**TASK LIST**

1.0 Analyzing Cleanliness of parts (welded and non-welded)

1.1 SEM Elemental Mapping of inflators “as received”
   1.1.1 Make appointment with Franklin
   Completed by: Franklin  Date: 11/13

1.2 Clean inflators with alcohol
Completed by: TH  Date: 11/11

1.3 SEM Elemental Mapping of cleaned inflator
Completed by: Franklin  Date: 11/12

1.4 Conclude a maximum level of cleanliness
Completed by: TH  Date: 11/13

2.0 Analyze grain boundaries (2 non-welded, 2-4 welded)

2.1 Clean samples with acetone
Completed by: TH  Date: 11/13

2.2 Polish sample
Completed by: TH/KB  Date: 11/13

2.3 Etch sample
Completed by: TH  Date: 11/19

2.4 Take optical images (repeat steps)
Completed by: TH  Date: 11/13

3.0 Analyzing wash samples

3.1 pH tests on samples from entire week
Completed by:  Date:
   3.1.1 Compare with suggested pH of wash detergent
Completed by:  Date:

3.2 Test for elements present in each sample
Completed by:  Date:
   3.2.1 Evaporate liquid from samples
Completed by:  Date:
   3.2.2 SEM to determine what elements are present
   3.2.2.1 Make note of trends
       (↑↓ elements)
Completed by:  Date:

3.3 Test sludge

3.3.1 Look at chemical composition
Completed by:  Date:
   3.3.1.1 SEM or Spectrometry of some kind
Completed by:  Date:
   3.3.1.2 Colorimeter
Completed by:  Date:

4.0 Helium Mass Spectrometry Testing

4.1 Weld part onto inflators to mount in mass spec
Completed by: Russ  Date: ?

4.2 Test leaker inflators to confirm leaking
Completed by:  Date:
   4.2.1 Compare our leak rates with Autoliv’s leak rates
Completed by:  Date:
5.0 Radiflo Testing

5.1 Test parts to determine where leak is occurring

5.1.1 Conclude if leak is due to cracks or pores

Completed by: Karl

6.0 Analyze porosity

6.1 Cut samples along weld

Completed by:

6.2 Polish sample until a pore(s) is found and large enough

Completed by:

6.3 Clean with ultrasonic cleaner

Completed by:

6.4 Take optical images of pore(s)

Completed by:

6.5 SEM images of pore(s)

Completed by:

7.0 Webpage Maintenance

7.1 Typing meeting minutes

Completed by: TH

Date: N/A

7.2 Posting Documents

Completed by: TH

Date: N/A

7.3 Updating pages with progress

Completed by: TH

Date: N/A

8.0 Design Review

8.1 Put together presentation

Completed by: TH/KB/SK

Date: 11/19

8.1.1 Write outline of presentation

Completed by: TH

Date: 11/18

8.1.2 Gather data/graphs/conclusions

Completed by: TH

Date: 11/18

8.1.3 Compile all information

Completed by: TH/KB/SK

Date: 11/19

8.2 Present on 11/20 at 2:00 Pacific time

Completed by: TH

Date: 11/20

9.0 Poster

9.1 Print images for poster

Completed by: TH

Date: 12/4

9.2 Type up text for poster

Completed by: TH

Date: 12/4

9.3 Put together poster (based off presentation)

Completed by: TH

Date: 12/4

10.0 Final Report

10.1 Introduction

Completed by:

Date:

10.2 Methods/Procedures

Completed by:

Date:

10.2.1 Helium mass spec

Completed by:

Date:

10.2.2 Radiflo

Completed by:

Date:

10.2.3 Analyzing porosity

Completed by:

Date:

10.2.4 Analyzing cleanliness

Completed by:

Date:

10.2.5 Analyzing grain boundaries

Completed by:

Date:

10.2.6 Analyzing wash samples

Completed by:

Date:

10.3 Results (of above procedures)

Completed by:

Date:
10.4 Plan of Action (for 2nd semester)

10.5 Conclusion

Completed by:  
Date: