# ANALISIS KEGAGALAN KIPAS INDUCE DRAF FAN (ID FAN) PADA BOILER WUXIHUAGUANG KAPASITAS 10.000kg/jam

**Usep Junaedi**

**NPM. 158070019**

Jurusan Megister Teknik mesin UNPAS e-mail : [Usepjunaedi029@gmail.com](mailto:Usepjunaedi029@gmail.com)

***ABSTRACT***

*Boilers or ”Ketel uap” are converters of water into water vapor, in the process of energy conversion, the boiler functions to convert chemical energy stored in fuel into heat energy that is transferred to the working fluid. One of the tools in a steam boiler is the indueced draft fan (id Fan). This tool works to suck hot air mixed with coal ash in the combustion chamber and then push the air out through the chimney.*

*In carrying out the function of sucking and pushing air from the combustion chamber to free air, the id fan turns out to have a failure, where a failure occurs in the impeller, failure occurs due to residual stress in the HAZ region generated by the welding process at making the impeller.*

*The formation of residual stresses in the welding process, welding metals and parent metals undergo a thermal cycle of heating and cooling. This thermal cycle causes stresses and stresses which in turn result in residual stresses and distortion. Residual stress can cause shaking, reduced fatigue resistance, reduced welding strength and corrosion resistance.*

*These conditions will cause a shorter service life, so the costs for purchasing these components are greater. To anticipate this, failure analysis is needed to find the root of the problem, so that improvements can be made to prevent similar incidents.*

*Keywords: boiler, id fan (induced draft fan), crevice corrosion, HAZ, welding*

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