Battelle
The Business of Innovation

MMPDS

May 2, 2016

Dear Sir/Madam-

Your company has been identified as a producer of bare 7075-T6 sheet per AMS4045, clad 7075-T6 sheet per AMS4049 or both. A sub-committee of the Metallic Materials Properties Development and Standardization (MMPDS) design handbook has commenced a project to update and confirm the design allowable properties of these materials. The MMPDS design handbook is a fundamental resource utilized by the aerospace industry in the design, analysis and certification of aircraft and aerospace structures and vehicles.

The Airframer Steering Group, (ASG), is the sub-committee that formulated and is executing a project to procure material, fabricate specimens and perform mechanical testing in order to characterize the following material properties over the thickness ranges offered for these materials: Shear Strength, Compression Strength and Bearing Strength. Please note that these types of design properties are not characterized by 'Lot Release' tensile coupons, but are nevertheless fundamental to the design, analysis and certification of aircraft structures. Your company is being requested to donate small quantities of sheet product(s) to support mechanical property testing. This request comes upon publication of MMPDS-05, wherein virtually all of these design properties where removed per MMPDs guidelines for aged datasets. This project will culminate with the publication of updated design allowable tables in future releases of the MMPDS handbook. Despite the age of these products, they are still widely utilized in the aircraft industry with important roles in the development and certification of derivative designs.

Table 1 summarizes the number of sheet donations of a given thickness needed to span different thickness ranges. Any donations that in whole, or partially meet the requirements of Table 1 are welcome. The amount of material requested for each thickness is 24" x 24"; however, the project is able to utilize smaller donations down to 18" x 24" sheets. Please note that the sheets must have the supplier roll code and grain directions clearly marked (L and LT). Also, the material certification (e.g. Heat/Lot Number) information for each donation is necessary for material pedigree and data reduction purposes.

It is standard practice that all raw test data generated for MMPDS publication is identified and protected as proprietary, and is retained anonymously and securely by Battelle. Contact Jana Rubadue, Battelle, for further details.

Table 1 Product Donation Summary

	7075-T6 Bare Sheet / AMS 4045			7075-T6 Clad Sheet / AMS 4049			
Thickness Range (in)	0.012 – 0.039	0.040 – 0.125	0.126 – 0.249	0.012- 0.039	0.040- 0.062	0.063- 0.187	0.188- 0.249
Number Donated Sheets	3	4	3	3	2	4	2

In particular, donations for any of the following less frequently specified thicknesses would be particularly appreciated:

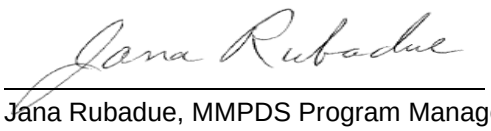
- 7075-T6 Clad: 0.012", 0.020", 0.025", 0.190", 0.250"
- 7075-T6 Bare: 0.012", 0.016", 0.020"

If your company can participate, please coordinate with either of the undersigned for further details or to respond to questions. This project is being undertaken on a volunteer basis by numerous and varied aerospace industry stakeholders, for the benefit of all concerned. Table 2 summarizes those organizations directly involved. Please support this initiative, and thank you for your attention.

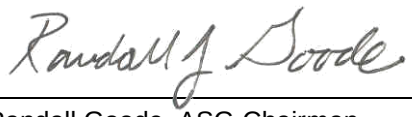
Table 2 Legacy 7075-T6 Indirect Properties Project Participants

Aerospace Companies	Government Organizations
Cessna Aircraft	USAF – Air Force Research Lab
Lockheed Martin	FAA – Tech Programs
Northrop Grumman	
Westmoreland Mechanical Research & Testing	
Battelle Memorial Research Institute	

Sincerely-



Jana Rubadue, MMPDS Program Manager
Battelle Memorial Institute
(614) 424-5948
jana.rubadue@battelle.org
https://www.mmpds.org



Randall Goode, ASG Chairman
Lockheed Martin – Missiles and Fire Control
(972) 603-9862
randy.goode@lmco.com