

QUALITY ASSURANCE PLAN
HANGZHOU QIANTANG RIVER ELECTRIC GROUP CO.LTD., HANZHOU CITY, CHINA



SHEET NO. 1 OF 2		PROJECT : Cogeneration power plant								
PREPARED Jack Yu		CUSTOMER : Mumias sugar company LTD.								
CHECKED Michell Xu		CONSULTANT : AVANT GARDE ENGINEERS AND CONSULTANTS PVT LTD.								
APPROVED LiuJun		TRANSFORMER RATING : 31.5/40MVA, 11/132 kV Generator Transformer								
DATE 04.01.08										
Sl.No.	Components / Operation	Characteristics	Classification	Type of Check	Quantum of Check	Reference documents	Acceptance Norms	Record Format	Inspection By	Remarks
a)	Routine Tests 1) General	1) Visual	Major	Visual	100%	Approved GA Drawing	As per GA	-	CS	
		2) Dimension	Major	Measurement	100%	Approved GA Drawing	As per GA	Inspection Report	CS	
		3) Name plate verification	Major	Visual	100%	Approved Drawing	As per Drawing	-	CS	
		4) Painting and Finish	Major	Visual	100%	Approved Drawing	Aesthetically OK	-	CS	
	2) Electrical	1) Measurement of Winding DC Resistance	Major	Measurement	100%	Design Data	+/- 10% of design	Inspection Report	CS	On HV winding Minimum/Normal/Maximum Tap and LV Winding
		2) Turns Ratio Test	Major	- do -	100%	Design Data/ Specification	+/- 0.5% of Ratio	- do -	CS	On all taps
		3) Vector Group Verification	Major	- do -	100%	Specification	IEC 600076	- do -	CS	
		4) Insulation Resistance Test	Major	- do -	100%	-	> 500 Mohms by 5kV Megger	- do -	CS	Between HV-LV, HV-Earth, LV-Earth
		5) Measurement of No Load Loss & current	Major	- do -	100%	Specification	IEC 600076	- do -	CS	
		6) Induced Over Voltage withstand Test	Major	- do -	100%	Specification	IEC 600076	- do -	CS	
		7) Measurement of Load Loss & short circuit impedance	Major	- do -	100%	Specification	IEC 600076	- do -	CS	
		8) Magnetic balance test	Major	- do -	100%	Specification	IEC 60076	- do -	CS	

		9) Separate Source Voltage withstand Test	Major	High Voltage application	100%	Specification	IEC 600076	- do -	CS	
		10) Tests on On Load Tap Changer	Major	OLTC operation on No Load & Load condition	100%	Design Data	IEC 600214	- do -	CS	
		11) Test on RTCC	Major	Functional	100%	Approved Drg	-	- do -	CS	
		12) Check Polarity, knee point voltage and magnetizing current for bushing current transformer	Major	Functional	100%	Design data	-	-do-	CS	
		13) Test on Transformer Oil	Major	Measurement	Oil Sample	Design Data	IEC296	- do -	CS	
b)	Type Tests	1) Temperature Rise Test	Major	Measurement	One Number of each Rating	Specification	IEC 600076	Inspection Report	CS	
		2) Full wave and lightning impulse test	Major	High Voltage application	One Number of each Rating	Specification	IEC 600076	Inspection Report	CS	
c)	Special Tests	1) Vacuum Test	Major	Physical	One Number of each Rating			Inspection Report	R	
		2) Oil Leakage Test	Major	High Voltage application	One Number of each Rating	-	No oil leakage through assembled parts	Inspection Report	CS	
		3) Zero phase sequence impedance measurement	Major	Measurement	One Number of each Rating	Design Data	-	Inspection Report	CS	
		4) Tan-delta test	Major	- do -	100%	Specification	IEC 60076	- do -	CS	

NOTE :

CS - Customer inspection

R - Test report Review