



## Direct Plating on Composites

*Electroforming of nickel abrasion guards as a separate component is already a well-established approach to extending the service life of aerospace propellers and rotor blades.*

Various application methods have been developed and are successfully used for bonding a metal abrasion guard to a carbon fiber-reinforced polymer (CFRP) rotary blade. This protects the leading edge and extends the service life of the blade. Alpha Metalcraft Group (AMG) has been supplying the aerospace market with electroformed abrasion guards for many years. Today, the company is leveraging its advanced engineering and technical capabilities to develop a new way to directly plate nickel and nickel-cobalt guards on to composite rotor blade structures.

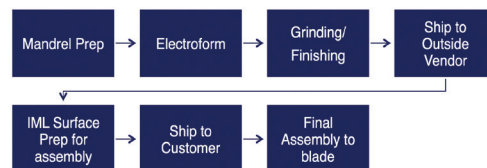
### Benefits of **Direct Composite Plating** include:

- Fewer assembly processes for reduced manufacturing time.
- Lower overall manufacturing costs.

AMG is currently working in cooperation with several aerospace suppliers to develop the specific processes required to support this vision, and drive this exciting advancement in the field of material engineering and rotary blade design. Our goal is to continue to optimize the electrodeposition process as applied to composite blade plating as we look to explore the scalability of this technology for high-volume eVTOL blade manufacturing.

### Leading Edge Guard (LEG) Roadmap

#### Current Process



#### AMG Vision



*Let our decades of experience help you  
simplify your assembly process.*