

# Transformer Test System



## Questionnaire

Quotation number: \_\_\_\_\_  
(Will be filled in by Samgor)

### Customer Information

Name: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Tel: \_\_\_\_\_  
 Email: \_\_\_\_\_  
 Placing location/Country: \_\_\_\_\_

### A. Technical Part

#### Application

Test shop       Research institute       Mobile on-site

#### Test Objects

Distribution transformers  up to \_\_\_ MVA up to \_\_\_ kV  
 Power transformers  up to \_\_\_ MVA up to \_\_\_ kV  
 Special transformers  up to \_\_\_ MVA up to \_\_\_ kV

#### Planned Tests

	YES (Y)	NO(N)	NOTE
Measurement of winding resistance			
Insulation resistance measurement			
C&tan delta measurement			
Measurement of transformer ratio			
Measurement of no load current and no load losses			
Measurement of short circuit impedance and load losses			
Applied voltage test			
Short time induced voltage test			
Long time induced voltage test			
Partial discharge measurement			
Tap changer test under load			
Temperature rise test			
Lightning impulse test			
Switching impulse test			
Radio interference measurement			

Transit characteristic measurement			
Noise level measurement			
Zero sequence test			
Cooling device test			
Bushing test			
Short circuit test			
Transformer oil test			
<b>Other:</b>			

### General Data of The Test Objects

		Single phase object		Three phase object	
		min	max	min	max
AC voltage class	kV				
Rated power range	MVA				
HV Voltage range	kV				
LV Voltage range	kV				
Short circuit impedance	%				
Vender group	/				

### Data of The Largest Test Objects

		Single phase 'largest' transformer		Three phase 'largest' transformer	
		min	max	min	max
AC voltage class	kV				
Rated power range	MVA				
Weight of iron core	kg				
		min	max	min	max
HV Voltage(Um)	kV				
LV Voltage(Um)	kV				
MV Voltage(Um) (if have)	kV				
Vender group	/				
Frequency	Hz				
Short-circuit impedance	%	(HV)	(LV)	(HV)	(LV)
Load losses	kW				
Temperature-rise test	kW				
No-load Test	Test Voltage	kV			
	Current	A			
	Losses	kW			

	3 <sup>rd</sup> harmonics	A		
	5 <sup>rd</sup> harmonics	A		
	7 <sup>rd</sup> harmonics	A		
	9 <sup>rd</sup> harmonics	A		
Winding Capacitance	HV	nF		
	LV			
	MV			
	HV-LV			

**\*Please provide a selection of test reports and data sheets of all planned test objects.**

### Apply Voltage Test

Yes  No

If yes:

AC resonant test system

AC test transformer system

If have voltage/current suggestion, please mention: \_\_\_\_\_

### Control

Basic manual control

Computer-aided control and measuring

### Power Measuring System

Yes  No

If yes:

Norma power analyzer

Yokogawa power analyzer

Dry type CT/PT

Oil type CT/PT

### Compensation Capacitor Bank

Yes  No

Low voltage

High voltage

Manual disconnectors

Automatic disconnectors

Capacitors with intern fuse

Capacitors without intern fuse

Bank with unbalance protection

Bank without unbalance protection

### Requirement Concerning the PD behavior of the AC Induce Test System

PD measuring system is required

Yes  No

PD level < ..... pC up to ..... kV

Shield test field exists Yes  No

Shield test field is required Yes  No

### Supply Conditions

	Low voltage mains	Medium voltage mains
	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Mains voltage	...../..... V	..... kV
Frequency	Hz	
Available power		
Single-phase	kVA	
Three-phase	kVA	
Star point earthed	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>

### Test Field

Layout(L*W*H),if application for test shop*	Test field	m*m*m	
	HV capacitor-bank	m*m*m	
Ambient conditions	Altitude above sea level	m	
	Min. ambient temperature	°C	
	Max. ambient temperature	°C	
	Relative humidity	%	

\*A drawing about the layout of the test field is preferred.

### Special Main Conditions/Restriction by Buildings:

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**If the test object is distribution transformer, please fill below:**

Test system structure

Control container

Machine container

Automatic platform

(Apply voltage, no load, load, induce voltage test by one connection)

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System components spate layout

### Operation of the Project

Turn key  Components

\*If you choose turn-key option, we are responsible for the whole system working. If you choose components option, we are responsible for each component working.

## B. Commercial Part

### Purpose of the Enquiry

Budget planning  Standard quotation  Tender

### Quotation Required

Within 1 week  Within 2 weeks  Within 1 month

### Binding Period of the Quotation

3 months  Other:

### Delivery Base according to Incoterms 2010

EXW  FOB  CIF

### Requested Delivery Period

.....months after order

### Warranty Period Required

1 year  2 years  5 years  Other:

### Space for Remarks

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