ABSTRACT

METHOD FOR IMPROVING CROSSWIND STABILITY OF A PROPELLER DUCT AND A CORRESPONDING APPARATUS, SYSTEM AND COMPUTER READABLE MEDIUM

Various embodiments provide a method for improving crosswind stability of a propeller duct. The method comprises defining an initial duct section based on a predetermined airfoil section having an initial value of a geometric parameter such that the geometric parameter of a portion of the initial duct section has the initial value. The method also comprises determining fluid flow paths around the initial duct section when subject to a crosswind having a predetermined crosswind speed. The method further comprises varying the initial value of the geometric parameter of the initial duct section to a threshold value which causes separation of fluid flow paths at a windward side of the initial duct section at and above the predetermined crosswind speed to form an improved duct section. Various embodiments provide a corresponding apparatus, system and/or computer readable medium.

FIGURE 1