Structural repair in artic climate Greger Nilsson



Background

- Blade Solutions was funded in 2013 by Greger Nilsson
- Area of excellences: Blade heat repair and development Blade repair in cold climate
- Two patents: Methods to repair the carbon heat mats
 Damage resistant blade heat system



Resistive vacuum infusion





Vacuum infusion



Outside temperature -15°C



Curing and post curing



Outside temperature -15°C



Test specimen





Repair by handlayup





Repair by standard vacuum infusion





Repair by resistive vacuum infusion





Strengt of the interface between blade surface and repair patch







Blade inspection and fibre wrinkle defect







Remove gelcoat





Inside blade





Crack propagation





Double lap shear joint by resistive vacuum infusion





Repair inside blade by resistive vacuum infusion



Outside temperature -10°C



Carbon connection





Repair patch inside





Repair inside blade by resistive vacuum infusion



FLIR

5°C

Outside temperature -10°C



Results after removing bag





Filler and grinding





After applying gelcoat





Conclusions

- Structural blade repair is possible to perform year around in artic climate.
- It is possible to control the temperature inside the repair patch according to desired viscosity and curing cycle.

Please feel free to contact: Greger Nilsson at Greger.nilsson@bladesolutions.se +46 70 66 499 21

