

Icing wind tunnel

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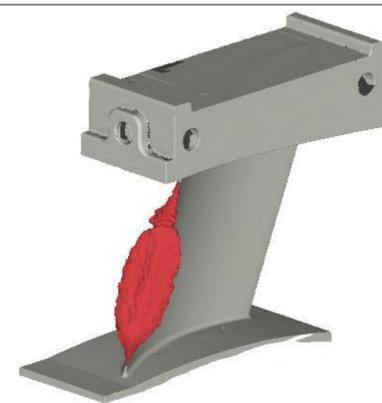
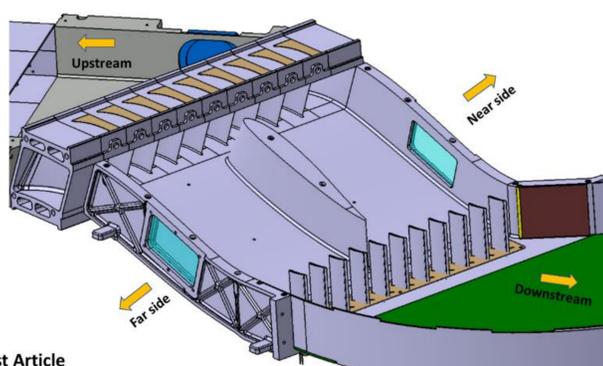
Rotating spinner in icing conditions

- Understanding how ice grow on rotating component similar to engine spinners under various icing environment and representative speeds
- Understand shedding behaviour and research how it can be modelled for frequency of shedding and size of blocks
- Enables assessment of the effects of coatings and blade shape for design analysis



Main icing tunnel

- Enables the testing of all sorts of ice protection system at the component level at 1:1 scale and representative speeds for the aeronautical field
- Understand the challenges posed by pushing the ice protection system performance while reducing its energy demand
- Ensure ice protection systems are tested in a wide range of icing conditions
- Understand ice to substrate adhesion interaction and ice characteristic depending on its conditions of formation



Ice Genesis - Cascade rig

- Representative geometry of an engine intake specifically designed to integrate within the Cranfield icing wind tunnel
- Enables the assessment of the effectiveness of electro-thermal ice protection system embedded inside the blades in a wide range of icing conditions
- The unique design of the frame allows the front blades to be individually extracted for high accuracy 3D laser scanning technique to be used
- Enables the build up of a database for complex 3D numerical models to be validated at the industrial level

Industrial customers & Academic Partners amongst many others

