

Power & Energy

FULL		0:19:08	
	A	B	Total
kW	0.5	0.6	1.1
kVA	0.6	0.6	1.3
kVAR	0.3	0.3	0.0
PF	0.85	0.85	0.85
DPF	0.86	0.86	0.86
kWh	0.171	0.173	0.344
kVAh	0.200	0.204	0.404
kVARh	0.104	0.107	0.003
START 01/03/03 10:42:25		0:19:08	
PULSE CNT ON OFF		CLOSE ENERGY	MANUAL COUNT+!
			RESET ENERGY

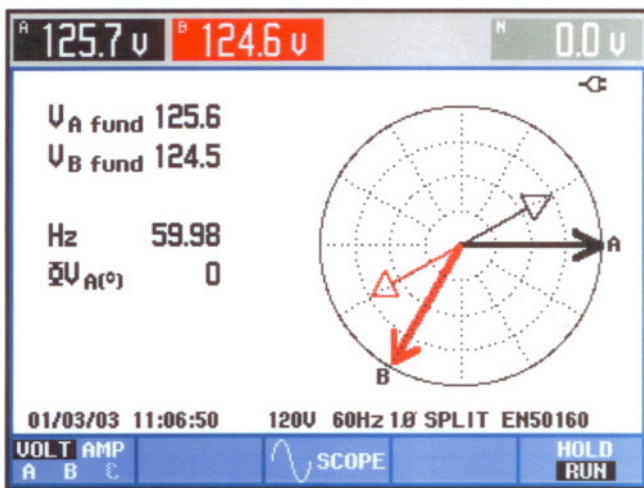
Test Control, 220VAC Air conditioner, run for 19 minutes 8 second

Note, even Kwh readings on A and B phase

Volts/Amps/Hertz

		0:04:19	
	A	B	N
V rms	123.9	122.8	0.0
V pk	171.2	169.3	0.0
CF	1.38	1.38	OL
Hz	59.84		
	A	B	N
A rms	5	5	0.1
A pk	9	9	0.1
CF	1.79	1.79	OL
01/03/03 10:35:21		120V 60Hz 1Ø SPLIT EN50160	
VOLTAGE ▲ ▼		TREND	
		HOLD RUN	

Test Control – Meter Readings



Test Control – Please note phase angle between current and voltage



Test Control- Graph indicating continuous current during test

The ER Water Torch was tested against the Control sample, the torch was operated at approx. 720 liters/hour of gas production. 1 liter every 5 seconds, with the following results.

Water displacement method was used to verify gas production rate

In addition a standard GE (2) phase watt-hour meter was put in parallel with the Fluke 463 Power Quality Analyzer as a control standard. Readings were within .2% of each other

Power & Energy				
FULL		⊖	2:30:46	☰ ←
	A	B	Total	
kW	2.1	0.1	2.1	
kVA	3.2	3.3	6.5	
kVAR	÷ 2.4	÷ 3.3	÷ 5.7	
PF	0.65	0.03	0.33	
DPF	0.89	0.04	0.46	
kWh	1.972	0.113	2.085	
kVAh	3.096	3.173	6.269	
kVAh	÷2.384	÷3.170	÷5.555	
START 01/03/03 13:31:43		⊖	1:00:03	
PULSE CNT		CLOSE	MANUAL	RESET
ON OFF		ENERGY	COUNT+1	ENERGY

ER Water Torch after 1 hour, 3 seconds. Note Kwh reading A and B phase

Also, capacitive reading on both A and B phase, note larger KVAR reading on B phase

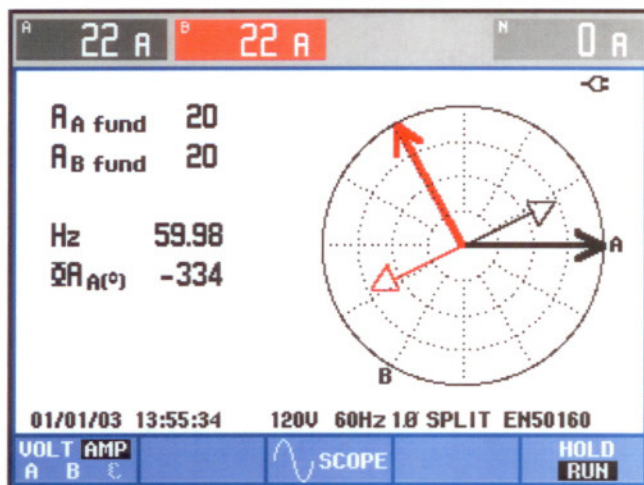
Power & Energy				
FULL		⊖	2:31:01	☰ ←
	A	B	Total	
kW	1.9	0.1	2.0	
kVA	3.0	3.1	6.1	
kVAR	÷ 2.4	÷ 3.1	÷ 5.5	
PF	0.62	0.03	0.32	
DPF	0.90	0.06	0.47	
A rms	24	24		
	A	B		
V rms	125.0	127.5		
01/03/03 14:32:02 120V 60Hz 1Ø SPLIT EN50160				
VOLTAGE	ENERGY		TREND	HOLD
▲				RUN

