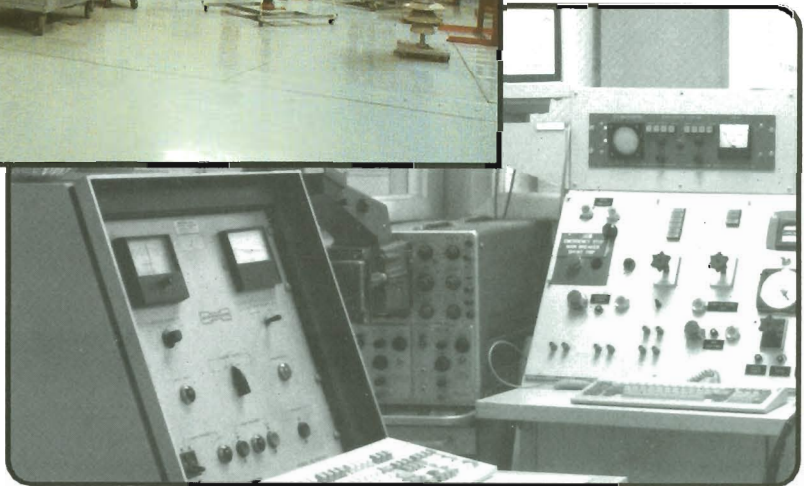
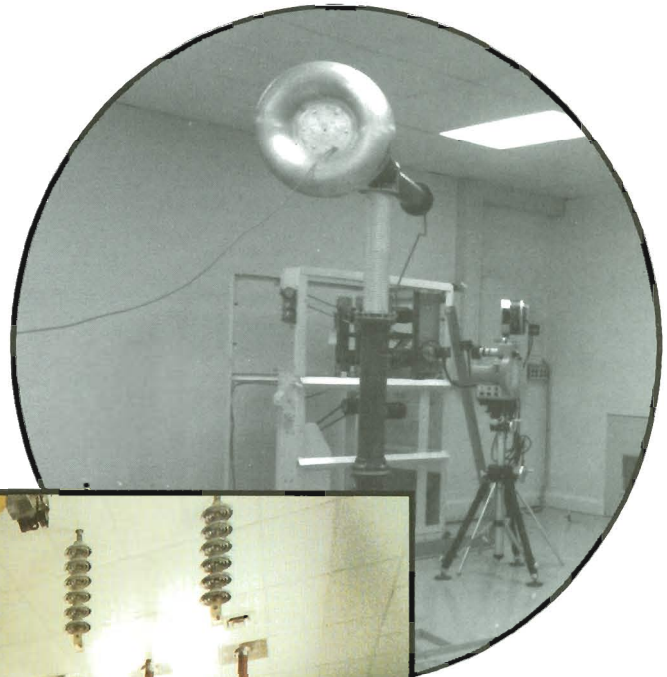


**Powercon Corp**  
SEVERN MD



*A MEDIUM-DUTY  
COST EFFECTIVE  
ELECTRIC POWER*

## **TESTING LABORATORY**

# MEDIUM-DUTY, COST EFFECTIVE, EL

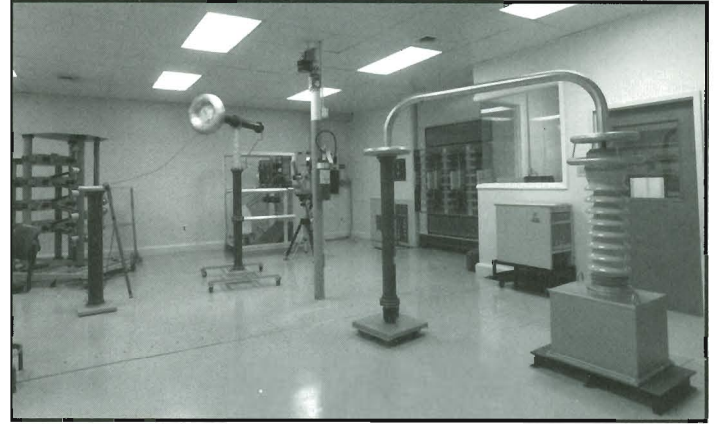
## HIGH POTENTIAL TESTING

The test capabilities as listed on insert can determine:

1. Conformance to ANSI and IEEE standards.
2. Verification that new or existing electric power equipment meets purchasers required specifications.
3. Performance OF electrical or mechanical products for R&D investigations.

The cost effective performance is not burdened by high overhead and large power demand charges. Arrangements for testing are flexible.

The broad range of quality testing is kept in strict confidence with only the purchaser having access to the test results.



