

Form No.	 HYDERABAD	PRODUCT STANDARD PROJECT ENGINEERING HYDERABAD		PY55155	
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7.0 DEVIATION SCHEDULE

Enquiry No.:

Name of Bidder:

Offer Ref. No.:

DEVIATION FORMAT

Sl. No.	Clause no. & Spec. no.	Description as per Specification	Deviation taken	Nature of Deviation	Remarks

NOTES:

- Technical offer of the bidder will be evaluated only on the basis of Deviation Schedule. Deviation Schedule constitutes this sheet (with these Notes) duly signed and stamped.
- Deviations, if any, shall be clearly brought out only in this format. Deviations mentioned / taken elsewhere or in any other format will be ignored.
- Additional sheets in the same format can be attached by the vendor, if necessary.
- Nature of Deviations shall only be of Design / Manufacturing constraints and non-availability of items / components / makes in market.
- No price implications shall be entertained for deviations withdrawn during the technical scrutiny. If any deviations are accepted by BHEL during technical scrutiny then also there will be no price implication. Hence, in no case there will be consideration of Price implications.
- Reasons for the deviations shall be specified in the Remarks column.
- If there are no deviations from the specifications, bidder still has to submit the Deviation Schedule by writing "NO Deviations" in this format.
- If the "Deviation Schedule" is not submitted along with the offer, the bidder's offer is likely to be rejected without any further interaction with the bidder.
- Only the accepted deviations in conjunction with the original tender shall constitute the contract document for the award of job to the bidder.

**SIGNATURE
OF BIDDER**

NAME

DESIGNATION

COMPANY SEAL

Ref. Doc

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		8.1 CHECKLIST FOR BID SUBMISSION			
		(TO BE FILLED BY BIDDER AND SUBMITTED ALONG WITH OFFER)			
		Sl. No.	Description	Bidder Confirmation	Comments/Remarks
		1	Technical offer is conforming to technical specification PY55154 & its associated Annexures (if any), pre-bid clarifications (if any) etc., Bidder to confirm (Yes / No).		
		2	Bidder confirms that they have read the provisions of the Deviation Schedule and have included the deviation Schedule in the Offer after agreeing to the said Provisions (Yes/No).		
3	Bidder confirms that Prices for all items have been Quoted. Unpriced & Priced Schedules are included in the Techno-commercial Offer and Priced Offer respectively. (Yes/NO)				
4	As per specification, bidder confirms that complete set of test certificates have been included along with the Offer. In case bidder has not submitted test certificates, bidder confirms to conduct the tests as per cl.no 4.7 and submit the report to BHEL/customer for approval. (YES/NO)				
Ref. Doc		Notes: Offer received without affirmative confirmation against any of the above points may not be considered for evaluation.			
		(Signature and stamp of bidder with date)			

