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STATIC LOAD TEST REPORT

406-TI FRAME SAMPLES



PROPRIETARY & CONFINDENTIAL

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1.0 PURPOSE

The purpose of this report is to test the structural and weld strength of framed subsections of the Titanium Medevac IIA Litter Frame via a tensile static load test. More specifically, testing will be done to emulate the equivalent G-forces associated with a Medevac II Litter Frame being tied down in a helicopter's cabin by adjustable tie-down straps. This will be done on samples 1 and 2 shown below in Figure 1. Additionally, Sample 3 will be used to emulate G-forces applied to the litter via the patient restraint strap.

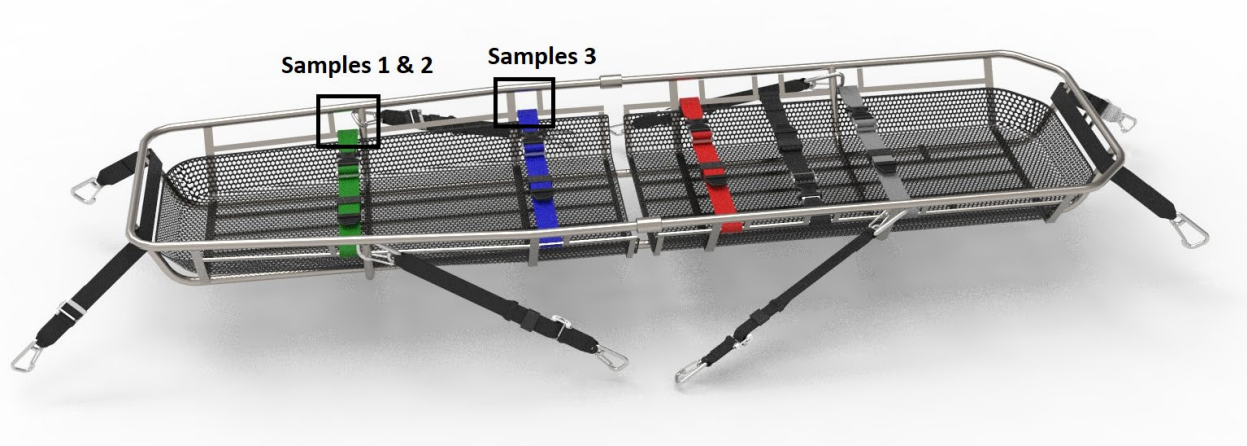


Figure 1. MEDEVAC IIA LITER FRAME HIGHLIGHTING LOCATIONS OF SAMPLE COMPONENTS.

2.0 DESIGN AND MATERIAL

Tube Stock
• Material: Titanium Grade 9 • Stock Size: 3/4” OD X 0.065” WALL

Flat Stock
• Material: Titanium Grade 5 • Stock Size: 1/2” X 1/8” THK.

3.0 TEST REQUIRMENTS

The target load for all test samples will be 3800lbs (16.9kN), which is the breaking load for the Adjustable Tie Down Strap part number 617. Thus achieving a breaking load over 3800lbs (16.9kN) essentially shows that the Adjustable Tie Down Strap will be the weak link component rather than the Medevac Litter. The direction of the loads will be applied identically as in the figures shown below.