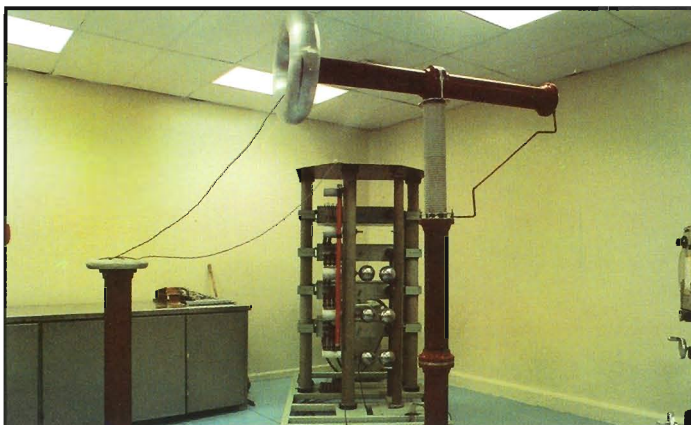
Above is shown the 70kV Hi-Pot/Partial Discharge - Corona Test Equipment

## IMPULSE TESTING



400kV Impulse Test on Standoff Insulator and Insulated Bus using 700kV Generator.

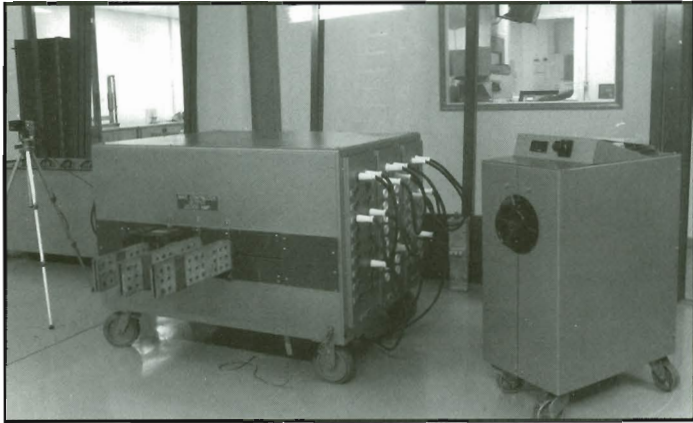
Below is a 400KV Generator. When both are connected in series, they can deliver 1,100 kV.



100mS/Sec. Dual Channel Digital Storage Oscilloscope and Impulse Generator Controller

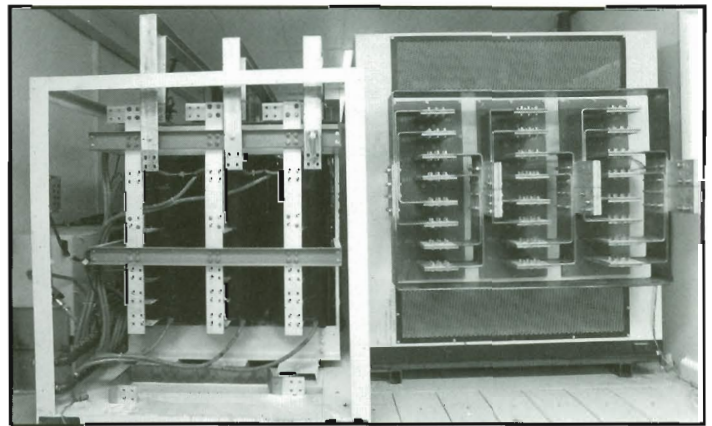
# ELECTRIC POWER TESTING LABORATORY

## CURRENT TESTING

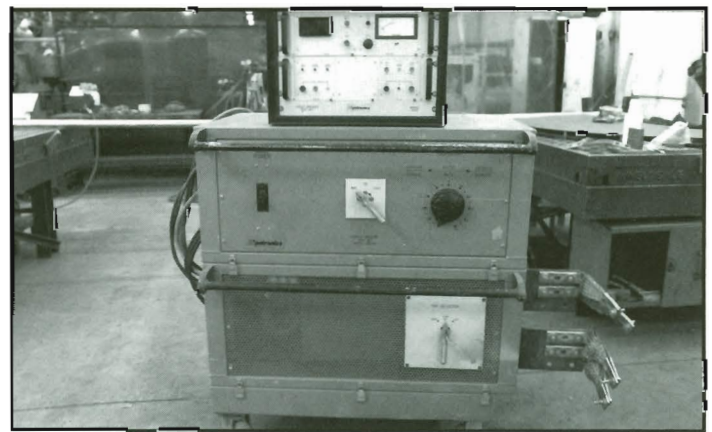


**HIGH CURRENT POWER TRANSFORMERS**  
Variable voltage taps capable of delivering up to 100,000A within selective impedances.

