

ENGR262 Lab – Tours

Name: Sean Lai

Tour Site: Ascentec Engineering

Tour Guide First Name: Chris

1. What type of work does the company do? Include both area of manufacturing (machine shop, casting factory, foundry) and industry sector (aerospace, defense, healthcare, microelectronics)

Ascentec does manufacturing work for the aerospace and semiconductor industry. They do design work as well, mostly for jigging and work holding for parts in their production lines. They also do extensive quality control since their parts need to be done to very tight tolerances.

2. Who are the customers that this company serves?

Ascentec serves primarily aerospace and semiconductor manufacturers and others who need precision machined parts. They mostly machine aluminum, which is a key material in the aerospace industry.

3. What manufacturing techniques does the company employ?

Ascentec uses a multitude of 4 and 5 axis CNC mills and CNC lathes to machine parts. They're unique in the industry for doing regular probing of parts during machine to hold the tight tolerances their customers require. They also have a clean room for preparing parts for the semiconductor industry where small amounts of dust can compromise manufacture of microelectronics. Ascentec also does extensive QC on all of their production lines to ensure that they are meeting the dimensional accuracy requirements of their customers.

4. What are some examples of finished products?

The products coming out of the Ascentec shop are mostly parts for the aerospace industry, and parts used in other machines that manufacture semiconductor products. Both industries require very high levels of precision in their parts. We saw some very large pieces of aluminum plate being machined into some sort of structural component of a machine used to make microelectronics.

5. What is something you learned on the tour and would like to learn more about?

I would like to learn more about the jobs of their process engineers whose primary task is to design the workflows and processes to have the parts manufactured accurately and efficiently. I am also interested in more details about Lee's job as the first QC stop gap on the floor of the shop.