

855 – The importance of transformer through fault monitoring

Author: Drew Welton (Intellirent)

Abstract: Transformers for high and medium voltage applications are often times at risk of mechanical failure due to through fault conditions. Modern transformer protective relay systems typically have through fault monitoring, but recent studies show that they are often disabled. This paper will show a case study of mechanical failure at an industrial location due to high and recurring through faults, unfortunately not captured by the protective relay system. We will discuss the potential damage, proper monitor settings based on ratings, and transformer diagnostic techniques used to determine possible mechanical failures. We will also discuss testing the monitoring system to assure it is properly set. In this presentation, we are bridging the gap between protective relay settings, and transformer diagnostic testing procedures for mechanical failure.