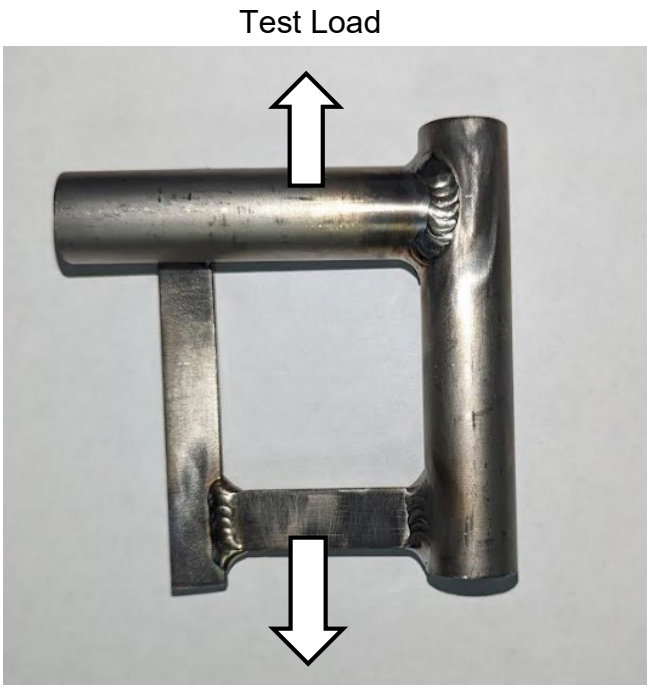


Figure 2. TENSILE STATIC LOAD DIRECTION FOR SAMPLE 1



Figure 3. TENSILE STATIC LOAD DIRECTION FOR SAMPLE 2

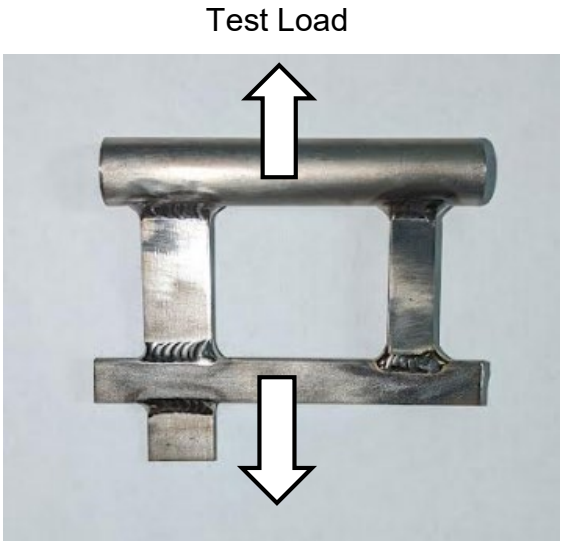


Figure 4. TENSILE STATIC LOAD DIRECTION FOR SAMPLES 1 & 2

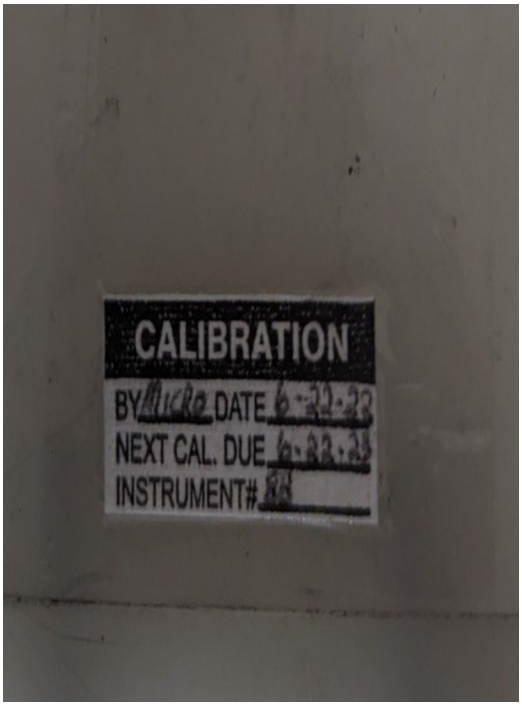
4.0 TEST EQUIPMENT AND CALIBRATION

4.1 EQUIPMENT

The primary testing equipment consists of the following items:

1. Force Measurement: 10,000lb S-Beam load cell with a digital gauge. Calibration sticker valid until 06/22/2023.





2. Load Tester: Hydraulic Cylinder

5.0 RESULTS

Sample Number	Target Load (lbs)	Load Recorded (lbs)	Pass/Fail
1	3800	4104	PASS
2	3800	4112	PASS
3	3800	4142	PASS

6.0 SUMMARY

From the results above, all test samples surpass the target load of 3800lbs. Moreover, there were no visible signs of warping or permanent deformation to any of the flat bar and tube stock samples. Finally, there was no damage to any of the welds.

