

I.A.D. PROJECT

INTRODUCTION

Welcome to my project, "Designing Traps for Vibrating Bowl Feeder." In this solo endeavor, I explore the world of object design using Autodesk Inventor and gain insights into the critical aspects of industrial processes, specifically focusing on vibratory feeding systems.

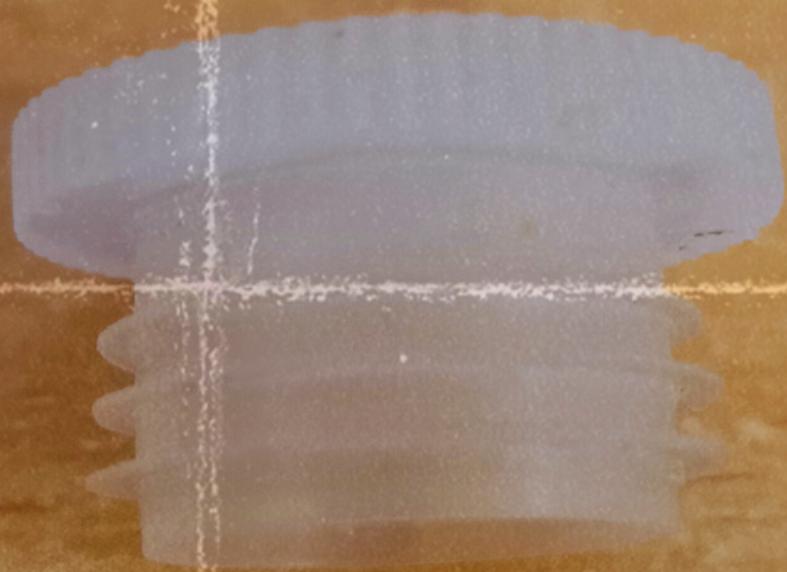
DESCRIPTION OF THE PROJECT TASK

This project is a solo exploration of designing objects with Autodesk Inventor. The primary objective is to grasp the intricacies of vibratory feeding systems, a key element in industrial automation. By addressing real-world challenges, I aim to enhance my skills in designing efficient and effective solutions.



SELECTED ITEM - PUSH CAP FOR TUBES

A push cap for tubes is used to seal and protect the open ends of tubes in various industries. It prevents contamination, ensures the containment of tube contents, aids in transportation, and is commonly used in laboratory, medical, and manufacturing applications.



POSSIBLE ORIENTATIONS OF THE ITEM



01. Base-on-bottom

02. Top-on-bottom

**03. Base-faced-
Forward**

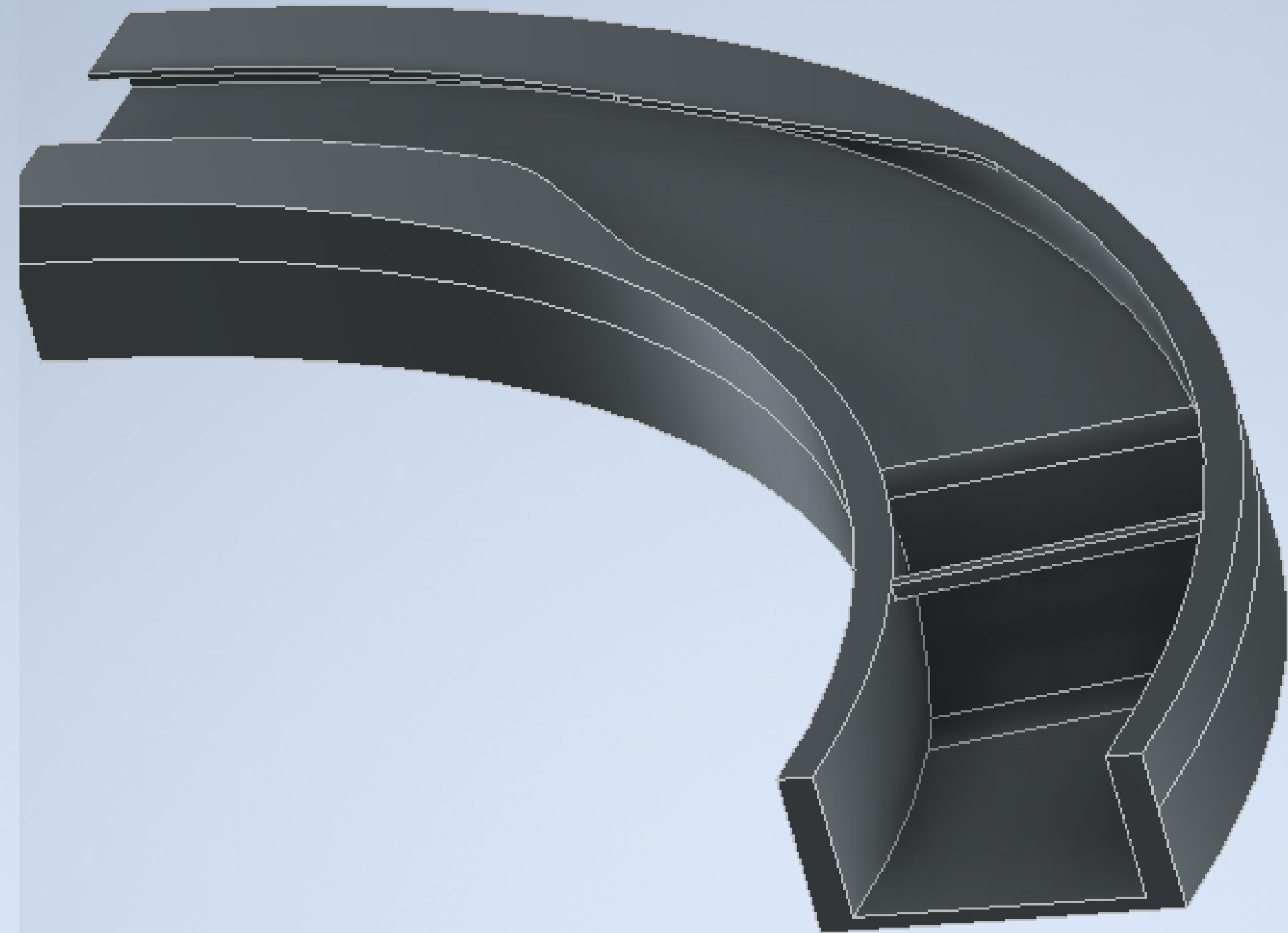
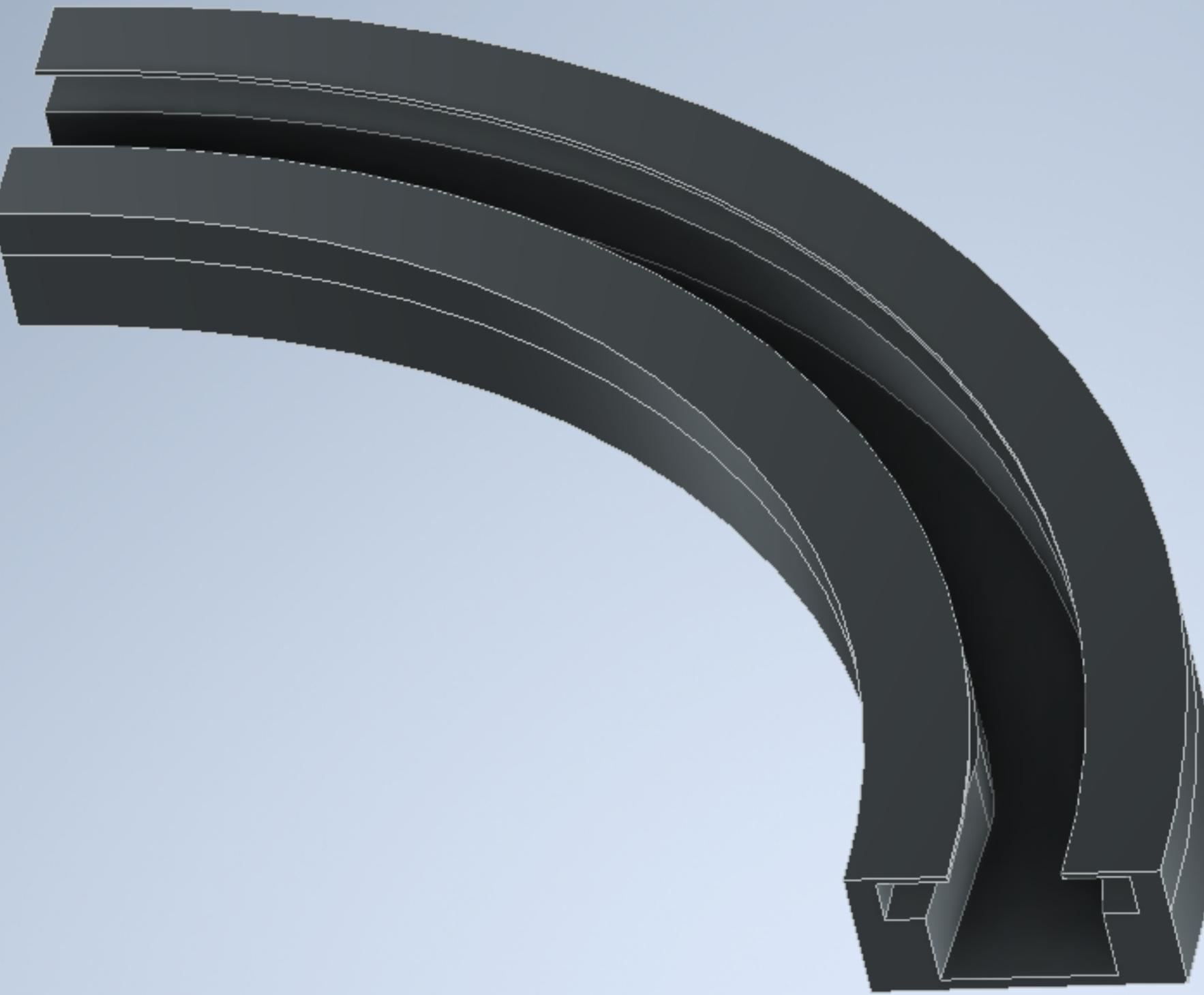
**04. Top-faced-
Forward**

CHOICE OF ORIENTATION

After careful consideration, I've selected orientation - 'Base-on-bottom' based on factors such as efficiency, assembly requirements, and compatibility with downstream processes



DESCRIPTION OF TRAP DESIGN



DESCRIPTION OF TRAP DESIGN

I've designed three traps for the push cap tubes:

1. The first trap flips push caps to either a top-on-base or bottom-on-base position.
2. The second trap collects all push caps oriented with the bottom-on-base.
3. The third trap flips push caps from a top-on-bottom to a bottom-on-base position.



OBSERVATIONS

The design process involved overcoming challenges such as designing, dimensional accuracy and smoother path and implementing solutions for an effective trap design.

CONCLUSIONS

This solo project has provided valuable insights into designing objects using Autodesk Inventor, with a focus on vibratory feeding systems. The chosen orientation and trap design demonstrate success and offer lessons for future improvements.



THANK YOU!

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