TECHNICAL DEVELOPMENTS AT THE WORLD CHAMPIONSHIPS

From FINAL GLIDE

Bulletin of the 17th World Gliding Championships

Paderborn - Haxterberg, 24.5. - 7.6.1981

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TIME-REGISTERING CAMERAS

One of the technical developments which will have a profound impact on future World Championships is a camera with a digital clock built in, so that when taking a photograph with the camera the time at which the picture was taken will appear on the film.

This type of camera was first developed by a group in Switzerland under the guidance of Dr. Hans Nietlispach. Some manufacturers have since taken up production of such cameras and two types are now marketed at prices around DM 700,-. The use of such cameras in future World Championships was discussed at a meeting between pilots and other interested persons on Thursday, 14th June. Trials have been made in national championships in a few countries, for instance Switzerland and German. Turn point photos and start line intervals are straightforward with no problems involved, whereas many pilots have been of the opinion that there would be difficulties in starts with time-registering cameras, and also with finishes. No such problems have, however, been experienced so far. The problem of checking the height when starting has been resolved by not having a maximum height at all. Finish line crossings would supposedly need some training, and for some time would need to be backed up by timing from the ground.

The great advantage with the cameras is that it is possible to dispense with the time and personnel consuming start line procedures now used in championships. An introduction in the forthcoming championships in Argentina is possible, either as an option open for all pilots or as a requirement in one of the Classes; perhaps the Open Class.

ATC TRANSPONDERS

Another technical development which might change our championships radically, and may be an alternative to the time-registering camera is the use of ATC transponders. It is technically possible to make these transponders so that they trigger a signal which automatically goes into the computer when the glider crosses start and finish lines. The price of such a transponder is at present somewhat higher than that of the time-registering camera, but is rapidly coming down.

LIFT INCREASING DEVICES

We all know that Baer Selen's glider has got holes in the underside of the wings to destroy the separation bubbles. (Ed. A previous note on this subject explained: "the glider of the Dutch aircraft engineering student and reigning Standard Class World Champion had been modified to obtain reduced drag over the wing, which could be altered in flight. His ASW 19B was reported to have a row of tiny holes in the bottom surface of the wings, and a pitot tube on each wing through which air was driven under pressure to the afore-mentioned holes which were about 5 mm in diameter. The airflow from these holes was supposed to have a positive effect on the boundary layer.") One of the Nimbus 3's has also got similar holes. At research centers around the world work is going on to try to reduce drag by this and also by other means. The most promising so far seems to be by some sonic devices; sound generated inside the wing seems to be able to do the trick. The rules of the Standard Class today prohibit "lift increasing devices", and discussions have been going on here at Haxterberg between CIVV members, and also between members of OSTIV's Sailplane Development Panel as to whether the rules governing the Standard Class should be modified to prohibit such devices. Their introduction would have to be in the Open and 15m Classes, which are unrestricted in this respect.