

# Pioneering Precision

## AZO's Innovative Solution for Biodegradable Pellet Production



### ● Introduction (Problem)

In the realm of eco-conscious manufacturing, where sustainability and quality intersect, a company, which we'll keep anonymous, has been leading the charge. They specialize in producing biodegradable pellets, a vital additive for eco-friendly plastic bags and film products. Their challenge? To optimize their production process by introducing an inline mixer that could seamlessly pre-mix a powder and liquid before entering the extruder. In this article, we'll uncover how AZO stepped up to provide an innovative solution for this forward-thinking company.

### ● The Company and Its Industry

Our story centers around a pioneering company dedicated to producing biodegradable pellets. These pellets play a crucial role in the manufacturing of environmentally friendly plastic bags and film products. This industry is at the forefront of sustainability, and precision is paramount in their production process.

### ● The Challenge: Streamlining the Mixing Process

The challenge at hand was to find a way to efficiently mix a powder and a liquid before introducing them to the extrusion process. This pre-mixing step was essential to ensure the consistent quality of the biodegradable pellets. The customer was looking for a solution that could handle this Poly application seamlessly.

### ● The Process Evaluation

AZO, known for its expertise in materials handling and mixing solutions, suggested the use of their Mixomat inline mixing unit. While the Mixomat is typically employed for blending different types of pellets before entering the extruder, it isn't commonly used for powder applications. However, after careful consultation and consideration with AZO's experts, it was deemed a suitable choice for this unique project.

## ● **Material Assessment Studies and Lab Trials**

To validate their proposed solution, AZO conducted lab trials at their test lab in Germany. These trials yielded highly promising results, providing the assurance needed to move forward with the Mixomat inline mixing unit.

## ● **Engineering Considerations and Achieving Precision**

During the design phase, the team had to work out the precise timing of adding the liquid in the mixing process to achieve the desired consistent blend. Additionally, a small quantity of another minor liquid needed to be incorporated into the process. These trials were completed successfully, leading to a mix that was then subjected to the customer's production process, where it proved to work exceptionally well.

## ● **AZO's Role as Installation Supervisor**

AZO continued to provide support during the installation phase by offering installation supervision. Their expertise ensured that the solution was implemented effectively and efficiently.

## ● **The Transformative Results**

Following the successful startup of the system, it has continued to operate seamlessly for the past five years. There have been no quality issues, and downtime has been minimal. The success of this endeavor has been so profound that the customer is now eager to purchase another duplicate system for another facility, highlighting the trust and satisfaction they have in AZO's solutions.

In conclusion, this collaboration between AZO and the biodegradable pellet industry exemplifies the power of innovation and problem-solving in the pursuit of sustainability. By addressing the unique challenge of pre-mixing powder and liquid, they have set new standards for quality and efficiency. While the name of the company remains undisclosed, their success story with AZO stands as a testament to the possibilities that emerge when industry leaders come together to solve unique challenges and promote a greener future.