

Measurement system to support the standard calibration

Purpose:

The highly accurate measurement system to support the standard calibration is required to maintain the reliability of the test data in High Power Testing Laboratory. Therefore, the fiber optic isolation measurement system, which has the rugged enclosure for use in EMI hostile environments and the unsurpassed dynamic accuracy, was constructed.

Outlines:

The measurement system in accordance with standard calibration is constructed of data acquisition systems, voltage dividers and shunt resistors.

Specifications:

I. Data acquisition system	
Mainframe	Genesis Tower (7 slots)
Isolated input card	Input type: Unbalanced differential
	Input type Unbalanced differential
	Resolution: 16bit
	Resolution 16bit
	Sample rate: 1MS/s
	Sample rate 1MS/s
	Memory: 256MS
	Memory 256MS
Fiber optic probe	Input type: Unbalanced differential
	Input type Unbalanced differential
	Resolution: 14bit
	Resolution 14bit
	Sample rate: 100MS/s
	Sample rate 100MS/s
	Memory: 400MS
	Memory 400MS
Software	Control: Perception and LabVIEW
	Control Perception and LabVIEW
	Analysis: Igor Pro
	Analysis Igor Pro
II. Voltage divider	
Standard voltage divider	Type: Damped capacitive
	Rated impulse voltage: 400kV
	Rated AC voltage: 100kV
Measuring voltage divider	Type: Damped capacitive
	Rated impulse voltage: 100kV
	Rated AC voltage: 100kV
III. Shunt resistor	
Standard shunt resistor	Type: Coaxial
	Maximum capacity: 170kA / 1sec
50kA class measuring shunt resistor	Type: Coaxial
	Maximum capacity: 170kA / 1sec
10kA class measuring shunt resistor	Type: Coaxial
	Maximum capacity: 63kA / 1sec

Location and Date of Installation:

Yokosuka Area, March 2008