7.0 APPENDIX

7.1 TEST SAMPLE 1

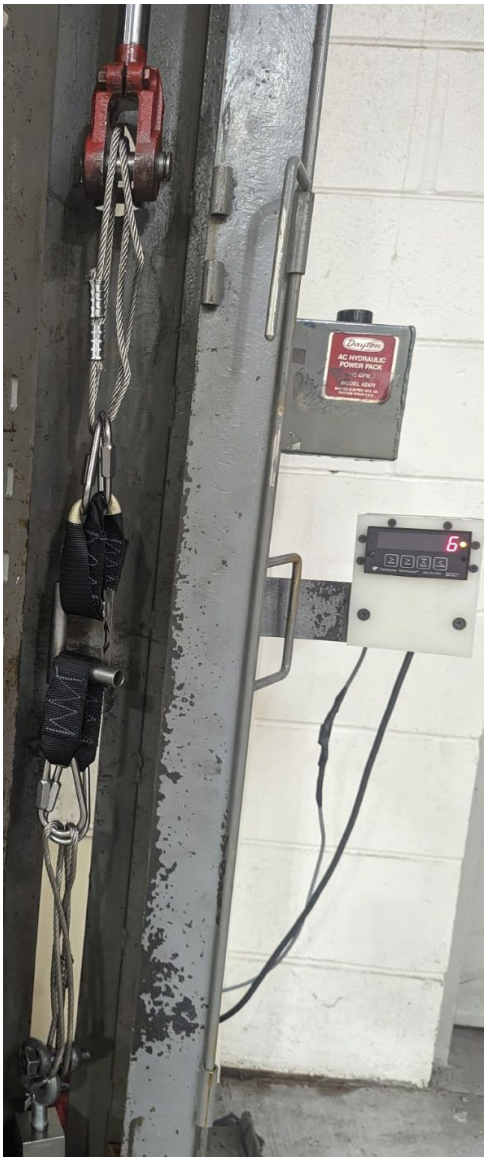


Figure 1. TEST SETUP OF SAMPLE 1 BEFORE LOADING

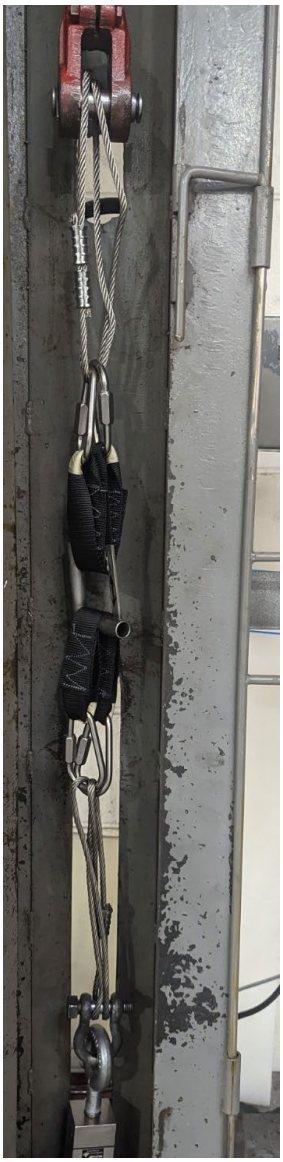


Figure 2. TEST SETUP OF SAMPLE 1 AFTER LOADING



Figure 3. FRONT VIEW OF SAMPLE 1 AFTER LOADING



Figure 4. REAR VIEW OF SAMPLE 1 AFTER LOADING

7.2 TEST SAMPLE 2



Figure 5. TEST SETUP OF SAMPLE 2 BEFORE LOADING



Figure 6. TEST SETUP OF SAMPLE 2 AFTER LOADING



Figure 7. FRONT VIEW OF SAMPLE 2 AFTER LOADING



Figure 8. FRONT VIEW OF SAMPLE 2 AFTER LOADING

7.3 TEST SAMPLE 3



Figure 9. TEST SETUP OF SAMPLE 3 AFTER LOADING



Figure 10. FRONT VIEW OF SAMPLE 3 AFTER LOADING



Figure 11. REAR VIEW OF SAMPLE 3 AFTER LOADING