Meter readings taken on ER Water Torch during above KWH test

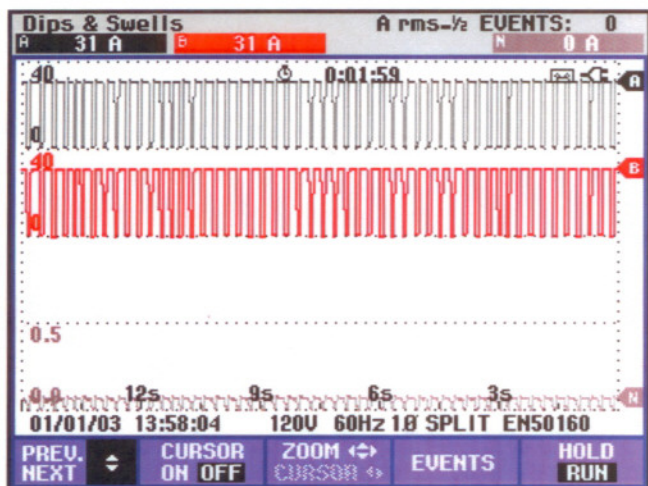
Again, note KW and PF reading between A and B phase



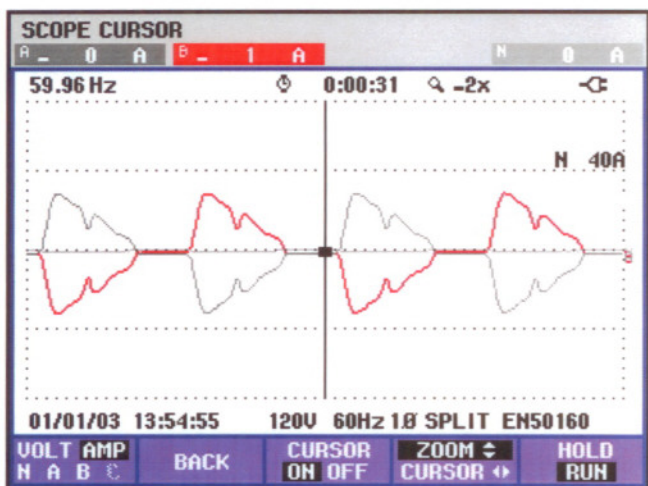
Phasor diagram (Voltage) of ER Water Torch in operation, note phase angle difference



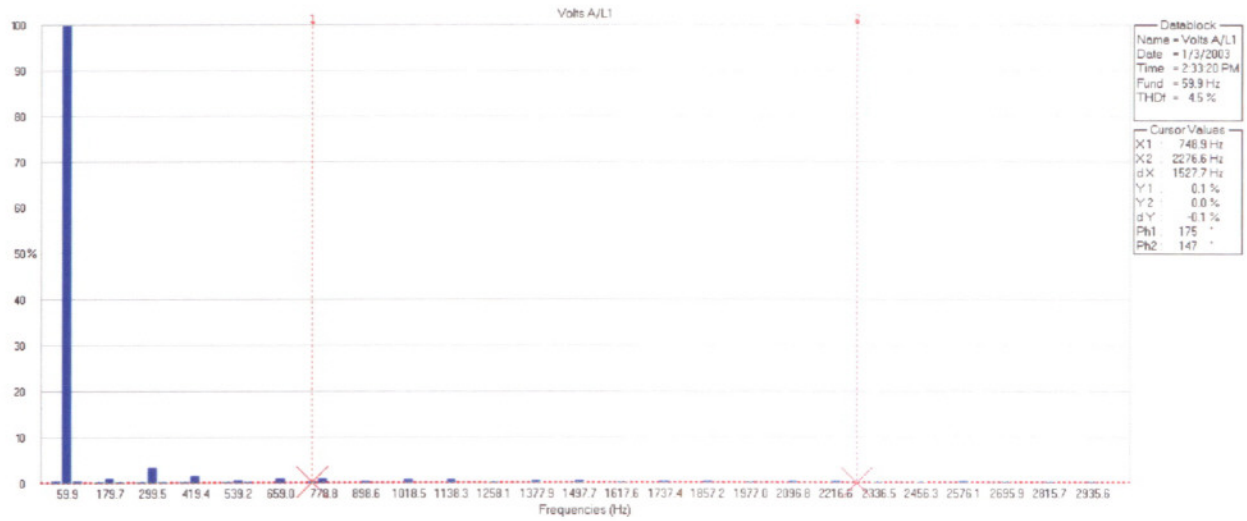
Phasor diagram (Amperage) of ER Water Torch in operation. Note as above the phase angle difference between current and voltage of each phase...



