**LUWA AIR ENGINEERING**

1600MM AXIAL FAN BLADE

**KEY REQUIREMENTS**

- Replace aluminium alloy
- Reduce thickness and weight of fan blade
- Withstand 920 Pa of static pressure, high relative humidity (90-95%), and max temperature of 40°C

**AVIENT SOLUTION**

Complēt™ Fiber Long Reinforced Thermoplastic

**WHY AVIENT?**

- Re-designed the blade, utilizing 3D modelling and mold flow analysis services from Avient Design
- Simulated mechanical load to determine which new design would provide optimal performance
- Improved strength utilizing carbon fiber and enabled an injection moldedable part, streamlining production
- Reduced blade thickness to 35% of the original and blade weight from 3.5kg to 800gms
- Improved overall efficiency of fan with thinner, light weight blade that cuts through the air

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