**Additive Manufacturing Round Robin Testing Survey**

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Email:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Phone:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Facility:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Additive Manufacturing Machine Manufacturer, AM Technology, Model #, Serial #, Manuf. Stated Accuracy, and Year Made:

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Materials Used in Round Robin Test:

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Date Parts were built for Round Robin Test\_\_\_\_\_\_\_\_\_\_\_\_\_

Tier Selections Used:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Size Selection of Parts (50% 100% or 150%)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Part Fill used for parts\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Can the temperature external to the machine be controlled? \_\_\_ yes \_\_\_ no

2. Can the temperature external to the machine be monitored? \_\_\_ yes \_\_\_ no

3. If possible, what has been the observable range for temperature fluctuation?

4. Can the humidity external to the machine be controlled? \_\_\_ yes \_\_\_ no

5. Can the humidity external to the machine be monitored? \_\_\_ yes \_\_\_ no

6. If possible, what has been the observable range for humidity fluctuation?

7. Is there any noticeable vibration in the environment where the parts are produced? \_\_\_ yes \_\_\_ no

If yes, can you quantify the vibration?

8. What is on average the duration of machine usage per day and in total per year?

9. Can you describe any abnormal wear of internal AM machine parts (brushes, print heads, laser, etc.)

10. Did you ever observe the machine exhibiting wear out behavior due to mechanisms such as electromigration and component parameter drift? \_\_\_ yes \_\_\_ no

If yes, which specific mechanism did you presume is the prominent cause to the machine failure and approximately for how long did your machine operate before this occurred?

11. Where on your build platform is the optimal and least optimal location to produce parts?

12. What preferred materials would you want to create your parts from?

13. What support materials are used for each type of AM machine at your facility?

14. What is the maximum acceptable z height dimension of test parts your facility could produce for the Round Robin Test?

15. What is the maximum amount of test artifacts your facility can produce during the Round Robin Test?

16. What is the number of years of experience your AM Machine Operators have?