

HEXATECH	PROJECT MANAGEMENT	Issue No.: 1	Document Effective Date: 01 Mar 2017	Page 1 of 7
	Inspection & Test Plan - Electrical Works	Revision No.: 0		Document Ref.: PD-REC-ITPGEW1

Customer Name:	Project:	ITP No:	Date:
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ITEM	INSPECTION/TEST STAGE	REQUIREMENT AND ACCEPTANCE CRITERIA	FREQUENCY	ACTION			INSPECTION RECORD / FORM NO.	NOTES
				OWN	PMC	CLIENT		
A	APPROVAL							
A1	Shop Drawings		Before to start the activity	P	A	A	Approved Shop Drawings	
A2	Method Statements	Tender Specifications	Before to start the activity	P	A	A	Approved MS	
A3	Equipment & material catalogues including technical engineering documents	Tender Specifications	Before to start the activity	P	A	A	Approved Catalogues	
B	MATERIALS RECEIVING INSPECTION							
B1	Visual Inspection of Cables, Trays, Distribution Boards, MCC Panels, VSD Panels, Sub Switchboards, Canopy Genset including arcoustic equipment, UPS, Busway, SSO, Light Fittings, etc.: - as approved. - no paint/surface coating damages. - no dents, etc.	Approved Shop Drawings & Accepted Materials	Before Installation	I, P	A	A	RFIT MRIR	
C	INSTALLATION MOCK UP							
C1	For on-site installation, mock up to be installed prior to start any new activities.	Approved Shop/ Mock Up Drawings, Catalogues & Method Statement	Before Installation	I, P	A	A	RFIT	

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D	INSTALLATION							
D1	Underground cables: - cables laid as per route & procedures. - individual backfill levels as per approved method statement and shop drawing. - cables labelled. - route markers placed.	Approved Shop/ Mock Up Drawings, Catalogues & Method Statement	Before Testing	I, P	A	A	RFIT IC/E/F4/R1	
D2	Compound/Street Lighting: - installed as per drawings. - labelled as per drawings. - Individual backfill levels as per approved method statement.	Approved Shop/ Mock Up Drawings, Catalogues & Method Statement	Before Testing	I, P	A	A	RFIT IC/E/F8/R1	
D3	Busway: - installed as per drawings. - labelled as per drawings. - verify continuity and insulation resistance progressively during installation/coupling.	Approved Shop Drawings, Catalogues & Method Statement	Before Testing	I, P	A	A	RFIT QMS/TRE1	
D4	Electrical Distribution Boards : - installed as per plan/drawings. - damaged wall/floor repaired (if applicable). - touch up paint completed. - labelled correctly. - earthing connected to board. - cables glands & earthing completed. - cables cores terminated with lugs & feruled as per drawings. - MCBs/MCCBs installed, labelled & functions checked.	Approved Shop Drawings, Catalogues & Method Statement	Before Testing	I, P	A	A	RFIT IC/E/F5/R1	

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D4	Electrical Distribution Boards : - installed as per plan/drawings. - damaged wall/floor repaired (if applicable). - touch up paint completed. - labelled correctly. - earthing connected to board. - cables glands & earthing completed. - cables cores terminated with lugs & feruled as per drawings. - MCBs/MCCBs installed, labelled & functions checked.	Approved Shop Drawings, Catalogues & Method Statement	Before Testing	I, P	A	A	RFIT IC/E/F5/R1	
D5	Genset including arcoustic equipment: - installed as per drawings. - labelled as per drawings.	Approved Shop Drawings, Catalogues & Method Statement	Before Testing	I, P	A	A	RFIT IC/E/F12/R1 IC/E/F20/R1	
D6	UPS: - installed as per drawings. - labelled as per drawings.	Approved Shop drawings, Catalogues & Method Statement	Before Testing	I, P	A	A	RFIT IC/E/F11/R1	
D7	LV Cables & cable trays: - installed trays as per approved routes. - trays secured firmly to structure. - repairs to damaged walls, structure, floor, etc. completed. - cable laid & secured with cable ties to trays. - cables & trays labelled as per drawings	Approved Shop drawings, Catalogues & Method Statement	Before Testing	I, P	A	A	RFIT IC/E/F10/R1	
D8	Lightings, Switch Socket Outlets, Switches, etc.: - installed as per drawings. - labelled as per drawings.	Approved Shop drawings, Catalogues & Method Statement	Before Testing	I, P	A	A	RFIT IC/E/F6/R1 IC/E/F7/R1 IC/E/F8/R1 IC/E/F9/R1	

