

A NEW APPROACH TO OVERCOME OF BOILER FEED WATER PUMP SEIZURES

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ABSTRACT

The seizures of boiler feed water pump cause severe damage to critical parts and even may led to replace complete Electric motor. Changing of suction strainer mesh size, verification of pump heat rise calculation at minimum continuous flow, checking of rotor centering, verification of instrumented flow control recycle valve operation and investigation on possible differential magnetic pull of motor may not solve the issue. Even with stringent grade (ISO 1940 Grade -1) of Rotor balancing, increasing the rotor stator gap and lowering vibration trip setting may not render much help. The phenomenon of mismatch in flow / fluctuations are experienced many a times during start up and lead to subsequent seizures of pump due to localized flashing of hot water. These fluctuations are random in event history and quite unpredictable. The consequential damage of motor due to pump seizure is explained in this paper as case study to define the problem statement.

This paper provides the details of methods adopted to successfully eliminate the pump seizure problem in chronological order. The proposed method can be implemented in any installation with similar duty condition.

KEYWORDS: Fishbone Analysis, Ni – Resist, Rub Tolerant, Seizure