**CONTINUOUS CURRENT**  
Continuous current tests of up to 20,000A, 3-phase, with current equalizer. Temperature/Current records of up to 120 points can be recorded simultaneously at prescribed intervals on programmable data collection system.



**100 Channel Programmable Data Logger**

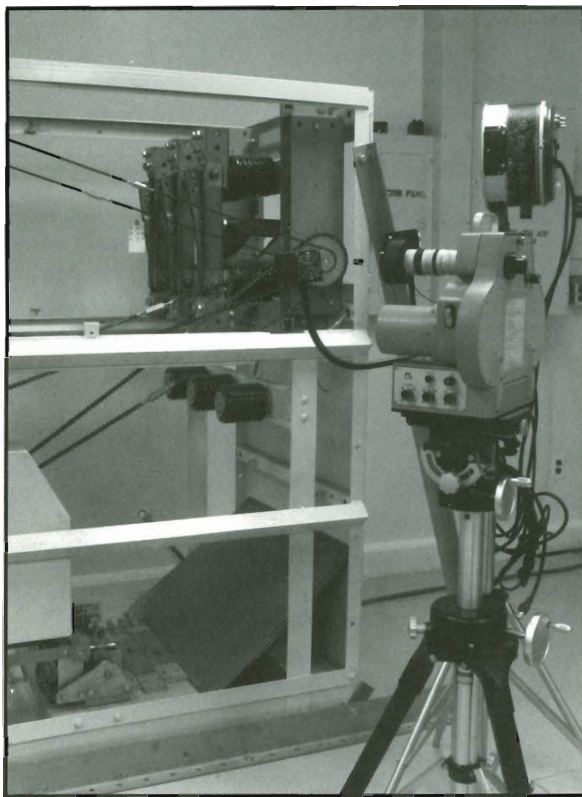


**High Current Breaker Test Set**

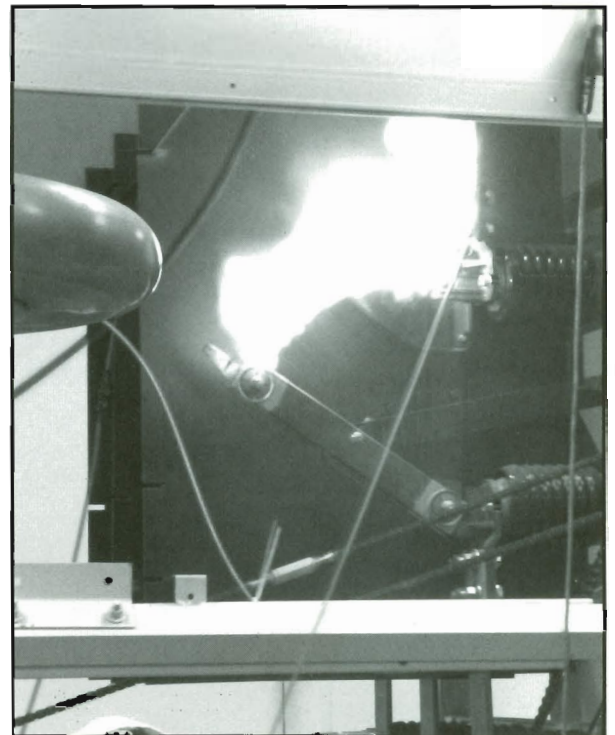
## CONTROL ROOM AND HIGH-SPEED FILMING



**CONTROL ROOM**  
with observation window of test floor



**Mechanical Operation effects being recorded on High Speed Camera**



**Magnetizing Currents of 22A at 17kV**

P. O. BOX 477  
1551 FLORIDA AVENUE  
SEVERN, MARYLAND 21144

Baltimore: 410-551-6500  
Washington: 301-621-7400  
TOLL FREE: 1-800-638-5055  
FAX: 410-551-8451



## LABORATORY CAPABILITIES\*

LOW-VOLTAGE HIGH AND MEDIUM CURRENT THERMAL TESTING 60 HZ - 2,000 KVA/600 KW - THREE-PHASE OR SINGLE-PHASE			
MAXIMUM LINE-LINE VOLTAGE VOLTS	NOMINAL CURRENT AMPERES RMS-SYM		
	CONTINUOUS DUTY	1 HOUR DUTY*	5 MINUTE DUTY*
10 AND BELOW	27,000	34,000	-----
15	27,000	34,000	-----
25	27,000	33,000	38,000
35	27,000	31,000	40,000
70	15,000	-----	42,000
125	1,250	2,000	3,000
208	1,500	2,500	3,600
280	1,600	2,700	3,900
480	2,300	-----	-----
600	1,800	-----	-----
700	1,500	-----	-----

