



Figure 8. Torsion, load distribution and wing deflection.

depend strongly on the type of resin and the fabrication methods.

The calculation for bending of the wing was based on the assumption that sections stay flat. Calculations for torsion of the wing were made first for the centerpiece only, later on for the complete wing shell. The results compared with the test results are shown in Figure 8. Figures 7 and 8 compare calculated values with actual test results.

In order to check the stress distribution at the wing root strain gages have been used. They were glued to the inner and outer fiberglass layer near the first rib and to the webs.

Under bending loads the test results agreed in magnitude and with respect to distribution with the basic theory. In the fiberglass resin layers the stresses did not exceed 2900 psi. The shear stresses in the outer layer of the webs did not exceed 1050 psi. No peak stresses to speak of have been recorded.

5. SUMMARY:

A glider is discussed which has been built using a new shell structure consisting of balsawood and glass fiber reinforced resin. The construction method gives considerable advantages with respect to weight and aerodynamic performance. These advantages are not based on a higher strength of the sandwich construction, but on the possibility to approach and verify the well known features of shell constructions. The advantages of the sandwich method for simple shapes are not too striking

COLUMBUS DAY MEET

by ALEX DAWYDOFF

Sanctioned by The Soaring Society of America, Inc.



Photo: Alex Dawydoff

Sailplanes in the tiedown area of the Wurtsboro, N. Y., Airport. The Schweizer 1-26 in the foreground is owned by Sail Flights, Inc.

The Columbus Day Soaring Meet sponsored by the Metropolitan Airhoppers Soaring Assn., Inc., at Wurtsboro, N.Y., unfortunately fell prey to bad weather but the hosts managed to keep the visitors happy. Saturday, October 10th looked promising but weather stabilized so no one accomplished the set task of a triangular flight from Wurtsboro to Matamoras, N.J., to Middletown N. Y., and back to Wurtsboro. Nearest to accomplish it was Gleb Derujinski who made Middletown.

That night, M.A.S.A. held a huge barbecue attended by members, guests and visiting pilots and crews.

The next day, Sunday, it rained cats and dogs, so most people packed up and went home.

Inasmuch as M.A.S.A. had gathered quite a few prizes, it was decided to distribute them to those who ran up the highest scores. First was

Gleb Derujinski, who won the Pfeiffer Variometer; second, Connie Moeller of Orange, Conn., with the fastest flight to Matamoras was awarded a Keystone 8 mm magazine loading motion picture camera; third, Harold Bovenkerk, of Balston Lake, N.Y., who was presented with an electrically heated blanket. There were a number of other smaller prizes, some donated by Wurtsboro merchants, which were distributed among runners-up. Fifteen sailplanes had participated.

Monday the weather cleared with a strong northwest wind blowing and those hardy characters who braved the Sunday rain had a taste of Wurtsboro ridge soaring. Inasmuch as most participants left for home, flying was for fun and non-competitive. Stephen duPont took advantage of the ridge wind and stayed up for five hours which he needed for his Silver C.

because dural and similar materials have higher strength. As far as no production problems arise these materials will not be replaced by plastics in the near future.

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