



Company News

Ajax Screw Conveyor enhances Handling at Johnson Matthey

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Bolton, United Kingdom -

Solids handling equipment specialist, Ajax Equipment, has supplied speciality chemicals and sustainable technologies company, Johnson Matthey, with an inclined screw conveyor and chute sections to enhance the handling of a catalyst material at temperature.



(Picture: ©Ajax Equipment, Inc.)

Since the screw conveyor is operating at an incline, the machine includes a range of features to ensure effective material transfer and mitigate any material fall back. The conveyor's flights were manufactured in a smooth finish of stainless steel as material testing by Ajax indicated this would provide better slip and material transfer than mild steel. In addition, screw geometry was selected with flights that compensate for the angle of operation. To limit the impact of material fallback on effective transfer, each section of the screw conveyor's covers has a special profile.

Commenting on the project, Johnson Matthey engineering project manager, John Lowe, said, "It was a delight to work with Ajax Equipment on the transfer system upgrade at the Johnson Matthey Clitheroe plant. Ajax's vast knowledge and expertise in transfer systems was essential to ensuring the correct equipment was specified for transferring the powders.

"Initially, we requested Ajax to develop an inclined screw conveyor that would transfer low density powders, at up to 100°C, at a minimum rate whilst deaerating the powder. During the design process alternative thermal expansion joints were required, which Ajax worked closely with us to develop. Ajax then incorporated their designs into our 3D models which provided a useful visual representation of the installation. The meticulously designed equipment ensured perfect installation within the very limited plant space available.

"The new inclined screw conveyor has been installed on plant for over 8 months and has performed amazingly. Ajax delivered on every expectation we had."

Following on, Eddie McGee, managing director at Ajax Equipment, commented, "Material characteristics, plant layout and equipment and process requirements are just some of the factors in designing solids handling equipment. Ajax's engineers work with our customers to ensure all these needs are considered.

"For this project with Johnson Matthey, the design of the screw conveyor and chutes had to fit in with the plant's current layout and a planned future layout which would introduce a new elevator. Knowing this, Ajax was able to ensure the conveyor's design would meet the level of productivity required in either layout."