Biogas Industry

Roto pumps since 1968

SUCCESSFULLY IMPROVED OPERATING EFFICIENCY OF A BIOGAS PLANT IN UK

RMAB692 PUMP TRANSFERRING DIGESTATE RETURN (MAIZE AND SUGAR-BEET) WITH 8% DISSOLVED SOLIDS
Duty Point : 60 m^3/hr @ 10 bar

CONTINUOUSLY RESOLVING FLUID PUMPING CHALLENGES OF BIOGAS INDUSTRY

Globally, Roto Pumps is known for providing the finest PD pumping solutions for more than 25+ industries. We never back down from addressing new fluid pumping challenges and constantly improved our product portfolio. The company takes pride in its ability to efficiently handle more than 5,000 fluids.
Biogas is one of the leading industry in European countries. Most of the biogas plants face challenges of finding the right pumping solutions due to highly viscous and solid laden media. Therefore, requiring highly robust, reliable and efficient fluid pumping solutions.
We at Roto Pumps have a rich experience of supplying hundreds of PC pumps in the Biogas Industry and have come across various challenges in transferring fluids. This enabled us to innovate, upgrade and develop customized Progressive Cavity pumps in accordance with Biogas Industry. Recently, we have delivered newly launched Biomix Pumps, upgraded RB Series and VB series pumps. Also, we have successfully filed patent for Roto Kwik-quick maintenance in place pumps.

THE PROBLEM

The biogas plant was facing the following issues in transferring maize and sugar beet digestate return:

a) Pump was not able to achieve the desired flow rate, therefore reducing the operating capacity of the Biogas Plant.
b) Repetitive damage to Pump internal components i.e. Pin & Bush joints resulting in downtime.

ROTO SOLUTION

After visiting the customer site and understanding the application challenges, our technical team suggested to install the RM series pump and advised to operate it at lower operating speed to increase the flow rate while retaining the same 30 kW motor. We have installed the pump in record 3 days time which is a feat in itself as a huge building structure needs to be dismantled to replace the existing pump. To ensure longer life of coupling joints, we have used Universal Cardan Joints in place of the Pin & Bush joint for saving the regular maintenance cost of the customers. Also, retaining of the same motor enabled the customer not to spend any money on electrical connections. The customer was very pleased with the pump performance and hence given us one more order of pump replacement in digestate feed.

APPLICATIONS OF PROGRESSIVE CAVITY PUMP IN BIO GAS INDUSTRY

- The pumps are used in feeding highly viscous bio-waste slurry to fermentation tanks
- Recirculation of fermentation tank slurry and feeding to digestate storage tanks
- Progressive Cavity Pump helps in mixing bio-waste with the digestate slurry
- Transfer digestate to the bio-mix unit and open lagoon
- Transferring organic manure from the open lagoon to tractors

RM Series Pump

Performance Range

Flow Rate: up to 500 m^3/hr
Pressure: up to 48 bar

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