

HYBRID METAL FAN BLADE

ABSTRACT

A fan blade is disclosed comprising a lightweight metallic airfoil portion and a high-strength sheath portion. The airfoil portion has a forward airfoil edge, a first airfoil surface, and a second airfoil surface. The sheath portion has a sheath head section, a first sheath flank, and a second sheath flank, both flanks extending chordwise from the forward sheath section. The sheath portion is bonded to the airfoil portion such that the sheath head section covers the forward airfoil edge, defining a blade leading edge. The first sheath flank covers a portion of the first airfoil surface proximate the airfoil forward edge, jointly defining a blade suction surface. The second sheath flank covers a portion of the second airfoil surface proximate the airfoil forward edge, jointly defining a blade pressure surface.

Fig 2.