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Ref. Doc	The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED . It must not be used directly or indirectly in any way detrimental to the interest of the company.	8.2 Quantities mentioned are tentative requirement. Based on the actual requirement, quantity can be increased or decreased by about 15% on overall qty. Final BOQ will be informed before price bid opening. Unit rates shall be applicable for the revised BOQ also. TABLE -1: Material Codification <table border="1"> <thead> <tr> <th>Var. No.</th> <th>No. of cores & Sizes (Sq.mm.)</th> <th>Cond, Insulation & Outer sheath matl, Grade</th> <th>Fault current</th> <th>BHEL Material Code</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3CX185</td> <td>Al, XLPE & PVC /FRLS, 11kV(UE)</td> <td>1kA/1sec.</td> <td>PY9755155007</td> </tr> <tr> <td>2</td> <td>3CX300</td> <td>Al, XLPE & PVC /FRLS, 11kV(UE)</td> <td>1kA/1sec.</td> <td>PY9755155015</td> </tr> <tr> <td>3</td> <td>3CX240</td> <td>Al, XLPE & PVC /FRLS, 6.6kV(UE)</td> <td>1kA/1sec.</td> <td>PY9755155040</td> </tr> <tr> <td>4</td> <td>1CX630</td> <td>Al, XLPE & PVC /FRLS, 11kV(UE)</td> <td>1kA/1sec</td> <td>PY9755155066</td> </tr> <tr> <td>5</td> <td>3CX185</td> <td>Al, XLPE & PVC /FRLS, 11kV(UE)</td> <td>1.25kA/1sec</td> <td>PY9755155058</td> </tr> <tr> <td>6</td> <td>3CX70</td> <td>Al, XLPE & PVC /FRLS, 11kV(UE)</td> <td>1kA/1sec.</td> <td>PY9755155074</td> </tr> <tr> <td>7</td> <td>3CX240</td> <td>Al, XLPE & PVC /FRLS, 11kV(UE)</td> <td>1kA/1sec.</td> <td>PY9755155082</td> </tr> </tbody> </table> 8.3 GUIDELINES TO VENDORS FOR PREPARATION OF QUALITY ASSURANCE PLAN: REFER ANNEXURE-I 8.4 “Vendors should not be part of EIL holiday List. Package vendors will not source the items from sub-vendors who are part of EIL' holiday list”		Var. No.	No. of cores & Sizes (Sq.mm.)	Cond, Insulation & Outer sheath matl, Grade	Fault current	BHEL Material Code	1	3CX185	Al, XLPE & PVC /FRLS, 11kV(UE)	1kA/1sec.	PY9755155007	2	3CX300	Al, XLPE & PVC /FRLS, 11kV(UE)	1kA/1sec.	PY9755155015	3	3CX240	Al, XLPE & PVC /FRLS, 6.6kV(UE)	1kA/1sec.	PY9755155040	4	1CX630	Al, XLPE & PVC /FRLS, 11kV(UE)	1kA/1sec	PY9755155066	5	3CX185	Al, XLPE & PVC /FRLS, 11kV(UE)	1.25kA/1sec	PY9755155058	6	3CX70	Al, XLPE & PVC /FRLS, 11kV(UE)	1kA/1sec.	PY9755155074	7	3CX240	Al, XLPE & PVC /FRLS, 11kV(UE)	1kA/1sec.	PY9755155082
		Var. No.	No. of cores & Sizes (Sq.mm.)	Cond, Insulation & Outer sheath matl, Grade	Fault current	BHEL Material Code																																					
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TECHNICAL DATA SHEET			
S.No. Description			
1. Cable size 2. BHEL material code 3. Cable code 4. Applicable standards: 5. Name of vendor 6. Voltage Grade 7. Maximum conductor temperature under : Normal operating conditions 8. Maximum conductor temperature under : Short circuit conditions 9. Permissible voltage variation: 10. Permissible frequency variation: 11. Combined voltage & frequency variation 12. Conductor : a. Conductor material : b. Size (sq.mm) Nominal(Main/Neutral) c. No.of wires & diameter of each wire (No/mm) d. Shape of conductor e. Maximum DC resistance of conductor at 20deg.C i. Conductor Screen: 1. Material of conductor screen 2. Extruded(Yes/No): 3. Material thickness of semi-conducting : Conductor screen (Nom./Min.) 13. Insulation: a. Insulation Material b. Insulation Type c. Extruded (Yes/No) d. Thickness of insulation(Nominal)(mm)(Main/Neutral) : e. Insulation Screen f. Metallic Material type: i. Thickness(Nom./Min) g. Non-Metallic material type i. Thickness (Nom./Min.) ii. Fault carrying capacity: 14. Core identification: 15. Calculated dia over laid up cores: 16. Extrusion process: Conductor screen, XLPE insulation & Insulation screen in single head (one) operation by triple extrusion. 17. Inner sheath : a. Material b. Type c. Minimum Thickness d. Extruded: Yes. e. Calculated diameter of cable : under armour(as per IS:10462)			
Ref. Doc			

