FEDERATION AERONAUTIQUE INTERNATIONALE

NOMINATION FORM

THE ANTONOV DIPLOMA

(for technical innovation(s))

From NAC: Romanian Modelling Federation — Date: November 04, 2005

Address: OP – 6, CP – 56 Bucuresti — Country: Romania

(only one person from a country may be nominated annualy by the candidate's National Airsports Control)

Name of nominee: PETCU DANIEL

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DESCRIPTION OF TECHNICAL INNOVATION(S): Please Print

1. The F1E "Bunt" System

For the first time in the history of the F1E class, I adopted the mechanical system with "bunt" for dynamic handlaunching in 1995.

Compared to classic launch, using this system enables gaining an initial hight between 4 – 8 meters according to wind intensity, when it is launched at very high speeds and at a 10 – 15° angle on the horizontal line.

The incidence angles of the stab are modified by a mechanical timer two times in 1.5 seconds, to gain hight in the first stage of the launch and to put the glider on the normal way in the second stage.

Since then, the gliders of this class have been radically changed:

- to prevent the flatter, the resistance structure of the wings had to be improved, using composite materials;
- the steering mechanisms had to be redesigned, to prevent the blockage of the industrial dyamond bearing when launching;

Besides the initial gain in high, the dynamic launch with bunt of the F1E gliders, has the folowing advantages:

- overpassing the turbulences zone, in the neighborhood of the contest slopes, created by the bushes and the landscape's irregularities and the rapid launch of the glider, directly in the laminar dynamic currents;
- avoiding the collision with other gliders, launched in the same time in the starting area;
- taking off in good conditions, when the wind blows from the side or the back.

2. The Quality of Dethermalization

The F1E gliders with conventional geometry, having the lifting surface higher then 40 – 45 dm^2 and specifical loads under 10 gr/dm^2, perform loops during dethermalization.

The results of theoretical and practical studies of the transversal stability during DT, as well as the conclusions and technical solutions have been published in the ANNUAL REPORT of the NATIONAL FREE FLIGHT SOCIETY, Symposium 2002, 2003 and 2004.

NAC Signature.....

President or Secretary General of nominating FAI National Airsport Control

(must be submitted to the FAI Office by November 15)