

Electrical Heat Tracing - The Successful Transport Of Liquified Products

The transportation of various products maintained at different temperatures has become a critical part of the supply chain process. The need to have specified temperature parameters has significantly increased over the past few years.

Containers that carry glucose, oils, bitumen acids, molten sulphur are a few of the products that are transported over long distances. These containers that include tankers must load, transport and deliver various products within specified temperatures.

Bitumen for example must flow freely from the relevant storage containers to the point of application; however due to its high viscosity, it is notorious for blocking pipelines and causing delays.

Electrical heat tracing (EHT) has emerged as a vital component of the temperature maintenance process, enabling organisations to regulate heat in containers within specified parameters. For example, to ensure that bitumen continues to flow freely over long distance, the temperature within tankers must be maintained at 120 degrees Celsius.

Explains Frik Van Dyk, Engineering Manager at eltherm South Africa, an EHT specialist: "The EHT cabling is attached and insulated on the outside of the tankers – each installation is designed and engineered to perform as per customer requirements. The cable generates heat over the surface of the container which in turn heats up the product inside the container.

"The system has temperature controllers and sensors that will regulate the product within pre-set parameters. The EHT system is also powered by a generator which is mounted on the tankers or alternatively an external supply is provided if the container is parked."

The installation of an EHT system on tankers can offer many important benefits. In the case of bitumen, reheating often burns the product which leads to unwanted carbon build up and blockages which can result in a sub-standard substance.

The weight of fuel powered tankers can weigh in excess of 700kg – 1500kg. This additional weight has an impact on fuel costs. An EHT system is low maintenance as no flues need to be replaced. With its low system weight and ability to maintain heat during stationary time, due to an external power supply, there is relatively no standing time, which makes this method of heating tankers very efficient.

An EHT system offers optimised control. Depending on the system the customer chooses to install, the drivers can monitor the temperature and adjust it if necessary. Also, the product and the system temperature can be monitored and logged over a period to ensure it is maintained and insurance coverage is in place.

This form of temperature regulation and control is used extensively in the shipping industry which transports various products between countries. In Europe for example, the use of EHT systems on containers have become commonplace over the years with significant success; it is now an invaluable part of the transport process.

In South Africa the market is also enjoying significant growth. Andrea Hector, GM of eltherm South Africa concludes: "We're going through an exciting growth period; organisations are realising that to safely maintain their liquids and materials during transport they have to employ an effective heat regulating system – EHT offers a safe, cost-effective and reliable option.

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