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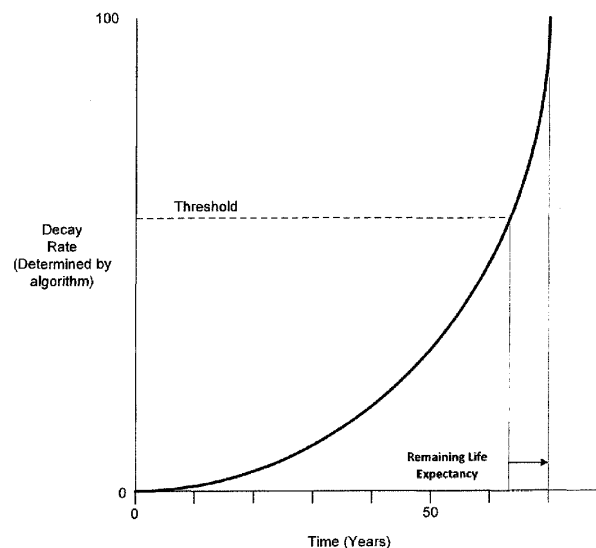


Figure 5

(57) Abstract: The inventive method of monitoring the condition of the circuit comprises of establishing a known baseline signal for a specific type of circuit (each is somewhat different) and defining these characteristics in terms of the lead and trailing edge angular components (@zero crossing point), the voltage (amplitude), and the period (time length) of the waveform. Ideally the angular component of the square wave should be vertical, or at 90 degrees to x-axis. The baseline non-regular square wave that is composed of current, voltage, any harmonic of these, or the combination of these signals which best indicate predictive measurement attributed to the specific type of circuit being monitored. Future wave forms indicate the rate of decay based upon the aggregated angular, amplitude, and period components of the zero-crossing points when compared to the baseline signal and/or prior waveform of the specific splice under observation. The rate of decay is projected to determine the life expectance of the specific circuit.

[Continued on next page]

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