

SAMPE 2010 Super Light-weight Bridge and Wing Building Contests Results

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The SAMPE 2010 Conference and Exhibition hosted the 13th Annual Super Light-weight Bridge competition and the 7th Annual Light-weight Wing competition, held May 17-20 at the Washington State Convention Center, Seattle. This year we had a total of 69 teams from 18 universities and colleges. We also had an outstanding display of student posters in the registration area.

We estimate there were about 75 students attending the exhibition in Seattle. This year United Testing of Huntington Beach, CA, provided the test machine, and SAMPE provided a large display/test area near the entrance to the exhibition.

The four bridge contest categories were the same as last year – carbon kit, carbon non-kit, glass kit, and natural fiber. This year the maximum bridge weight was limited to 600 grams, down from 650 grams last year. Also, this year we required all support structures to be open sections – no closed box beams. Past experience had shown that some schools were getting very good at designing closed box structures. So this new rule was introduced as an attempt to level the playing field, and to encourage students to come up with innovative and exciting new ideas and designs.

The wings were particularly exciting again this year. They were 36 inches wide with winglets that had to support a torque load in addition to the center span load. The wing had to support a center load with a maximum 2 inch deflection. The wing having the largest load-to-weight ratio was the winner.

Final standings for both contests are given in the accompanying table. Test results of all the tests are available online at www.unitedtesting.com.

Awards were announced and distributed Wednesday morning, May 19. This year we were able to give out a record \$8000 prize money as well as a number of composite tennis racquets from Prince, and a composite training course from Abaris.

Once again, we acknowledge and thank our sponsors for their continued cooperation and support. They provided the material for the kits, and the cash and product hardware for the prizes. United Testing provided the test equipment and operating personnel for loading the bridges and wings at the exhibition. We acknowledge the very strong financial support of NASA Langley and Boeing Corp.

Bridge and Wing Contests Final Results (Continued on page 41)

WING				GLASS BRIDGE			
School	Weight(gm)	P max(lbs)	P/W	School	Weight(gm)	P max(lbs)	P/W
Univ Wash	376	906	2.41	Univ Del	598	2922	4.89
UNLV	299	508	1.70	USNA	578	2516	4.35
Univ Del	321	346	1.08	USNA	469	1679	3.58
Univ Md	397	426	1.07	USNA	437	1512	3.46
Univ Del	399	406	1.02	Univ Wash	532	1522	2.86
San Diego St	395	255	0.65	Univ Wash	492	1382	2.81
CSULA	364	131	0.36	Texas State Univ	535	791	1.48
San Diego St	236	81	0.34	Texas State Univ	491	354	0.72
				Univ Dayton	511	84	0.16



NATURAL FIBER BRIDGE

School	Weight(gm)	P max(lbs)	P/W
Univ Wash	561	1557	2.78
Texas State Univ	596	1576	2.64
McGill	600	1321	2.20
Univ Del	598	1234	2.06
Univ Wash	568	1170	2.06
Texas State Univ	475	815	1.72
NDSU	559	722	1.29
Univ Del	587	648	1.10
Texas State Univ	419	362	0.86
Cerritos	502	158	0.31
Drexel Univ	367	51	0.14

CARBON NON-KIT BRIDGE

School	Weight(gm)	P max(lbs)	P/W
Univ Wash	588	7358	12.51
Univ Wash	589	7125	12.10
Univ Wash	541	5773	10.67
Western Wash Univ	426	4224	9.92
Univ Del	590	5681	9.63
Univ Wash	532	4272	8.03
NDSU	600	4118	6.86
BYU	600	3258	5.43
UBC	481	2522	5.24
Univ Wash	527	2406	4.57
UNLV	571	2174	3.81
Western Wash Univ	500	1887	3.77

CARBON KIT BRIDGE

School	Weight(gm)	P max(lbs)	P/W
Univ Wash	468	4645	9.93
Univ Wash	487	4602	9.45
USNA	367	2472	6.74
Univ Del	562	3723	6.62
USNA	469	2479	5.29
Drexel Univ	559	2659	4.76
USNA	308	1295	4.20
Drexel Univ	559	2154	3.85
Univ Del	587	2052	3.50
UBC	466	1628	3.49
CSULA	412	754	1.83
Univ Dayton	541	859	1.59
Drexel Univ	289	396	1.37
Texas State Univ	361	354	0.98
Cerritos	584	564	0.97
Univ Dayton	420	115	0.27

POSTERS

School	Standing
USNA	1 st
UNLV	1 st
USNA	2 nd
U. Texas	2 nd
U. Maryland	3 rd
U. Wash	3 rd
Drexel	Honorable Mention
U. Del	Honorable Mention

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