KnaufAlcopor saves £50,000 with ABB energy survey

APPLICATION NOTES

APN-Kna-0802

A massive saving in energy costs is being achieved by a Liverpool based thermal and acoustic insulation manufacturer, following the installation of ACS 607 drives from ABB.

- 20% reduction in energy consumption
- Payback in 12 months
- Improved reliability
- Increased production

Insulation manufacturer KnaufAlcopor is saving £50,000 in energy per year since installing ABB AC drives from Drives Alliance Partner Central Electrical

Problem

KnaufAlcopor Ltd (formerly Owens Corning Alcopor UK) is the UK leader in the manufacture of products for thermal and acoustic insulation and fire protection. From 4 plants across the UK, the company supplies a range of glass mineral wool, rock mineral wool and extruded polystyrene insulation products under the Crown®, CrownRocksil® and Polyfoam® brands.

Two drives control the speed for the fans in the forming section. These provide suction underneath the forming conveyor as part of the overall insulation manufacturing process.

An upgrade was essential, as the existing drives were over ten years old and had become unreliable, requiring frequent maintenance. Being less efficient than modern drives, they were also wasting energy and money. As a result of this, the system needed updating to increase the lifespan of the existing machinery and to reduce running costs.

Equipment:	**Equipment: Three ACS 607 drives**
Savings p.a:	**£50,000**
Payback:	**12 months**

APPLICATION NOTES

Solution

An energy audit of the plant by ABB Drives Alliance Partner, Central Electrical, revealed that a complete overhaul of the existing motors would deliver significant energy savings. This was done by cleaning and renewing the bearings on the motors extending the life span for a further 5 years with running hours of 40-60,000. The installation of three ACS 607 drives from ABB resulted in improved reliability of the forming section, with less downtime, increased production and reduced energy consumption by 20%.

The process starts with molten glass running through an electrically heated brushing, flowing into a fiberising machine spinner. The spinner rotates at 2,000 rpm and glass strands are formed through holes on the outer wall.

The fibres are then sucked on to a conveyor with suction provided by the forming fans. The final manufactured product is either slab or roll formed mineral fibre insulation product.

Closed loop control is provided, by measuring the suction with a probe and pressure transmitter.

Benefits

Ricky Hill, Maintenance Leader for KnaufAlcopor commented: “We received a complete solution from Central Electrical including ABBs ACS 607 drives. The equipment has improved the process reliability with added benefits of 20% saved energy and running costs.”

By using insulating material buildings can save energy and lessen their environmental impact

The cost savings were immediate, KnaufAlcopor is saving £50,000 worth of energy per year, since replacing the existing variable speed drives on its insulation conveyor with new DTC controlled drives from ABB. Payback time was only twelve months for the system.

Using a variable speed drive is the most energy efficient way of controlling fan speed. This is because the power requirement drops off rapidly with decreasing speed. Running the fan at 80% speed, for instance, only requires 50% of the power, compared to running the fan at full speed.

Variable speed drives is one of the categories on the Energy Technology Product List, qualifying for Enhanced Capital Allowances due to their capacity to save large amounts of energy. It is estimated that if variable speed drives were to be fitted to all motors in the UK, over 500,000 tonnes less carbon dioxide could be produced annually.

To find out more about ABB Drives Alliance, visit: www.abbdrivesalliance.com

For further information on how an energy survey can save you money, call us FREE on ***0800 783 7491****, or fax back the coupon below. Alternatively, you can send an email to* ***enquiries@gb.abb.com***

FAXBACK

☐ Please send me more information about how I can save energy at my plant

☐ I would like an ABB representative to contact me to discuss energy savings

Name **Job title**

Company

Address

Postcode

Tel **Fax** **Email**

Your details will be held on a database and we may send information later about special offers and other products of likely interest to you.
If you do not want to benefit from this service, please tick here: ☐

Please fax your form to **020 8667 9426**; or mail to:

ABB, c/o Mill House, Wandle Road, Beddington, Croydon, Surrey CR0 4SD