



"The Rockwool treatment": insulating a roof

"Mineral wool is a gift from nature" explained Jen Deelstra, Plant Manager at Rockwool Lapinus. "Millions of years ago the Earth was a ball of fire. Lava erupted from the depths of the planet, solidifying to form the rock we call basalt. Even as long ago as the beginning of the 19th Century, Geologists found that native inhabitants on Hawaii were

Rockwool invests in KAESER systems

Mineral Wool – A Gift from Nature

Rockwool Lapinus B.V. is a Dutch company based in the district of Limburg. Part of the Rockwool group, the company operates true to its slogan 'for now and for the future'. As part of this philosophy particular attention is given to the efficient use of energy, resources and to caring for the environment.

using a natural variety of mineral wool as an insulation material for their huts."

Industrial production of mineral wool began in Europe after the Second World War and today's Rockwool Group emerged from the Dutch company Hoogovens' activities in Ijmuiden, Netherlands and Hedehusene in Denmark.

Not Just an Insulation Material

In addition to being used as an insulation material in the construction industry, mineral wool has also been developed for a wide range of other applications including: use as a culture medium for plants e.g. tomatoes and peppers, to enhance paint cohesion, for pipe insulation applications, to replace asbestos in brake pads and clutch plates, for use in head gaskets and car bumpers and is made into mineral-fibre acoustic insulation boards. Mineral wool doesn't just have excellent insulation properties; it is also extremely resistant to fire, is sound absorbing, water repellent and completely harmless to humans and the environment.

"The environmental aspect is of particular significance" explains Jen Deelstra. "The energy saved by the insulation material throughout its lifetime is approximately one thousand times greater than the amount required to manufacture the mineral wool in the first place."

Low Speed Airends Provide the Perfect Solution

Approximately 1000 employees in Roermond manufacture the entire

range of Rockwool products on ten production lines. They also prepare waste and used plant culture mediums for reuse in the fibre manufacturing process. Decentralised compressor systems provide the operating and control air.

In mid-1998, a fire destroyed the compressor installation on the "Rockfibres" production line.

As Jen Deelstra explained "Reliability, efficiency and durability were the main attributes we were looking for when sourcing the new replacement system. We were aware that the finest fibres, as produced in the "Rockfibres" line, are able to get into sealed bearings and can lead to considerable wear in systems operating at high speed. However, KAESER provided the perfect solution with low speed direct drive airends running at 1500 rpm. The efficiency and the large volume of cooling fluid are further advantages of the compressors".

The new compressor system comprises two DSD 141 rotary screw compressors, a TD 367 refrigeration dryer, two micro-filters and two air receivers (3000 litres wet, 6000 litres dry).

Start-Up Even in Sub-Zero Temperatures

The combination of a closed primary loop with 50% glycol content and an open secondary loop of softened well-water enable the water-cooled compressors and dryer to be started from standstill even in sub-zero temperatures by just using the primary loop. Once the primary loop is warm enough, the second-



Production lines require large quantities of air

ary loop is filled and activated; a pre-filter chamber for the inlet air reduces the compressor system's exposure to dust.

However, due to an increase in air demand and a request for additional operational reserve, it soon became necessary to further expand the compressed air installation. Therefore, a DSD 201 KAESER rotary screw compressor and a SIGMA AIR MANAGER (SAM) 4/4 were commissioned to provide the required extra capacity and control.

± 0.2 bar of 7 bar after air treatment. The "Rockfibres" production line normally consumes 19 m³/min (671 cfm) of air, but, due to production demands, this figure rises to approximately 45 m³/min (1589 cfm) for around 18 hours per week.

One Good Thing Leads to Another...

Positive experiences with the direct drive rotary screw compressors at the "Rockfibres" line lead to the

The SAM precisely controls the compressed air for the production process which is so dependent upon constantly maintained pressure. Even with fluctuating air demand, the SAM's pressure band control ensures a constant operating pressure within

installation of additional KAESER compressor systems at Rockwool Lapinus B.V. This decision was due to the low energy running costs of KAESER systems, their low maintenance requirement and high availability (100 percent/ 4000 operating hours per year).

A DSD 141 rotary screw compressor and a downstream energy saving SECO-TEC TF 171 refrigeration dryer, both cooled by a water/glycol mixture due to the high dust content of the air, provide the compressed air for the "Raw Materials Production" line.

Situated in a separate building complex, the "Rockpanels" line manufactures fire resistant, water vapour permeable cladding panels. Their stable structure and almost

unlimited colour possibilities offer architects a versatile and attractive material ideal for the construction of building facades.

Air for the "Rockpanels" production line is provided by a DSD 201 and a DSD 141 rotary screw compressor, whilst an SK 19 acts as "watchdog" during the weekends and is mainly used for spray painting applications. A refrigeration dryer and a combination of filters ensure the required compressed air quality. All KAESER compressed air systems installed at Rockwool Lapinus B.V. are maintained as part of a servicing and maintenance contract by the Hengelo based company Gietart who have represented KAESER in the Netherlands for many years now.



Rockwool's Roermond plant

With almost 7200 employees worldwide and 22 production centres in 22 countries, Rockwool is established as a world leader in its field. The company produces mineral wool based products and has an annual turnover in excess of Euro 1 billion.



Recycling plays a key role in Rockwool's philosophy