulation foam we use. This makes our product more expensive to produce, but we rest assured that our customers are happy to follow our commitment towards a more environmentally friendly reefer business,” he adds.



decrease in CO₂ emissions

Insulation foam for reefer machines requires the use of a cell gas. Traditional cell gasses like HCFC141b contain Ozone Depleting substances and adds to Global Warming as well, but the environmentally friendly insulation SuPoTec® (Sustainable Polyurethane Technology) complies to the Montreal Protocol by stopping the use of HCFC-gasses to avoid ozone depletion potential (ODP). It also reduces the global warming potential (GWP) per unit by 630 kgs of CO₂ per kg cell gas to near zero.

Logistically it has not been an easy change for MCI. 141B is a simple liquid and very easy to handle, while the new insulation foam is based on a flammable liquid and therefore can be highly explosive during the processing. This means that MCI has had to reengineer its production process entirely in the area of the production where the new insulation foam is handled.

"It is not a normal working environment and therefore we have put a lot of focus on training, safety procedures and safety equipment. The overall key point has been to change the mindset of everybody involved in the production process, so the understanding and work along the new rules," explains Mr. Stephan Teepe, Technical Director in MCIQ.

"The implementation was a big challenge, because it was done while the production was still running. Now after more than one year into handling SuPoTec® none injuries or accidents related to SuPoTec® are proved," he adds.

MCI acknowledges the fact that it was a risky decision to change to SuPoTec® once and for all, but the challenge paid off. Today customers are now placing their orders specifically because of SuPoTec®.

SuPoTec® supports MCI's enduring effort to find environmentally sound solutions that has become a trend in every industry today. Just to comply with current laws is not enough, as laws and customer expectations constantly change. MCI wants to go beyond compliance with environmental laws, to strive for reducing the environmental foot print along its value chain and to assist in helping customers and suppliers to meet environmental goals.

Now we can put hard facts on the table and prove that our environmental friendly ambitions have proven right. For us the work with SuPoTec® has been an eye-opener – hopefully our customers will appreciate this as much as we do.



The successful line off of Star Cool unit no 50,000 was a new milestone in the history of Star Cool. The unit was for our loyal customer Hanjin Shipping, a world-leading shipping company based in Korea. January 27, 2011, we held a ceremony at the Star Cool factory to celebrate Hanjin's constant support.

Mr. OM Kwon from Hanjin, MCIQ's management team members and all Star Cool employees joined the ceremony, and Mr. Jens Peder Hansen, Director of Star Cool production, made a short speech and gave Mr. Kwon a souvenir model of a Star Cool unit.



 **HANJIN SHIPPING**
Beyond the Ocean



Training in every corner of the world

In 2010 alone Maersk Container Industry delivered service training to almost 900 people in 27 countries – and the company doesn't hesitate to leave the beaten track to keep its products running in a small, secluded port.

Sometimes it takes a significant amount of patience to get to the location where a technician or service provider needs training to handle the containers and reefer products from Maersk Container Industry properly.

At one time one MCI employee had to cross borders in South America by a small boat, because the bridge had been washed away. And another time it took days to get out of a location in Dutch Harbour in Alaska where the training took place under harsh weather conditions.

And at other times the location itself just doesn't seem to be anywhere near major shipping routes or important ports. Over the last year alone MCI has trained personnel in exotic locations like Pakistan, Myanmar and Mauritius. Often training here is much appreciated, because the local repair service often has not been offered any proper training from the reefer manufacturers.

"We want to help our customers keep their MCI products running smoothly in every corner of the world. And we want to act as a responsible company pulling up the service level wherever our presence is needed. Therefore it is important for us to leave a meaningful footprint in even the smallest or most exotic location where training is also needed," explains Peter Tanner, director of Global Service at MCI.

"We are proud to help raise the service level and keep the repair work on local hands. At the same time we get a closer connection to the service provider, helping us build a stronger and more flexible relation in the future," he adds.

MCI has a total of 270 service providers. In 2010 the seven different Star Cool instructors had 59 training seminars with 889 students in 27 different countries. The 889 students represented 226 different companies or branches of companies.

In some situations Star Cool instructors don't only leave a footprint – they also take something back home. That was the case in 2007 in Ecuador where one instructor met his future wife on a sightseeing trip after a training session.

