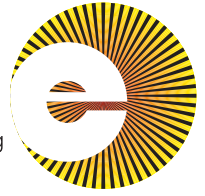


Application Report

Heating of a white sugar silo

eltherm[®]
innovations in heat tracing



Electrical heat tracing – in the application of heated sugar silos

Modern electrical heat tracing technology plays a decisive role in many different types of industrial production and construction and building. Like a complex white sugar silo. More than just a routine project, but no problem for our engineers.

Essential for dry sugar crystallals

One of the main uses of heating cables is to prevent the system from condensation water. In most projects vessels, containers, tanks or pipe systems are heated. A project which is more than a routine is the heating of a white sugar silo in near east.

For eltherm it is not the first sugar silo, but again this application is a special challenge for the eltherm employees. eltherm engineers calculated the heat loss and suitable electrical heating system.

Dimensions of the sugar silo:

- height 38 m
- diameter 40 m
- Capacity 40,000 tons

eltherm Products in this project:

- 12,000 m heating cable
- end termination technique
- measurement and control
- 10 heating circuits
- central configuration and control via Modutronic
- the whole system is controlled via profibus interface by a central control room
- installation at site
- supervision of eltherm technician

The eltherm philosophy:

"We are in the business of developing heat tracing systems"

eltherm's range of products for production of heat tracing systems combines high quality heating cables and components with individual systems. As a manufacturer of heating cables with a comprehensive range of resistance heating cable PTFE, FEP and PFA, self regulating heating cable, measuring and control devices and accessories eltherm advises its customers in the planning phase already. This ensures that all the heat tracing equipment is exactly tuned to the whole system, and that the system meets the specification and the some times extreme requirements.

Beyond this, eltherm also offers complete systems, built in close cooperation with the customer, for use in other markets, like automotive or petrochemical industries.

One of manifold applications of eltherm heating cable

- Sugar Silo



- Control Cabinet



Source: eltherm Projekte 2005

No danger of condensation water

eltherm equips sugar silo in the near east with heating technology from Burbach

ch Burbach. The structure of refined sugar is crystal with fine or even finest granulation.

To 99.9 percent it consists of saccharose i.e. a sweet substance which can be dealt with very well. When the final product, made of sugar cane or sugar beet, gets damp it can not be used any longer. Therefore near eastern refinery counts on the high-tech from Siegerland. At present the Burbach company eltherm Elektrowärmetechnik GmbH equips a huge sugar silo with heating techniques, to avoid arising of condensation water and thus the agglutination (sticking together) of sugar crystals.

There is a flat country side with fields as far as you can see and with a bright yellow construction crane and a round huge silo just in the middle. This silo towers up to exactly 38 meter with a diameter of 40 meter. Its capacity is as much as 40,000 tons. By mid October the construction site is expected to be finished. Then the silo will be stocked with white sugar. A large scaled heating cable construction of many kilometres on the surface of the exterior wall and a control system provide constant temperature in the silo. Thus the quality of the stocked products can not be affected by the condensation water, according to Peter Schmidt who is the technical manager for this project. For him the sugar silo is more than just a routine. He is very pleased that

this silo reference project will show customers abroad how competently complex problems can be solved.

The company was founded in 1991. On the one hand the specialist for heat tracing systems manufactures heating cables, heating tapes, heated hoses, heating mats and heating jackets which meet most industrial requirements in construction and building. Every year more than 2,500 km of Teflon cable leave the shop floor in the industrial area of Burbach. On the other hand eltherm is a service provider for electrical heat tracing systems, how Marketing Manager Rolf Th. Viehmann calls it. Chemical industries, engineering and installation plants, environment and waste water or container and vessel constructions: Basically we try to respond to four questions of our customers. How can you protect from frost? How can you hold temperatures e.g. in sugar silos? How can you supply heat? And how can you transport media under certain temperature conditions. Adds Mr. Viehmann. The answers for these questions are given by the 50 employees of the Burbacher enterprise mainly by the R&D-Team consisting off four persons.

Sufficient incoming orders occupy the research and production departments very well.

Steady growing is the target of the Burbach activities. "To achieve this we focus on three main items", explains the Marketing Manager. The company invests permanently to increase productivity. In 2001 the production area with a new hall was enlarged up to 2300 m². In 2005 the machinery has been renewed and completed. This costs eltherm 1.3 million €. Furthermore the Burbach Company tries to extend the export rate of 40% permanently and to find new markets abroad for which the sugar silo in the near east is a good example, according to Rolf Th. Viehmann. Last but not least eltherm enlarges continuously its value appreciation of all process levels. The silo is an object for successful presentation as well. Meanwhile we can realize everything starting from development via construction up to assembly with subsequent service and at the same time we earn our living.



eltherm: "The specialist for electrical heat tracing systems"

Eltherm Asia-Pacific Pte Ltd
33, Ubi Ave 3, #08-11, Vertex, Tower B
Singapore 408868
Tel : +65 6634-9100
Fax : +65 6634-9101
Website : www.eltherm.com
Enquiry email : apsales@eltherm.com