Pulses applied to ER Water Torch A and B phase



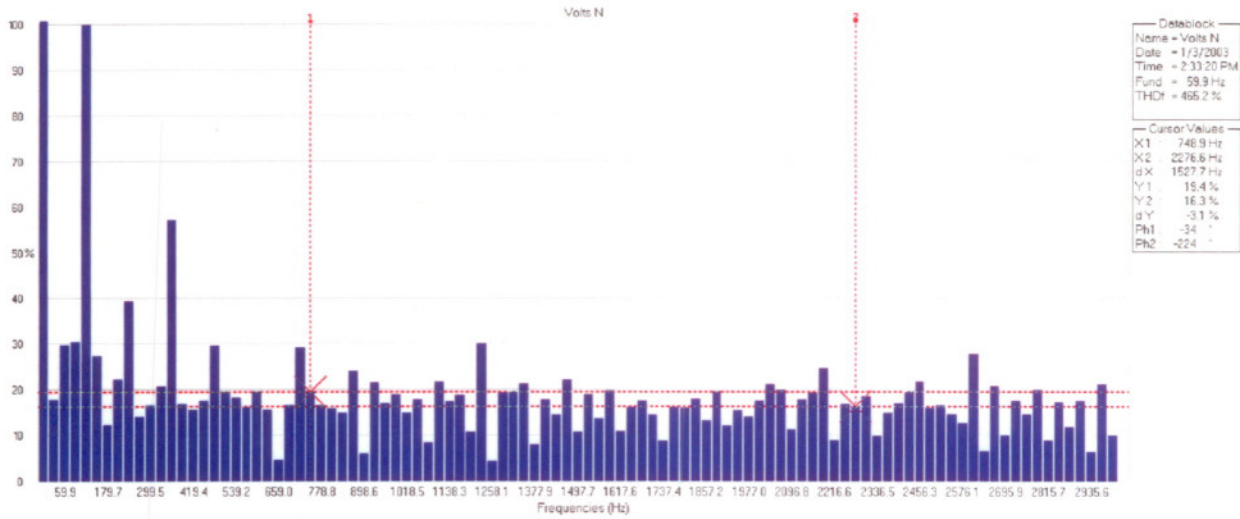
Scope wave form of ER water torch in operation (amperage)



