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ENERGY SCAN HELPS COMBAT HEAT LOSS AND EMISSIONS AT DSM COATING RESINS

Targets related to energy consumption and reduction of CO₂ emissions are driving more and more companies to seek an insight into their energy efficiency. Bilfinger Tebodin offers just that in the form of its Energy Scan, including a thermogram of live production areas. A recent scan at DSM Coating Resins could result in cost-effective measures that reduce gas consumption.

DSM Coating Resins in Waalwijk, the Netherlands, supports the coating industry with resins that allow the manufacture and application of sustainable coating technologies, such as water-based, powder and UV-curing coatings. By constantly investing in technologies that expand the potential application of sustainable technology, DSM is making a significant contribution to the transformation of the entire paints and coating industry, helping to move towards a sustainable future.

For the coming years, DSM has committed itself to ambitious targets regarding energy efficiency, says Beerd Volkers, who is responsible for plant improvement DSM Waalwijk: 'As part of the strategy to make our plants more sustainable, we are taking every opportunity to make improvements. In order to identify possible gains we brought in our long-term partners of Bilfinger Tebodin to perform an analysis. Their proposed

method resulted in a series of quick wins and investments that we are currently exploring.'

THERMOGRAPHIC INFRARED SCAN VISUALIZES ENERGY LOSS

The Energy Scan that Bilfinger Tebodin performed included a thermography measurement of the DSM installations and piping. This measurement identified a total of 320 MWh in the plant's total gas consumption. By improving the insulation of the pipes and installation, the plant could minimize heat loss while reducing annual CO₂ emissions by approximately 56 tons.

Energy Scans such as these can play an important part in making all kinds of plants more energy efficient, says Bilfinger Tebodin's Roel Tolle: 'In any production area where hot liquids, steam, condensate and gases are transported, optimization of insulation can

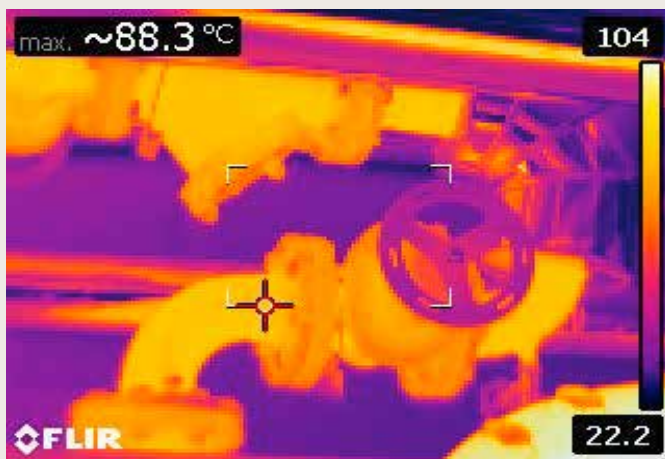
make a big difference in reducing energy loss to the environment. Our Energy Scan adequately charts this energy loss and helps to find an easy solution to save energy.'

'The first step with regard to energy saving is reducing the heat demand. Reducing heat losses by means of applying or improving the thermal insulation of equipment and piping is often a quick-win solution. A thermographic infrared scan is helpful in order to quantify these heat losses and the energy saving potential when insulation is applied,' continues Roel.



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Images of thermograms at DSM Coating Resins Waalwijk.

ENERGY SCAN RESULTS IN CLEAR RECOMMENDATIONS FOR IMPROVEMENT

What happens in the thermographic infrared scan is that a thermographic camera is equipped with an optic for infrared and a detector that analyzes the wavelength.



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The readings are presented in a so-called thermogram, a visualization of heat leakage in the insulation and thermal bridges of piping, fittings and equipment. Finally, the heat losses and energy saving numbers are summarized in a report, along with recommendations for improvements.

Beerd Volkers of DSM: 'The insulation scan that was carried out by Bilfinger Tebodin fits perfectly in our strategy to make our plants more sustainable. Bilfinger Tebodin brought in the knowledge of doing the scan and identifying places in our installation where unnecessary loss of heat occurs. This has been very insightful and we are

very satisfied with the quality of the report that has been presented. At this point quotations have been requested from suppliers and most of the suggested improvements will be implemented.



Beerd Volkers
Process Engineer bij DSM Coating Resins.