

## **THESES OF THE REPORT:**

***«Klimov Company on Chinese market.***

***We've been working for you for 50 years »***

**Action:**

The “Klimov Company” plans to conduct the press conference at the 6th China International Aviation & Aerospace Exhibition, which is to be held from October 31 to November 5, 2006. At the press conference the report will be made.

**The report subject:**

“Klimov Company on Chinese market: we’ve been working for you for 50 years”

**The reporter:**

General Director of the “Klimov Company” – Alexander Vatagin

**Scheduled date/time:**

November 1, 2006, 12.30 –14.00; Press center, room 2029

**“Klimov Company on Chinese market:  
we’ve been working for you for 50 years”**

**1. The designs of the “Klimov Company” on the international market. Klimov engines are known all over the world.**

**The RD-33 engine designed by the “Klimov Company”.** Thrust rating: **8000-9000 kgf**. The most widely –spread jet engine for the light fighters. According to our information it makes up 50% of the engines of this thrust range operated in the world. Today the Mig-29 fighters with the RD-33 engines make up 23% of the combat aircraft fleet of the Russian Ministry of Defense. The engine is operated in 27 countries of the world.

**The design of the “Klimov Company”:** **the thrust-vectoring nozzle.** The unique design improving the maneuverability of the MiG-29 combat airplanes, providing the possibility to take-off and to land on the limited-size areas, to execute the aerobatics. The prototype of the KLIVT (Klimov thrust vector) nuzzle is used in the power plant design of Su-27 fighter.

**The TV2-117, TV3-117 engines designed by the “Klimov Company”.** The most mass-produced engines of the helicopter world fleet. More than 81% of the Russian helicopters are powered with these engines. The engines are operated in more than 70 countries of the world. All over the world there are operated more than 20000 of the TV3-117 engines, while the foreign analogs (RTM-322-01/8/9, Rolls-Royce and Turbomeca, T5508D, Textron Lycoming, CT7-6A, General Electric), designed by the world leaders in the engine-building, do not exceed 500 engines in total.

## **2. The “Klimov Company” on Chinese market: more than 50 years we’ve been working for you.**

In 2004 the “Klimov Company” celebrated its 90<sup>th</sup> anniversary. The enterprise was founded in 1914 as JSC “Russian Renault”

One of the famous designs of the “Klimov Company”, which is still being operated in China, is the VK-1. The engine powers the serial airplanes MiG-15bis, Mig-17, IL-28, Tu-14. The VK-1F engine powers the all-weather interceptors MiG-17F and MiG-17PF and the photoreconnaissance airplanes MiG-17P. The VK-1 is operated in China more than 50 years.

In the 60-ies of the last century the TV2-117 engine was developed. This engine is installed on Mi-8 helicopters. The NV2-117 engine operates in China more than 30 years.

In the 70-ies of the last century the TV3-117 engine was developed. It is installed on the helicopters of Mil Design Bureau Mi-8MT/Mi-17, Mi-28, Mi-35 and of Kamov Design Bureau Ka-27/Ka-28, Ka-29, Ka-31, Ka-32, Ka-50, Ka-52. The TV3-117 engine is operated in China more than 15 years.

In the 90-ies of the last century the VK-2500 engine was developed. Nowadays it is one of the most prospective projects within the power range of 2200-2500 hp. The Federal State Unitary Enterprise “Klimov Corporation” has supplied 30 of the VK-2500 engines to China.

At present we participate in FC-1 Super-7 project.

## **3. Participation of the “Klimov Company” in the prospective project of FC-1 Super-7 fighter.**

FC-1 Super-7 is a multipurpose fighter, for which is forecasted the fine future. The program is under the leadership of China National Aero-Technology Import and Export Corporation (CATIC). The “Klimov Company” has participated in this project.

In 1993 – the works were started. There was signed the General contract on the experimental-design works on development of the power plant for FC-1 Super-7 fighter. The engine thrust rating: 8000-9000kgf. At present the performance flight tests of the airplane are being carried out.

#### **4. FC-1 Super-7 project.**

The comments on the project made by the representatives of CATIC Corporation.

#### **5. The importance of the international cooperation for the aviation development.**

Nowadays we are at a threshold of the new aviation development stage, which refers to gas turbine engine development. To make the new step is difficult technically and economically. The cost of the advanced aviation engine development is in milliards of US dollars. It is impossible to decrease the production costs if only one company is responsible for the whole technological process. The unique solution of the situation is the cooperation of the companies and not in one country but all over the world.

We represent the possible trends of the “Klimov Company” designs as the object of the further cooperation with the aviation and engine companies:

- ✓ APU, 100-400 hp
- ✓ Turboshaft engine, 400-6000 hp
- ✓ Turboprop engine, 400-6000 hp
- ✓ Turbojet engine, 100-10000 kgf
- ✓ Main gearboxes
- ✓ AADG
- ✓ Automatic control systems
- ✓ Electric power stations