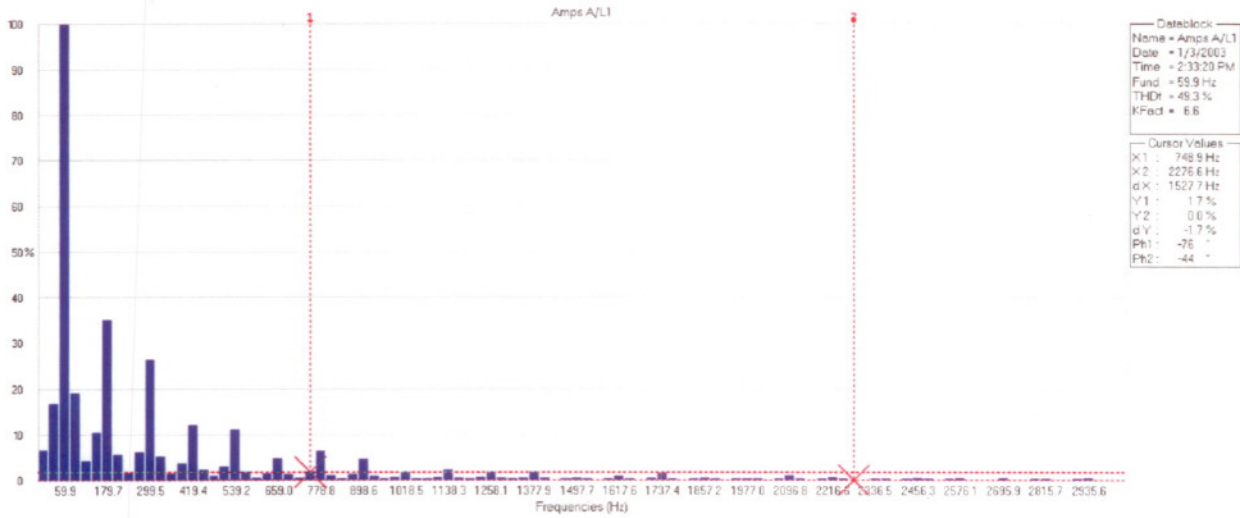
Volts A/L1 Harmonic Graphic



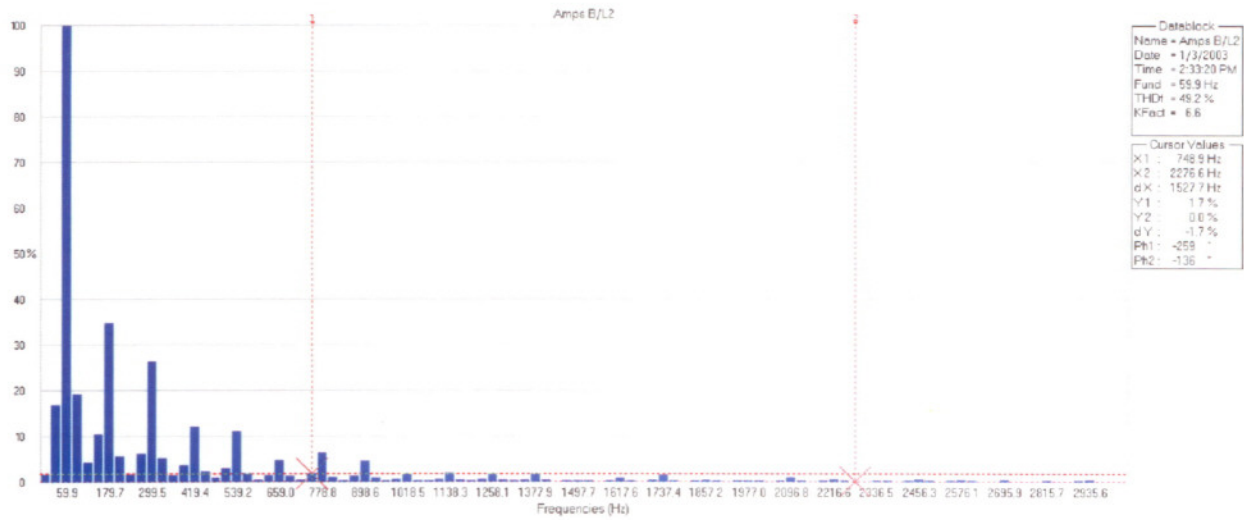
Volts B/L2 harmonic graphic



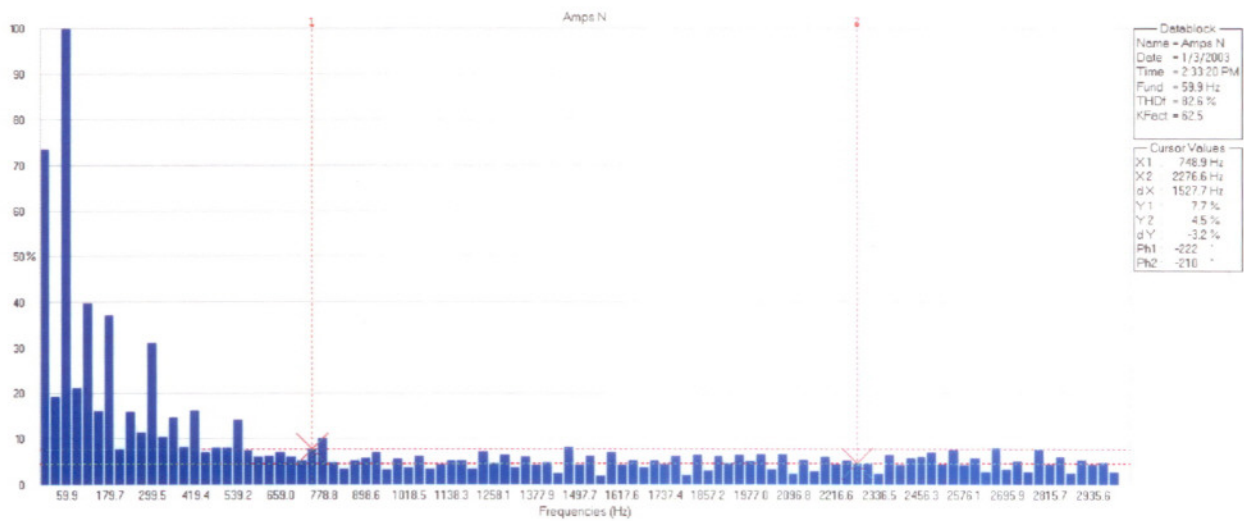
Volts Neutral Harmonic Graphic



Amps A/L1 Harmonic graphic



Amps B/L2 Harmonic Graph



Amps Neutral Harmonic Graph