implico

Success Story

ConocoPhillips Refinery Optimizes Forwarding

Wilhelmshavener Raffineriegesellschaft: OpenTAS for All Means of Transport

The petroleum industry is faced with continuous change at a global level on account of restructuring and mergers. In order to remain competitive, forwarding centres, refineries, and tank farms require modern, integrated systems. Wilhelmshavener Raffineriegesellschaft mbH (WRG) was aware of this development, and has introduced OpenTAS, a state-of-the-art loading system. The oil refinery, which is part of the ConocoPhillips Group, now uses tank trucks, rail cars, and ships for supplies, using this solution for terminal authorization and administration.

Originally WRG worked with various IT solutions for the three forwarding sections. These old systems had to be replaced because they no longer met the latest legal requirements, maintenance of the hardware used was becoming ever more expensive, and it was not always possible to enhance the existing software. Also, working with heterogeneous IT was very prone to error and slow, and caused extensive care and maintenance. As a result, WRG had a comprehensive analysis of the present status carried out in 2004 with the objective of receiving documents enabling us to issue an offer to tender.

"We established that most of our problems are in the administrative field", says Michael Kley, IT Manager at WRG. "That is why OpenTAS of Implico was our favourite."

Together with the founder and managing director of Implico, Helmut Butzmann, Kley inspected the OpenTAS installation at the Holborn refinery in Hamburg – and after that, the decision was made: "Implico provided exactly the sort of experience we needed: namely, experience in the administrative field." And it is this strength which now enables WRG to handle forwarding in all three forms of transport in one overall integrated system.

Tank Truck Loading

Loading at WRG is executed mainly via tank trucks. On average, 150 tank trucks per day load petroleum products of WRG. This field is accordingly sensitive for the success of the refinery. That is why Implico and WRG first introduced OpenTAS in the tank truck section, not least because the support of the previous system was unsatisfactory and frequently resulted in problems.

OpenTAS was initiated at the first loading platform in May 2007. Conversion of the other platforms was executed successively until September 2007, when all ten loading platforms were then operating with the new system.

Delivery of goods via road transport is now made fully automated using OpenTAS. The driver of the tank truck completes all steps of the loading process himself, from the compartment disposition to the printing of the delivery notes. OpenTAS then transfers the delivery data online on the onboard computer of the truck. This means that the driver has all essential information immediately available: the volume loaded specifying the respective compartment, density, and temperature as well as various time stamps of the loading process. This includes, for example, entry, duration of loading, and the exit time.

These innovations provide decisive benefits: there is no requirement for the lengthy entering of data of the delivery note into the PDA or board computer, which was also prone to error. This means that the quality of data is much higher. Also, the driver can leave the refinery premises much faster in his tank truck than up to now. Another special feature of the new system is the complete link of the card reader and measuring value recording system Accuload and Microload of the company FMC Technologies.

Many procedures have changed significantly as a result of the automation. "This was difficult for many of our

staff“, says Kley, “everything happened quite quickly. However, thanks to the outstanding support from Implico, the introduction was very successful.“

Another challenge: since conversion was made step by step during operation, the old tank truck system and the new OpenTAS solution were operating in parallel during this period. Conversion was made without any restriction to ongoing forwarding.

Railcar Loading

The next step was the introduction of OpenTAS to the railcar sector. The first track was initiated in October 2007. At the start of February 2008 WRG started the fourth and final track. Introduction was also executed here without any restriction to ongoing operation of loading. Among the various improvements in this section is that liquefied petroleum gas mixtures can be loaded, since OpenTAS includes such special features on the transport documents of liquefied gases.

Thanks to OpenTAS some process steps are also automated for forwarding via railcar at WRG. For example, release of the loading volume or acceptance of the measuring data from the weighing machines. These were re-calibrated prior to introduction, and then integrated into the OpenTAS system. New controls were also introduced in form of Siemens S7, and integrated into OpenTAS. Measuring data from the technical systems is accepted by OpenTAS and used for further processing. This means that WRG is able to optimize the administration in the rail car section and execute maximum exploitation of the loading facility capacities.

Ship Loading

The greatest challenge for the experts at Implico was in the ships section: handling of the extensive processes involving the preparation of the required loading documents. Automation here was not necessary. „Relatively little data ensues from the 70 ships we load each month,“ explains Kley. “However, they actually cause a sea of paperwork. In order to handle this, we needed a purely administrative solution.“ This was achieved via OpenTAS. All forwarding steps concerning planning, disposition, and bookings are now made uniformly in OpenTAS.

Conclusion

“Cooperation with the experts at Implico was very positive at all times. We now have the advantage of a good and functioning support system. OpenTAS also secures observance of the latest legal regulations, especially in the field of accounting,“ says Michael Kley, IT Manager at WRG looking back on the development. “If I had to execute such a project again, I would not keep the entire project management in our company, but transfer this to Implico. This would have saved us various coordination problems between different suppliers.

OpenTAS is now running, and we have a highly integrated overall system via which we can handle goods delivery with all three forms of transport. The times when we had different systems for each section are finally over.“

With OpenTAS, WRG is now ideally equipped for the future and competition, on all three forwarding routes: road, rail, and water.

implico

www.implico.com

ConocoPhillips

Wilhelmshavener Raffineriegesellschaft mbH (WRG)

WRG has a crude oil processing capacity of 275,000 b/d, placing it in the top 10% of refineries in Europe. Located in Wilhelmshaven on the North Sea coast of Germany, the company benefits from a deep-sea port. WRG is one of the youngest refineries in Europe and has excellent levels of safety and reliability. WRG produces more than 170 different kinds of petroleum products and supplies countries throughout the European Union and North America.

Implico

As an international consulting and software company, Implico has been helping customers from different industries with the optimization of their business processes for more than 40 years.
Projects are being implemented with comprehensive industry know-how as well as in budget and on time.
Implico offers professional, integrated consultancy and implementation services from one source.