

Spring Project Plan

The breakdown of the work that needs to be done next semester for the completion of the project is shown in the Gantt chart below.

SD Team 507 Spring Project Plan										
	1/7-1/31	2/1-2/28	3/1-3/17	3/18-3/22	3/23-3/31	4/1-4/17	Apr. 18	4/19-4/28	4/29-5/3	5/4
Receive Press & Accessories	█									
Install Accessories		█								
Create CAD Models for Accessories			█							
Design Holding Mechanism for Shafts				█						
Test Press Process for Assembly					█					
Send Assembly for Testing						█				
Calculations for Grip & Adjustments							█			
Develop Work Procedure								█		
Modify and Update Designs/Procedures									█	
Finalize w/ Sponsor & Academic Advisor										█
Engineering Design Day										
Finals										
Graduation										

Receive Press and Accessories

The pneumatic press, the shield, the press controls, and the table have been ordered and are expected to arrive at Danfoss during winter break. These items will be gathered and placed in the workstation at Danfoss.

Install Accessories

Setting up the workstation involves attaching the press to the table, attaching the shield to the press, and installing the press controls that will only allow use of the press when the shield is closed.

Create a CAD model for Accessories

To design the workstation a CAD model of the press, the table, and the shield will be created to test workstation layout options.

Design Holding Mechanism for Shafts

An attachment to the press may be needed to hold the shaft in alignment with the sleeves during the pressing procedure. The team will work with the machinist at Danfoss to design a soft tooth chuck that will hold the shaft in place without damaging the shaft.

Test Press Process for Assembly

Once the workstation is assembled with the press and accessories, the team will test the press procedure. The tests need to show proper alignment between the shaft and sleeves, that there is no damage to the parts or press, and that the assembly is axially symmetric. If any defects are present in the press procedure the team will need to modify alignment fixtures.

Send Assembly for Testing

After the shaft has been completely assembled the assembly will be sent to be tested at Danfoss. The results from these tests will be discussed with our sponsor and will determine the overall success the project or if modifications need to be implemented.

Calculate the Strength of the Shrink Fit

The team will calculate the pressure that is exerted onto the shaft during the press procedure and the force from the shrink fit as the sleeves cool around the shaft. This is necessary to show that the structural integrity of the assembly is adequate for the compressors.

Develop Work Procedure

A step by step procedure of all the actions that need to be done for shaft assembly will be documented. This procedure needs to concentrate on employee safety and efficiency.

Finalize with Advisor and Academic Advisor

Discussions with the sponsor and advisor for this project help determine if any modifications are needed for the overall design.

Engineering Design Day

The team will meet to document all the work that has been put into the project. A poster board will be created to show our accomplishments. The team will practice presenting our project for Engineering Design Day.