Abstract

Induced Draft Fan is part of the power plant system. One of the components of the Induced Draft Fan (IDF), blade suffered damage to its leaves. This axial compressor Induced Draft Fan’s has 16 pieces of blades, and blades work as Controllable Pitch Propeller. On Controllable Pitch Propeller type (CPP) leaf blade changes its angle to adjust the speed according to RPM desired.

Under normal circumstances, all the blade angle will change according to the change of pace, but in certain circumstances, three blades were damaged because the pitches were not uniform. The purpose of this study was to determine how fluid flow affects the force on the blade and the hub, when the leaves on the fan blade is damaged.

The analysis method will be using CFD (Computational Fluid Dynamics). The Variables are varied pitch and propeller rotation.

Keyword : Induced Draft Fan, Blade, Controllable Pitch Propeller, Computational Fluid Dynamics
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