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- (54) **Title:** OPTICAL DETECTION OF AIRFOIL AXIAL POSITION WITH NSMS

(57) **Abstract:** A method for determining axial location of rotor blades is provided. The method may monitor an output signal of a sensor configured to detect the proximity of the rotor blades, wherein at least one of the rotor blades being marked with a position marker that is configured to cause a recognizable inconsistency in the output signal only when the rotor blades rotate at a known default axial position. The method may further determine the axial displacement of the rotor blades if the inconsistency is not detected in the output signal for at least one full revolution of the rotor blades.