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E	PRE-COMMISSIONING							
E1	Underground Cables: - physical inspection. - visual inspection. - terminations as per drawings at both ends. - continuity tested & recorded. - IR tested (ph-ph, ph-earth) & recorded.	Approved Shop Drawings & Catalogue	Before Commissioning	I, P	A	A	RFIT QMS/TRE1	
E2	Busways / Busducts: - physical Inspection. - visual Inspection. - terminations as per drawings at both ends. - continuity tested & recorded. - IR tested (ph-ph, ph-earth) & recorded.	Approved Shop Drawings & Catalogue	Before Commissioning	I, P	A	A	RFIT QMS/TRE1	
E3	Electrical Distribution Boards: - physical Inspection. - visual Inspection. - terminations as per drawings at both ends. - cable continuity tested & recorded. - cable IR tested (ph-ph, ph-earth) & recorded.	Approved Shop Drawings & Catalogue	Before Commissioning	I, P	A	A	RFIT QMS/TRE1	
E4	Genset including arcoustic equipment: - physical Inspection. - visual Inspection. - terminations as per drawings at both ends. - cable continuity tested & recorded. - cable IR tested (ph-ph, ph-earth) & recorded.	Approved Shop Drawings & Catalogue	Before Commissioning	I, P	A	A	RFIT QMS/TRE1	

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E5	UPS: - physical Inspection. - visual Inspection. - terminations as per drawings at both ends. - cable continuity tested & recorded. - cable IR tested (ph-ph, ph-earth) & recorded.	Approved Shop Drawings & Catalogue	Before Commissioning	I, P	A	A	RFIT QMS/TRE1 Manufacturer's Service Report	
E6	Lighting including Switches, Emergency Lights & Keluar Signs: - physical Inspection. - visual Inspection.	Approved Shop Drawings, Catalogue & Single Line Drawing	Before Commissioning	I, P	A	A	RFIT PD/ESTR	
E7	Power Sockets: - physical Inspection. - visual Inspection.	Approved Shop Drawings, Catalogue & Single Line Drawing	Before Commissioning	I, P	A	A	RFIT PD/ESTR	
F	Commissioning							
F1	Underground Cables: - physical inspection. - visual inspection. - verify terminations at both ends. - pressure test & recorded. - voltage tested & recorded.	Approved Shop Drawings & Catalogue	After Pre-Commissioning	I, P	A	A	RFIT QMS/TRE1	
F2	Busways/Busducts: - physical inspection. - visual inspection. - verify terminations at both ends. - contact resistance tested & recorded. - voltage tested & recorded.	Approved Shop Drawings & Catalogue	After Pre-Commissioning	I, P	A	A	RFIT QMS/TRE1	

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F3	Electrical Distribution Boards: - visual Inspection. - verify terminations at both ends. - physical inspection. - functional test. - protection test. - voltage tested & recorded. - phase rotation tested & recorded.	Approved Shop Drawings & Catalogue	After Pre-Commissioning	I, P	A	A	RFIT QMS/TRE1	
F4	Genset including arcoustic equipment: - physical inspection. - visual inspection. - verify terminations at both ends. - votage tested & recorded. - phase rotation tested & recorded. - ATS functionality tested & recorded.	Approved Shop Drawings & Catalogue	After Pre-Commissioning	I, P	A	A	RFIT QMS/TRE1	Note 1
F5	UPS: - physical inspection. - visual inspection. - verify terminations at both ends. - site functional test. - protection test. - voltage tested & recorded.	Approved Shop Drawings & Catalogue	After Pre-Commissioning	I, P	A	A	RFIT Manufacturer's Acceptance Certificate	
F6	Lighting including Switches, Emergency Lights & Keluar Signs: - test lighting. - lux level test.	Approved Shop Drawings, Catalogue & Single Line Drawing	After Pre-Commissioning	I, P	A	A	RFIT QMS/TRE1 IC/E/F23/R1	Note 1

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F7	Switch Socket Outlets: - test functionality.	Approved Shop Drawings, Catalogue & Single Line Drawing	After Pre-Commissioning	I, P	A	A	RFIT QMS/TRE1	
G	FINAL INSPECTION & ACCEPTANCE							
G1	Final inspection: - punch list cleared.	100%	At work completion	I	A	A	Punchlist	
G2	As Built Drawing.	Approved Shop Drawing, Tender Specs, IFC Drawings	At work completion	P	A	A	TN	
G3	Dossier Compilation & Issuance.	Handover Requirement	At work completion	P	A	A	TN, CPC, Project Handover Form	

Note 1: BOMBA Inspection

Abbreviations:

A Approval
R Review
I Inspection
W Witness
P Prepare Documentation
H Hold
TN Transmittal Note
CPC Certificate of Project Completion

RFIT Request For Inspection & Testing
MRIR Material Receiving Inspection Report
TRE1 Test Report Electrical No. 1
ESTR Electrical Services Test Report
MS Method Statement
PD Project Department
QMS Quality Management System

Prepared by:	Approved by:	Recorded by:
Signature:	Signature:	Signature:
Name:	Name:	Name:
Appointment:	Appointment:	Appointment:
Date:	Date:	Date: