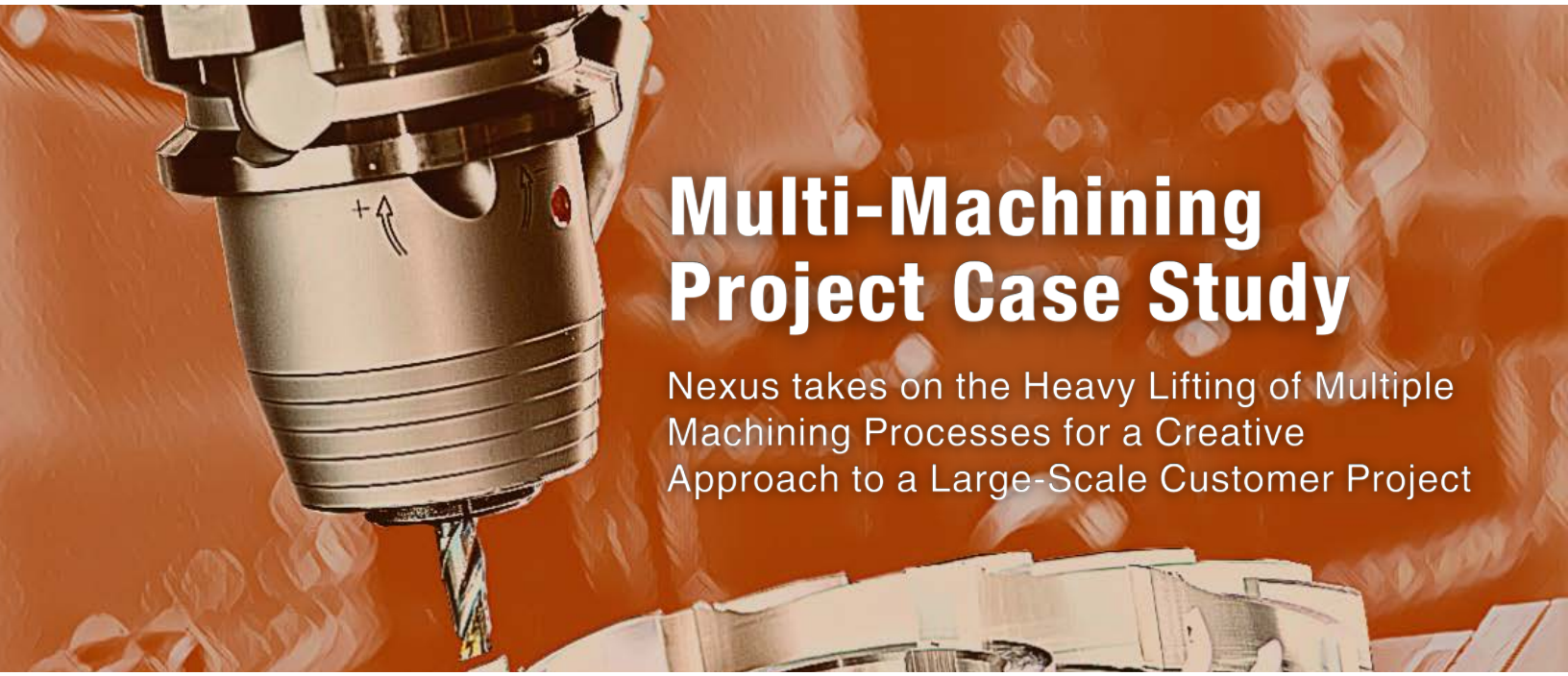


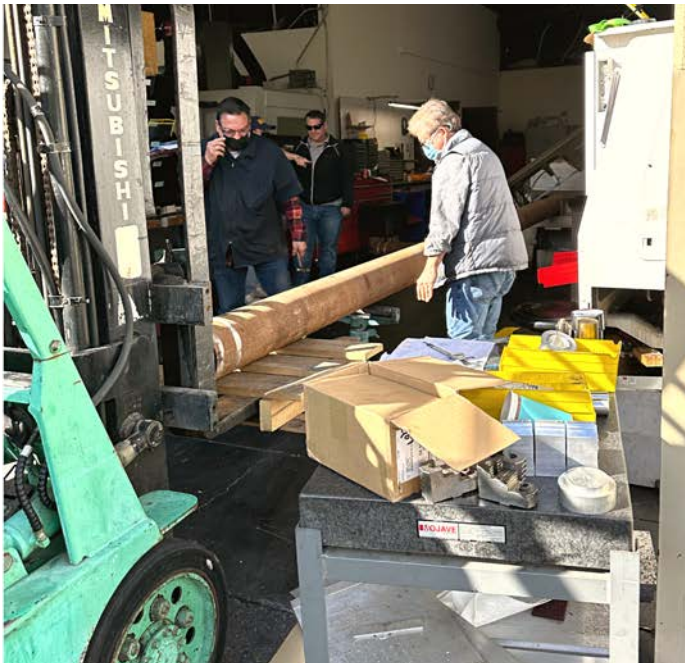
Multi-Machining Project Case Study

Nexus takes on the Heavy Lifting of Multiple Machining Processes for a Creative Approach to a Large-Scale Customer Project

01 The Challenge

A customer had a request for Nexus to produce a large part that required multiple machining processes. The material provided by the customer was a very heavy steel that came as one long rod weighing almost two tons. It took two forklifts to remove the rod from the delivery truck.

Not every shop can deal with staging and manufacturing such heavy parts or has the machines to handle these weights. After assessing the material for machining, the team built special tooling in order to support a heavy rotating mass without vibrating.



The 2-ton heavy steel rod transferred to our facility

Some of the cut steel rod rounds stock

02 The Process

The first step was to cut the steel rod into rounds stock to work on. Going from the rounds to finished parts would have required 35 tool changes on the lathe alone with opposites on both ends (ID and OD),

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Parts partially through the lathe process

03 The Result

With Nexus having EDM services in-house, the final part cut details could be added faster and with greater precision.

This bespoke and rapid production approach is an example of the creativity Nexus brings to the manufacturing process for unique customer requirements and the value of the multi-machining capabilities we offer.

About Nexus Automation

For over ten years, Nexus has provided custom machining, assemblies, components, automation, and design services for the exacting needs of innovative startups to Fortune 10 companies in the automotive, aerospace, medical devices, and consumer electronics industries.

that needed different outer and inner diameter tools.

The changes would have been a slow process to complete all in the lathe, but to speed up machining to meet the customer's timeline, our technicians put the lathe chuck on the CNC mill as a fixture in order to mill some of the features.

Additionally, instead of broaching for grinding accuracy, the piece fine feature details were finalized in the EDM to produce the degree of precision required.

The lathe chuck on the CNC mill as a fixture

A view of a completed part