

Runway opens new horizons

The Orsha Aircraft Repair Plant has mastered the serial production of helicopters, enabling them to seriously compete with well-known manufacturers. Thanks to investments, the Belarusian company intends to enter the international helicopter market and the second domestic helicopter, the Mi-8 MSB, has recently been launched.

By Olga Kruchenkova

Key to investor

At the end of 2011, a control packet of shares in the Orsha Aircraft Repair Plant was bought by the Ukrainian company Motor Sich, one of the world's leading manufacturers of aircraft engines.

"People often ask how we have attracted such a serious company, but the answer is obvious. The investor came to a working factory that has all the certificates and licenses for the reparation and modernisation of helicopters of various designs," said Director General Vladimir Troitsky.

Motor Sich is committed to creating over three hundred jobs in Bolbasovo within five years, to allocate \$12 million for production modernisation and to invest about Br20 billion in the socio-economic development of Bolbasovo. Vladimir Troitsky is sure that the final investment will exceed the stated amount, because two-thirds of that sum has been already allocated so far.

Time to go on a record

The new Mi-8 MSB is a highly modernised version of the world renowned Mi-8T — transport and assault helicopter.

"This machine has a very reliable airframe, so despite the fact that it was developed in the 60s,



The new helicopter MI-8 MSB

production has barely changed," says Vladimir Troitsky. "However, the old model had problems with an engine that did not meet modern requirements for power, altitude, speed and fuel consumption. Motor Sich engineers developed a fifth-generation engine, and most importantly, developed the technical ability to install it on the old fuselage. This is a big alteration that has taken a whole year to master. It was necessary to make more than a thousand parts, to strengthen fuselage and to install the new starting system. At the end, we had a helicopter, unique in its characteristics that surpassed modern ones, including the Mi-8 MTB-5."

"The advantages of this are

impressive. According to the developers, thanks to the turbo shaft engines, a four-kilometre height is reached by the helicopter just in seven minutes against the forty taken by the Mi-8T. The machine is particularly effective in mountainous terrain and high temperatures, and it boasts a 30 per cent increased service life. The new engine saves up to 20 percent of the fuel and increases the flight range up to 600 km without using additional fuel tanks."

Production of this air-assigned technology will be fully entrusted to the Bolbasovo plant, where the production of all parts and assemblies, except for the engine and gearbox has already



Vladimir Nemtsev tests the equipment

been mastered.

"In such a narrow sector it is very difficult to find a niche, but with the Mi-8 MSB we will be able to challenge our competitors," said the Director General. "The machine is in no way inferior to the new helicopters, and it is half the price. Additionally, there are more than three thousand of old Mi-8Ts throughout the world. It makes no sense to repair them with the old engine, and it would be a shame to throw them away. Now, these owners

can modernise them and actually get a 'new' helicopter for a third of the price."

Interest in the new product is tremendous. According to the director, just two weeks after the presentation, a buyer appeared and the first sale will be completed before the end of the year.

The plan for 2014 is to release twenty new helicopters. At the same time, the modernisation of the Mi-2 has begun and, when finished, will have many different characteristics.

Belarusian 'tornado' definitely brings profit

By Dmitry Pimenov

What looks simple from the outside is the result of deep theoretical research and numerous patents, and allows Belarusian power engineers to get profit 'from nothing'. This relates to the new construction of cooling towers that have been developed by scientists from the Heat and Mass Exchange Institute, named by A.V. Lykov, of the National Academy of Sciences of Belarus.

It would appear that nothing could be altered in these grandiose constructions, meant for water cooling by the atmosphere, as their design is tried-and-tested. But that didn't stop the national researchers attempting, and succeeding in their endeavour. They found that they could twist the incoming air flow in such a manner that the duration of

its contact with cool water increased significantly. As a consequence, the artificial eddy, the 'tornado', reduced the temperature of the cooling water by several degrees. This is a monumental achievement as, during the summer, the additional cooling or water in a tower by one degree leads to the decrease of fuel consumption by 1.2-2 grammes on the generation of every kilowatt/hour of energy.

Because of this original work, and other inventions made by Belarusian scientists working on improving the effectiveness of various types of cooling units, Minsk was chosen as the location of the 16th International Conference on Cooling Towers and Heat Interchange Apparatus. This big forum is a unique platform for the organisation of international co-operation and the sharing of experiences between researchers and specialists from 18 countries worldwide.

Transit prospects in place

By Yevgeny Vasiliev

The first section of the Prilesie Logistic Centre has been built in the Minsk District. The construction project is supported by Kayson, a well-known, international Iranian company.

"Considering the fact that our country is situated in the centre of Europe and the Minsk Region is in the centre of Belarus, we have paid serious attention to the creation of logistics centres in this area. It is not the first logistics centre in the Minsk Region, but Prilesie is certainly the first of such a level, size and volume," said Boris Batura, Chairman of the Minsk Regional Executive Committee.

For his part, President of the Iranian company Kayson Mohammad Reza Ansari thanked the country's leadership for the trust. "It is a great honour for us. Therefore we are so serious about this project. Construction

is based on modern approaches. Storage facilities are built using energy-efficient and energy-saving technologies. Thus, we try to create a comfortable platform for the development of logistics business in Belarus," said the Head of the company.

The construction of the Prilesie Logistic Centre is



First stage of Prilesie complex is already complete

envisaged by the programme for the development of the logistics system in Belarus. Investor is the Iranian investment and construction company Kayson, while the customer is the LLC Prilesie Logistic Centre (registered as a resident company of the Minsk Free Economic Zone). This project has been supported by the President of Belarus.

The centre will contain the necessary infrastructure to service the transit of goods via automobile and railway traffic. According to the general plan, the centre

is divided into two zones — general and limited access. The general access zone will include a parking and rest area, including a three-star hotel, shopping and dining areas, parking for trucks and cars; and an engineering area. The project should be finished in 2014 and its total cost stands at \$145m.