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COPYRIGHT AND CONFIDENTIAL The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED . It must not be used directly or indirectly in any way detrimental to the interest of the company.	18. Armouring : a. Material : b. Type of armour : c. Nominal dia of armour: d. No.of armour wires/strips: e. DC resistance of armour 19. Nominal diameter of cable under : outer sheath 20. Calculated diameter of cable under : outer sheath 21. Outer sheath : a. Material b. Type c. Minimum Thickness: d. Extruded: Yes 22. Nominal outer diameter of cable : 23. Calculated outer diameter of cable: 24. Tolerance on outer diameter : 25. Electrical parameters: a. AC resistance at 90 deg.C: b. Cable reactance: c. Cable impedance: 26. Short circuit rating of conductor for the Duration of 1 sec (kA) 27. Maximum drum length of cable: 28. Continuous current rating for standard IS conditions laid direct (amps) a. In ground (ground temp of 30 deg.C) b. In duct (ground temp of 30 deg.C) c. In air (ambient temp of 40 deg.C) 29. Embossing on outer sheath: 30. Total I²R losses(watts/meter/phase), When cable laid in ground. 31. No. of end caps: 32. Tests to be conducted: 33. Current carrying capacity(in air at 40°C) : (in ground at 30°C) 34. Derating factor for cable current carrying : carrying for different method of laying			
		Ref. Doc		

[illegible]

मध्यम एवं उच्च वोल्टेज केबल तथा सहायक सामग्री के लिए निरीक्षण व परीक्षण योजना

INSPECTION AND TEST PLAN FOR MEDIUM AND HIGH VOLTAGE CABLES & ACCESSORIES

3	30.01.2014	Revised and Reissued	MJ	RS	SGG	SC
2	15.07.2011	Revised and Re-issued	AB	RJD	AKC	DM
1	28.09.07	Revised and Re-issued	AKG	PPM	MVKK	VC
0	30.04.02	Issued for implementation	RG	AKC	AKB	GRR
Rev. No.	Date	Purpose	Prepared by	Checked by	Standards Committee Convenor	Standards Bureau Chairman
					Approved by	

Abbreviations:

AS	:	Alloy Steel	:	MPT/MT	:	Magnetic Particle Testing
BASEEFA	:	British Approval Service for Electrical Equipment in Flammable Atmospheres	:	MRT	:	Mechanical Run Test
BIS	:	Bureau of Indian Standards	:	MTC	:	Material Test Certificate
CCE or CCOE	:	Chief Controller of Explosives	:	MOC	:	Material of Construction
CEIL	:	Certification Engineers International Limited	:	NPSH	:	Net Positive Suction Head
CIMFR	:	Central Institute of Mining & Fuel Research	:	NDT	:	Non Destructive Testing
CE	:	Carbon Equivalent	:	NEMA	:	National Electrical Manufacturers Association
DFT	:	Dry Film Thickness	:	PO	:	Purchase Order
DT	:	Destructive Testing	:	PESO	:	Petroleum Explosive Safety Organization
DPT	:	Dye Penetrate Testing	:	PQR	:	Procedure Qualification Record
ERTL	:	Electronics Regional Test Laboratory	:	PR	:	Purchase Requisition
FCRI	:	Fluid Control Research Institute	:	PMI	:	Positive Material Identification
FM	:	Factory Mutual	:	PVC	:	Poly Vinyl Chloride
FLP	:	Flame Proof	:	QC	:	Quality Control
HIC	:	Hydrogen Induced Cracking	:	RT	:	Radiography Testing
ITP	:	Inspection and Test Plan	:	TC	:	Test Certificate
IP	:	Ingress Protection	:	TPI or TPIA	:	Third Party Inspection Agency
IC	:	Inspection Certification	:	UT	:	Ultrasonic Testing
IGC	:	Inter Granular Corrosion	:	UL	:	Under writer Laboratories
IEC	:	International Electro technical Commission	:	VDR	:	Vendor Data Requirement
JEC	:	Japanese Electro technical Committee	:	WPS	:	Welding Procedure Specification
LPT	:	Liquid Penetrate Testing	:	WPQ	:	Welders Performance Qualification
	:		:	XLPE	:	Cross Linked Poly Ethylene

Inspection Standards Committee

Convenor : Mr. S.C. Gupta

Members:

Mr. R.K. Singh	Mr. Rajeev Kumar	Mr. Himangshu Pal
Mr. Neeraj Mathur	Mr. T Kamalakannan	Mr. Deepak Gupta (Project)
Mr. Mayank Jain		