

04<sup>th</sup> June 2012

Customer,  
Address

Attention Mr

**Re: \*\*\*\*-Power Factor Switchboards**

After carrying out testing on power factor equipment installed on site, we enclose the following reports on condition of capacitors and associated equipment installed. Tables attached for each unit tested.

We carried out test on each Mains Supply. Regulators working correctly, power factor displayed agrees with test unit.

**1 x 25kVAr and 4 x 50kVAr steps.**

The Power Factor regulator controlling this unit has a cracked screen and needs to be replaced. We noticed a cable connected to the Step 3 contactor has started to discolour, we checked tightness of connection and found a loose connection. Replaced boot lace crimp and re terminated.

On arrival to site the PF board fan grills were completely blocked and inside was covered in dust. Fans grills and mediums need to be regularly cleaned to keep the unit working at its optimal level. Excessive heat will reduce life of capacitors.

All Capacitors tested are working at their recommended outputs

Yours truly,

Max McKinnon

## **Sample PF Test Report**

### **Step 1 - 25 kVAr Step**

Date Time	Reactive power L: Phase 1 + (kvar)	Reactive power L: Phase 2 + (kvar)	Reactive power L: Phase 3 + (kvar)	Reactive power L: Phase III + (kvar)
25/08/2015 15:31:40	9.70	9.40	9.36	28.45
25/08/2015 15:31:50	9.71	9.40	9.36	28.47
25/08/2015 15:32:00	9.72	9.42	9.40	28.54
25/08/2015 15:32:10	9.75	9.45	9.40	28.59
25/08/2015 15:32:20	9.73	9.41	9.38	28.52
25/08/2015 15:32:30	9.72	9.41	9.39	28.52

### **Step 2 - 50 kVAr Step**

Date Time	Reactive power L: Phase 1 + (kvar)	Reactive power L: Phase 2 + (kvar)	Reactive power L: Phase 3 + (kvar)	Reactive power L: Phase III + (kvar)
25/08/2015 15:33:55	18.57	18.01	17.85	54.44
25/08/2015 15:34:00	18.53	18.05	17.87	54.45
25/08/2015 15:34:10	18.64	18.05	17.91	54.59
25/08/2015 15:34:20	18.58	17.98	17.83	54.39
25/08/2015 15:34:30	18.56	17.98	17.82	54.37
25/08/2015 15:34:40	18.58	18.00	17.86	54.45

### **Step 3 - 50 kVAr Step**

Date Time	Reactive power L: Phase 1 + (kvar)	Reactive power L: Phase 2 + (kvar)	Reactive power L: Phase 3 + (kvar)	Reactive power L: Phase III + (kvar)
25/08/2015 15:36:02	18.75	18.16	18.10	55.01
25/08/2015 15:36:10	18.79	18.15	18.10	55.04
25/08/2015 15:36:20	18.81	18.19	18.11	55.11
25/08/2015 15:36:30	18.80	18.19	18.12	55.11
25/08/2015 15:36:40	18.79	18.16	18.13	55.09
25/08/2015 15:36:50	18.79	18.15	18.10	55.04

## ***Sample PF test Report***

### **Step 4 50 kVAr**

Date Time	Reactive power L: Phase 1 + (kvar)	Reactive power L: Phase 2 + (kvar)	Reactive power L: Phase 3 + (kvar)	Reactive power L: Phase III + (kvar)
25/08/2015 15:27:42	18.51	18.03	17.88	54.42
25/08/2015 15:27:50	18.58	18.05	17.90	54.54
25/08/2015 15:28:00	18.56	18.07	17.91	54.54
25/08/2015 15:28:10	18.55	18.04	17.86	54.45
25/08/2015 15:28:20	18.55	18.07	17.89	54.52
25/08/2015 15:28:30	18.65	18.15	17.98	54.78

### **Step 5 50 kVAr**

Date Time	Reactive power L: Phase 1 + (kvar)	Reactive power L: Phase 2 + (kvar)	Reactive power L: Phase 3 + (kvar)	Reactive power L: Phase III + (kvar)
25/08/2015 15:29:50	18.50	18.07	17.96	54.52
25/08/2015 15:30:00	18.49	18.04	17.95	54.47
25/08/2015 15:30:10	18.47	18.01	17.91	54.39
25/08/2015 15:30:20	18.46	17.98	17.89	54.33
25/08/2015 15:30:30	18.44	17.95	17.87	54.27
25/08/2015 15:30:40	18.43	17.92	17.84	54.20
25/08/2015 15:30:50	18.41	17.89	17.82	54.14