\*DUTY CYCLE IS ON FOR INTERVAL SHOWN THEN OFF FOR TWO HOURS

HIGH-VOLTAGE THERMAL TESTING 60 HZ - 2,000 KVA/600 KW - THREE-PHASE OR SINGLE-PHASE			
MAXIMUM LINE-LINE VOLTAGE VOLTS	NOMINAL CURRENT AMPERES RMS-SYM		
	CONTINUOUS DUTY	1 HOUR DUTY*	5 MINUTE DUTY*
1,300	500	-----	-----
2,400	450	-----	-----
4,160	260	-----	-----
12,470	35	58	70
13,200	35	58	70
13,800	35	58	70
14,400	35	58	70
25,000	4	6	10
34,500	4	6	10

\*DUTY CYCLE IS ON FOR INTERVAL SHOWN THEN OFF FOR TWO HOURS

DIRECT CURRENT TESTING MEDIUM CURRENTS	
MAXIMUM VOLTAGE VOLTS	NOMINAL CURRENT AMPERES
160	3,000
500	1,000



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\*(SUBJECT TO AVAILABILITY)  
(POWER FREQUENCIES OF 45-65 HZ AND 400 HZ ALSO AVAILABLE)

<b>MOMENTARY HIGH CURRENT TESTING THREE-PHASE OR SINGLE-PHASE - 60 HZ</b>			
<b>MAXIMUM LINE-LINE VOLTAGE VOLTS</b>	<b>NOMINAL CURRENT AMPERES ASYM</b>	<b>NOMINAL CURRENT AMPERES RMS-SYM</b>	<b>TIME CYCLES</b>
60	30,000	25,000	10
52	35,000	30,000	10
45	40,000	35,000	10
30	61,000	50,000	10

<b>SHORT CIRCUIT HIGH CURRENT TESTING THREE-PHASE OR SINGLE-PHASE - 60 HZ</b>		
<b>MAXIMUM LINE-LINE VOLTAGE VOLTS</b>	<b>NOMINAL CURRENT AMPERES RMS-SYM</b>	<b>TIME SECONDS</b>
70	12,500	2
60	19,000	2
46	25,000	2
40	30,000	2
30	38,000	2

<b>EXCITATION CURRENT INTERRUPTION TESTING THREE-PHASE - 60 HZ</b>	
<b>MAXIMUM VOLTAGE VOLTS</b>	<b>NOMINAL CURRENT AMPERES RMS</b>
17,000	24
<b>CABLE CHARGING INTERRUPTION TESTING SINGLE-PHASE - 60HZ</b>	
<b>MAXIMUM VOLTAGE VOLTS</b>	<b>NOMINAL CURRENT AMPERES RMS</b>
17,000	10

<b>DIELECTRIC TESTING</b>		
APPLIED POTENTIAL TESTING	60 HZ/50 HZ 120 kV TO GROUND 180 kV ACROSS SAMPLE	
INDUCED POTENTIAL TESTING	400 HZ 35 kV MAXIMUM	
DIRECT CURRENT TESTING	100 kV TO GROUND 200 kV ACROSS SAMPLE	
IMPULSE TESTING	1,100 kV	27.5 KILOJOULES
SWITCHING SURGE TESTING	350 kV	17.5 KILOJOULES

## MECHANICAL AND MISCELLANEOUS TESTING

<b>STRESS TESTING</b>	
TENSILE	24,000 LB.
COMPRESSION	24,000 LB.
CANTILEVER	24,000 LB.
TORSION	250 FOOT-POUNDS
DEFLECTION UNDER LOAD	1500 LB.
STRESS GAUGE MEASUREMENTS ALONG WITH APPLIED FORCE CAN BE CONTINUOUSLY MONITORED AND STORED	

<b>ROCKWELL HARDNESS TESTING</b>	
"B" SCALE MEASUREMENTS	RANGE 30 - 100
"C" SCALE MEASUREMENTS	RANGE 20 - 67

<b>HIGH SPEED TIMING TESTS</b>	
MECHANICAL TIMING	100 MICRO-SECOND RESOLUTION (PHOTOGRAPHIC)
ELECTRICAL TIMING	0.010 MICRO-SECOND RESOLUTION

<b>MISCELLANEOUS TESTING</b>	
PARTIAL DISCHARGE/CORONA MAXIMUM 50 kV	
DEW TEST (INSULATING COMPONENTS)	
INSULATION RESISTANCE	
RESISTANCE (DOWN TO 5 MICRO-OHMS)	
MECHANICAL LIFE TESTS	
TRANSFORMER RATIO METER POLARITY PHASE RELATION	

<b>HIGH SPEED PHOTOGRAPHY</b>	
16 MM FILM	SPEEDS UP TO 11,000 FRAMES PER SECOND