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## **Airfield Snow Clearance Operations at Vnukovo International, Moscow**

Continuity of operations and flight-dispatch continuity and reliability of any airport during the



fall-winter period and located in a snow-abounding climate at that, are decided to a great extent by the organization and techniques of snow clearance operations as performed by the airport's airfield maintenance services.

Both speed and quality of snow and icing removal from airfield pavements are key performance factors of this vitally important division at any airport. Furthermore flight safety conditions are a paramount consideration and are to be fully met at all times during snow and icing removal operations.

The 2005-2006 fall-winter period saw the comprehensive reorganization and upgrading of Airfield Maintenance Division kick off at Vnukovo International with the key component being the procurement and introduction into service of the following mobile snow and icing removal equipment manufactured and supplied by the Schmidt of Germany as well as of domestic-origin equipment in quantities and to specifications tailored to ensure all the snow and icing removal jobs at the Airport are handled with maximum efficiency and on time.



The list of the recently acquired mobile equipment includes:

- Schmidt SUPRA 4001 snowplow-blower (rotor-cutterhead) – 1 vehicle
- Schmidt Jet Sweeper Type 630 – 4 vehicles
- Schmidt Compact Jet Sweeper Type 914 SuperP – 1 vehicle



Field-trial runs of a brand-new sweeper-type snowplow manufactured in Belarus commenced in October 2005 and are underway still. This latest addition to the above equipment mix forms the backbone of the highly productive specialized snow removal and de-icing Division operating at Vnukovo International.

With the introduction into service of these vehicles to augment the operation of the two Boschung snowplows acquired in 2004, the total fleet of snow-removal and de-icing equipment now comprises 7 vehicles, allowing for a 30 meter-wide swath of runway surface to be swept clean in one pass. This has proved an immediate positive influence on both the speed and quality of snow removal and deicing operations at Vnukovo International.



The commissioning of the second MAZ-642208 dump-body with a CAT-118 trailer and the capacity of 26 tons (three times that of the previously used Maz-5551 dump-bodies) as well as of the two all-purpose wheeled K-702-chassis bulldozers, has made possible the clearance from the apron and AC stands of sizable snow bank deposits within days of severe weather events.

With a view to decreasing both snow and ice deposit buildup that tends to occur on the apron, taxiways and runways and in particular on aircraft stands during severe snowstorms, a number of similar vehicles needs to be added to the existing fleet.

In order to ensure proper level of airfield maintenance at any given time the entire snow-clearance fleet is divided into two detachments - one to service the runways and taxiways and the other to take care of the ramp, apron, and the adjacent maintenance areas. The two detachments can be juggled and dispatched to handle a variety of tasks in different locations anywhere on the airfield as the case may require.



This sort of flexibility also enables more efficient resource planning and utilization. Thanks largely to the detachments' specialization both the quality and speed of these operations have improved radically.

The introduction into service, trial runs and scheduled operation of new snow-removal equipment has resulted in an average 50 per cent increase in the speed of snow-clearance operations at the Airport, significantly improving Vnukovo's ability to remain fully operational during severe snow events.

The commenced reorganization of Vnukovo International's Airfield Maintenance Division, implementation of cutting edge snow-clearance techniques and equipment fleet renewal are but first steps in its ongoing development in conformity with the international standards that apply in the field.

Translated by Maxim A. Mikhailov, PJSC Vnukovo Airport