

Process Engineering Internship Report

By Aaryan Sonawane

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Who Am I?





Introduction:

- Name: Aaryan Sonawane
- School: Rensselaer Polytechnic Institute
- Major: Aeronautical Engineering Class of 2025
- About me: I am big into sports. Cricket, Soccer, and Basketball are some of my favorites. Along with that, I really enjoy video games and watching movies.







Projects:

- Palomar 8000i wire bonding programs (RFLO)
- Fixturing (AIM IRAD)
- UID Label Creation (APR-39, RFLO, AIM)
- Laser Marker Programming & Fixturing (SEWIP II)
- Bond Pull setup (All products)
- Process Documentation updates & redlines



<u>RFLO Programming:</u>



Tasks Completed:

 Programmed 1 mil ball bonds of the entire LO1 assembly onto the Palomar 8000i Wire Bonder



- Being Detail oriented
- Read RF assembly drawings
- Proprietary programming













Tasks Completed :

• Designed two unique fixtures for support AIM SMT Testing Procedure

- Inventor
- Tolerance stack up analysis
- Turning theoretical into actual



UID Label Creation:



Tasks Completed :

- Reviewed RF outline assembly drawings
- Created 2D matrix labels using BarTender Designer software for avionic parts using Format 6 and 12 from ISO/IEC 15434

- BarTender Designer software syntax
- Organization of the data into machine readable form
- Review according to Standard



Laser Marker Programming:





Tasks Completed :

- Programmed SEWIP II outline drawings onto the Laser Marker
- Created standard work instructions on how to program the Laser Marker

- Read Drawing Notes
- Programming of Machine
- Work cross functionally



Nordson Dage Stellar 4000 Setup:



Tasks Completed :

• Set up the desired output file based upon feedback from Quality and Operations

- Working cross functionally
- Making sure output is user friendly
- Iterative learning and understanding the inputs of the machine
- Partnered with operators for success



Process Documentation:

Tasks Completed :

- Found out differences between current company painting procedure and the military standard
- Drafted a procedure to incorporate the use of stamps for Operators, Testers and Inspectors
- Wrote a procedure explaining the programming of .dxf files into machine readable form for the Laser Marker within the plant

- Clear concise instructions
- Work across language barriers (pictures)
- User friendly output
- Strong documentation is required

What Did I Learn?





- I learned that working cross functionally gave me greater insight on how to solve problems
- I would've liked to spend more time at the Testing Lab upstairs
- The least engaging part of my internship was shadowing people

What Could Be Improved?



- I think the communication between IT and the employees has serious room for improvement
 - Took me ~2 weeks to get access to Inventor and AutoCAD



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What's Next?



- I'll start my senior year of Aeronautical Engineering in the fall. I am excited to finish my degree and work on a real world capstone project.
- Post graduation, I intend on joining the work force for a couple years and then moving onto getting my MBA.



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