

MAINLINE FREIGHT AIR TRANSPORT*Pavel Zraikowsky**Supervisor – c.t.s. Kholupov V. S.*

The strength of the air transport is, first of all, the speed of transport. Weak, as we know, - is the cost. But, nevertheless, this type of transport is in great demand, develops, and that's why it, even in particular its individual components, and the subject of this presentation, which consists of two parts, which, however, are considered separately. The first part is dedicated to some representatives of the air transport, its characteristics and abilities. After will be performed the analysis of the freight part in air transportation. In concrete occasion the aim was to examine the existing main freight models of European aircraft manufacturers, whose age would not exceed 4-5 years (ideally - from 2010), and to compare performance properties and characteristics of these models. Today, there are two planes that satisfy the above conditions: Airbus A330-200F and IL96-400T.

Second part of this work is devoted to means of containerization and palletizing the above models of aircraft, such as: possible options for placing ULD (unit load device), varieties of ULD and ways of fixing them into the fuselage.

Containers and pallets are made from sheets of high-strength aluminum alloys and have provision for easy loading and securing the freight compartment of the aircraft, the maximum service life of 7-10 years and the tare weight is not more than 10% of the gross mass. The metal of the container with a protective layer of corrosion and carried out mainly in the form corresponding cross section of the lower part of the fuselage. At service load containers with freight must not have permanent deformation. Depending on the nature of the goods transported containers can be equipped with built-in refrigerators. Pallets have a special network of reusable packaging. The standard height of the pallet load is 163 cm (64 in), a freight aircraft load height on the pallet, and the maximum weight of the load on the pallet can be more.

The fastening system of air cargo is based on ISO 16049.

ISO 16049 (the International Organization for Standardization) consists of the following parts, under the general title Air cargo equipment — Restraint straps:

- *Part 1: Design criteria and testing methods*
- *Part 2: Utilization guidelines and lashing calculations*