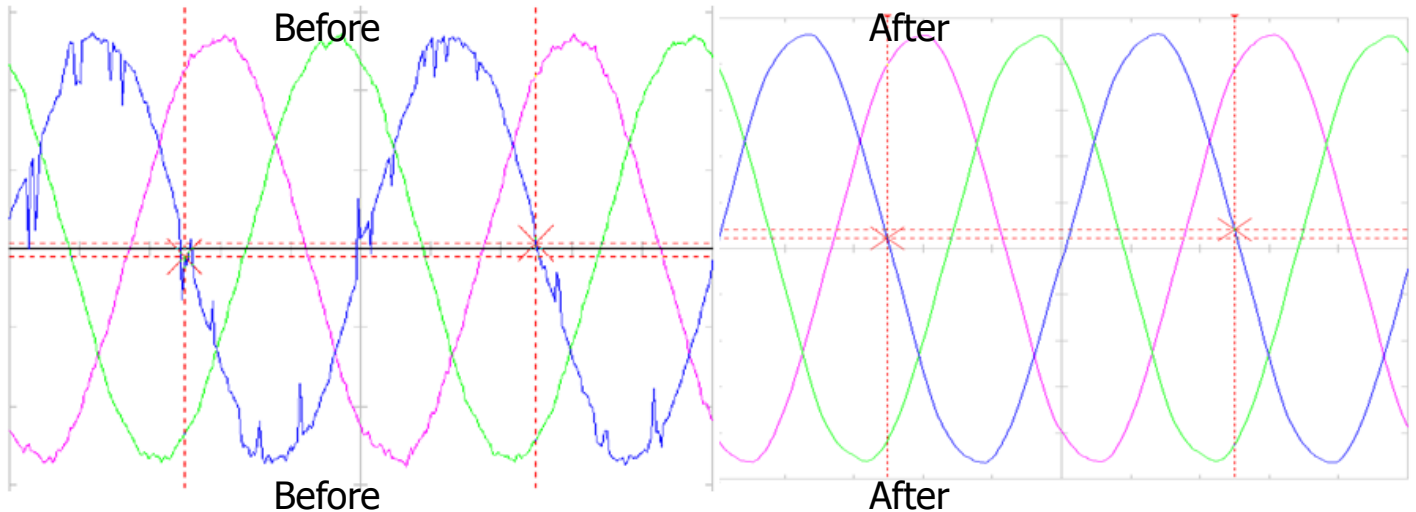


Why not Save Money, Save Lives, and Save Aggravation?

This is how an auto-parts manufacturer improved uptime in a CNC machine facility. In this test, one CNC machine's Voltage Harmonics went from 7% to 1%. One **AFPT** was installed in place of each Delta / Wye Transformer. Problem Solved!



HARMONICS TABLE				
	0:02:30			
VoIt	A	B	C	N
THD% _r	7.1	6.8	7.4	77.7
H3% _r	0.3	0.6	0.3	5.4
H5% _r	5.4	5.0	5.7	8.3
H7% _r	1.0	1.0	1.1	6.2
Amp	A	B	C	N
H3% _r	11.8	8.7	9.2	1.4
H5% _r	75.1	66.4	66.5	15.0
H7% _r	32.4	29.0	28.6	3.1
02/16/05 17:05:15 400V 60Hz 3Ø WYE DEFAULT				
U&A BACK TREND HOLD RUN				

HARMONICS TABLE				
	0:01:10			
VoIt	A	B	C	N
THD% _r	1.5	1.6	1.3	13.9
H3% _r	0.3	0.9	0.4	2.6
H5% _r	1.3	1.2	1.0	4.1
H7% _r	0.5	0.5	0.6	3.2
Amp	A	B	C	N
H3% _r	4.9	1.5	5.9	0.3
H5% _r	3.3	3.6	2.8	0.2
H7% _r	1.3	2.1	1.2	0.3
02/18/05 16:36:11 400V 60Hz 3Ø WYE DEFAULT				
U&A BACK TREND HOLD RUN				

These machines were faulting, causing the CNC control, PLC control Operator Station Computer and the drives to lock up every day. Maintenance electricians disconnected the power feed from the Delta - Wye transformer (Before) and connected it to the Delta/Delta power transformer which had a **Phaseback VSGR** on the secondary. (After) = **AFPT Arc Flash Preventing Transformer**.

The results were very conclusive and very surprising to the plant operations people. They went from faulting multiple times per shift to never faulting. Up-time, in the plant, went from 50% to 85% so the factory did not have to ship parts out for machining and they saved \$9.00 per part. 33,000 parts per month saved \$297,000 per month. That was a payback in less than one week. Install **AFPT** in the first place, so you can Save money, Save Lives, and Save Aggravation.

Give me a call to discuss your applications. Cy Cates

***1 OF 10 GOOD REASONS TO
CHANGE YOUR TRANSFORMER SPECIFICATION.
Be CAREFUL WHAT YOU CHOOSE***

Delta / Wye Transformer w NGR/HRG or AFPT

Harmonics Isolation	No	Yes
Arc-Flash / Fault prevention	No	Yes
Voltage Spikes / High Voltage corrected	No	Yes
Phase Voltage Imbalance corrected	No	Yes
Phase Loss from high impedance grnds fixed	No	Yes
Phase angle differential maintained	No	Yes
Phase voltage instability corrected	No	Yes
Phase voltage harmonics improved	No	Yes
Waveform distortion corrected	No	Yes
Noisy ground reference /frequency corrected	No	Yes
Arcing ground-faults corrected and alarmed	No	Yes
Operational efficiency reduce KW & grnd current	No	Yes

Harmonics related Power Quality events affecting Power Systems can cause downtime. Solutions

Drives /Rectifiers cause Harmonics Tuned Capacitors or **AFPT**

Grnd Current costs money continuously Reactor or **AFPT**

Fundamentally improve your power system, continue to operate, rather than fault and replace damaged equipment.

Replace your distribution transformers with **AFPT** and eliminate SPDs, Harmonic Filters, Voltage Regulators, NGR or HRG
SAVE MONEY & SAVE LIVES by PREVENTING ARC FLASH!

Give me a call to discuss your applications.