



## Fan Blade De-icing

**Fan blade de-icing with cost cutting „EDE“**

**Under freezing weather conditions and precipitation, de-icing an aircraft on the ground before take off is crucial. Frozen contamination causes critical control surfaces to be rough and uneven, disrupting smooth air flow and degrading the ability of the wing to lift and increases drag. Fan blades, if frozen, e.g. caused by condensing humidity at low outside temperatures, tend to cause similar hazard effects.**



### CUSTOMER ADVANTAGES

- **fast de-icing**
- saves time and money
- mobile equipment
- adjustable height for different aircraft types

Since frozen fan blades cause overload and unbalanced mass that would, with a high likelihood damage the engine immediately, it is prohibited to start the engine when fan blade icing occurs.

Due to technical and dynamical reasons fan blades and propeller blades may only be de-iced by applying pure warm air at a limited temperature. Other commonly known technologies that require chemicals are strictly prohibited.

Lufthansa flight captain M. Liczbinski has developed an idea, (patent application pending ) which uses the ram air outlet energy, available at every aircraft with running APU, for fan blade de-icing purposes.

Based on theoretical analysis with practical tests LEOS has proved the feasibility of the concept. It is planned to practically test and prove the concept usability of the system during the upcoming winter season.

The diagram shows how the system works in principle. It is suitable for all kind of aircraft types with jet engines as well as propeller driven aircraft.

For further information please contact LEOS.

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