

KEY FACTS

- Reykjavik Airport has three runways, measuring: 1.6km x 45m, 960 x 30m and 1.2km x 45m.
- Runways can be cleared in less than 30 minutes, assuming a 10cm layer of snow.
- Approximately 1,500t of sand is used annually to help keep the airport operational.

Located near the sea and within ten minutes' walking distance west of Reykjavik city centre, Reykjavik Airport is primarily a domestic airport, connecting Iceland's capital with 11 other airports in the country. It serves flights to Greenland and the Faeroe Islands, international charter flights and private aircraft including business jets, as well as being an alternative to Keflavik International Airport when landings there are impossible due to adverse weather conditions.

Reykjavik's winter season begins in October and ends in April, and winter maintenance at the airport is geared for this period. Local conditions are extremely variable, and the weather at this time of year is normally characterised by large temperature swings and precipitation. It is not uncommon to see substantial snowfall melting, only to be followed by another snow shower or hail, all within 24 hours. The likelihood of snowfall in Reykjavik increases sharply in the second half of October, but by May has largely ceased. In late winter, when temperatures are still low but the days

are longer, slush often causes considerable slipperiness on runways during daylight hours.

Reykjavik Airport is operated by ISAVIA, which has 240 staff serving in all parts of Iceland. The state-owned organisation places great emphasis on employee education, with skills being maintained through continuous training. Employees are required to hold a professional driver's license and attend courses on airport ground traffic procedures. In addition, they receive special training in clearing and sweeping runways; assessing the primary risk factors associated with runways, taxiways and ramps; and observing winter maintenance work procedures.

Employees closely monitor weather conditions and forecasts, and subsequently make the appropriate preparations. They have access to various measurements and estimates, including forecasts for wind, precipitation, air and runway temperature as well as ice forecasts for the area.

Sand and water

Strong emphasis is placed on environmentally friendly winter maintenance at Reykjavik Airport, as long as flight safety is not compromised. The primary environmental factors include selection of equipment and substances, and

# Cold calling

➤ TRAINING, INVESTMENT AND UNUSUAL METHODS COMBINE TO KEEP ICELAND'S REYKJAVIK AIRPORT ON THE MOVE IN CHALLENGING CONDITIONS.





#### AIRPORT FACTS

- It has an elevation of 45ft, or 13.7m.
- The coordinates of the airport centre are 64°07'48"N and 21°56'26"W.
- It covers an area of 120ha.
- Regular service hours are 07:00–23:00.

sound working procedures. Every effort is made to use only equipment that meets the highest environmental standards of the European Union.

With this in mind, rather than using chemicals for ice control, an unusual method has been developed that involves a mixture of sand and cold water in a ratio of 70/30. The result is that when the water freezes, the sand – which is spread evenly across the runway, thereby reducing the risk of it whirling up during take-offs – adheres to the surface and works like sandpaper. When the ice thaws, the sand, approximately 1,500t every year, is removed to prevent air traffic and wind causing drifting.

If it is suspected that runway friction has decreased, frictional properties are measured using airport surface testing equipment (ASFT). In snowfalls, the runways are swept prior to testing. If the test shows values below the minimum threshold established by the airport (0.4µ according to ICAO standards), an assessment is conducted to assess what measures should be taken to achieve the best results. The main factors to be considered include current temperature, humidity, wind and precipitation levels, together with the trend of these factors over the next hours. A separate ice forecast is also factored in. If the friction tests reveal inadequate braking conditions, the runways are sanded with or without water. In the event that the amount of precipitation is too high for snow removal equipment to be of use, further action is delayed until the precipitation ceases. The capacity of the snow removal equipment at Reykjavik Airport is sufficient to clear the runways in less than 30 minutes, assuming a 10cm layer of snow.

#### New equipment

This autumn, ISAVIA will receive new equipment from German company Schmidt, which will increase the efficiency of the snow-clearing services and increase its availability during inclement weather. This equipment consists of a towing vehicle, sweeper and a snow plough.

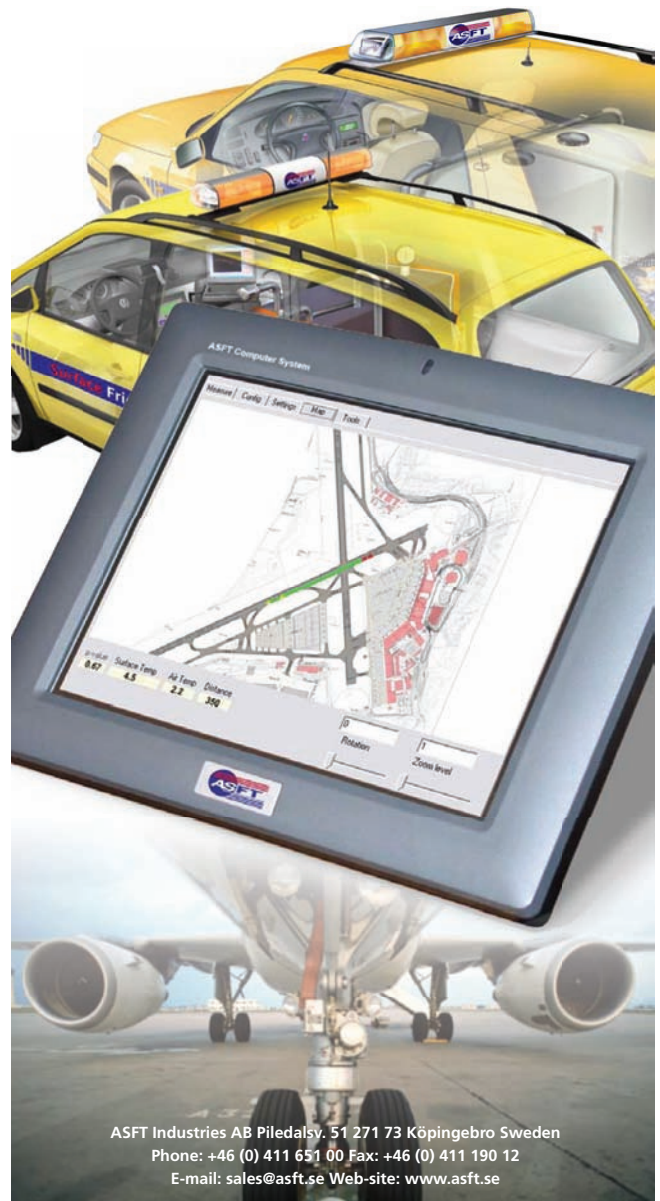
It is hoped the addition of the new sweeper, to operate alongside the highly trained staff and inventive eco-friendly method of coping with ice, will further enhance safety at Reykjavik Airport and increase the possibility of keeping the airport open during periods of heavy snow. ○



The World's Leading Manufacturer of  
Continuous Friction Measuring Equipment

## All the functionality that you can expect from a Runway Friction Tester

- Standard reliable proven techniques
- Ability to save GPS position of results
- Traceability of measure results
- Authentication of operators
- Global mapping service
- And more...



ASFT Industries AB Piledalsv. 51 271 73 Köpingsbro Sweden  
Phone: +46 (0) 411 651 00 Fax: +46 (0) 411 190 12  
E-mail: sales@asft.se Web-site: www.asft.se