

FLIGHT SUITABILITY OF EUROPEAN “BLANIK” GLIDERS

“Blanik L-13” is a very famous glider which was designed in Czech Republic and used in many countries for different purposes. Nowadays in Ukraine we have a great opportunity to operate those gliders and use them for training pilots and for excursions. But are they really safe and good enough to be used?

In general, many catastrophes were caused by weather conditions, but most of the main factors were human. This is confirmed by world statistics, which shows that most crashes occur precisely because of the wrong actions of people who were somehow involved in the process of the flight or preparation. Also, a significant number of catastrophes with fatal consequences were due to structural damage or fatigue of materials. All of the catastrophes L-13, which are associated with the destruction of the longeron, occurred in Europe, where the average flight time of "Blanik L-13" exceeded the 5 thousand hours, which in combination with the start of powerful winches and acrobatic flights intensively reduces the safety margin. And the last straw of all this was the catastrophe in Austria, it happened with the glider which was built of 1972, had more than 5,000 landings and 2,318 flight hours, of which over the past 400 hours accounted for 8% of acrobatic flights. At the same time, the nature of the flights of the first 2,000 hours is unknown.

The European gliders of "Blanik" model have been flying quite a lot with more powerful winches than the "Hercules", so the gliders gain altitude with a much larger angle than the "Hercules", and hence, with a larger equivalent overload.

Acrobatics on Blanc has its own peculiarities: the glider does not like the negative and interchangeable overloads, which is indirectly reflected in the rules in the form of a ban on the flight on the back and the controlled barrel in a double variant (a controlled barrel requires the creation of a negative overload in an inverted position, permissible the value of which is easily exceeded in its uncorrected performance) - while the glider easily performs a simple complex of figures, the overload in which does not exceed 2.5:

- corkscrew
- corkscrew coup
- a loop
- turn on the hill.

It is believed that the latest EASA directives are so rigorous that they took into account, first of all, the European peculiarities of the operation of Blanic.

Given all of the foregoing, it is considered that “Blanik” gliders, having average raids of about 1,500 hours and used in the CIS countries, performed fewer aerobatics (usually only 1 turn of a corkscrew for educational purposes), even when used with a winch (for example, "Hercules-3") the danger in the form of destruction of a spar box is not threatened.

REFERENCES

1. Руководство для конструкторов. Том 1 / К.:Бюро новой техники НКАП, 1943
2. Техническое руководство Л 13. / К.: ЛЕТ, национальное предприятие, г. Куновице, ЧССР, 1969