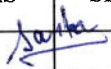




BHARAT HEAVY ELECTRICALS LIMITED

TRANSMISSION PROJECTS ENGINEERING MANAGEMENT

DOCUMENT No.	TB-394-316-131-B	Rev. No.	00		Prepared	Checked	Approved
TYPE OF DOC.	TECHNICAL SPECIFICATION			NAME	SS	SKS	SKS
TITLE	400KV & BELOW CLAMPS AND CONNECTORS			SIGN			
				DATE	07.01.26	07.01.26	07.01.26
				GROUP	TBEM	W.O. No	86009
CUSTOMER	Tamilnadu Transmission Corporation Limited (TANTRANSCO)						
PROJECTS	765/400kV AIS S/S Ariyalur						

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Issued for PI NO. 09I2602096R

All technical requirements (TECHNICAL SPECIFICATION & APPROVED DRAWING/DOCUMENTS) shall be followed as per original PO NO. 278P244 (M/s PREMIER POWER PRODUCTS PVT. LTD).

BOQ shall be as per ANNEXURE-1B: BILL OF QUANTITY FOR 400/132/66/54/52/33KV CLAMPS & CONNECTORS

Rev No.	Date	Altered	Checked	Approved	REVISION DETAILS				
				Distribution	TBMM	TBQM	TBCM	TBTS	
				Copies	1	1	1	-	

ANNEXURE-1B: BILL OF QUANTITY FOR 400/132/66/54/52/33KV CLAMPS & CONNECTORS

Information for reference as per EKD					Information for procurement			
S. no.	EKD NO.	Description of connector with rating as per technical specification	Unit of Qty.	Qty required (AS PER SITE)	Item description as per material code	Material code	Qty for INDENT	REMARKS IN PI
1	10A	400kV , 3150A, 63kA for 1 Second Isolator , Rigid type connector suitable for 4" IPS Aluminium tube with horizontal approach	Nos.	3	SUPPLY- CLAMPS & CONNECTORS : 400KV, 63KA FOR 1S, 3150A, ISOLATOR (HDB) CONNECTOR SUITABLE FOR AL TUBE 4 INCH IPS, RIGID TYPE	TB9094670236	3	
2	10C	400kV , 3150A, 63kA for 1 Second Isolator , Rigid type connector suitable for Quad ACSR Bersimis conductor with horizontal approach	Nos.	1	SUPPLY- CLAMPS & CONNECTORS : 400KV, 63KA FOR 1S, 3150A, ISOLATOR (HDB) CONNECTOR SUITABLE FOR QUAD BERSIMIS	TB9094670342	1	
3	10D	400kV , 2000, 63kA for 1 Second Isolator , Rigid type connector suitable for twin ACSR Bersimis conductotr with horizontal approach	Nos.	3	SUPPLY- CLAMPS & CONNECTORS : 400KV, 63KA FOR 1S, 2000A, ISOLATOR (HDB) CONNECTOR SUITABLE FOR TWIN BERSIMIS	TB9094650332	3	
4	13B	400kV , 63kA for 1 Second bus post insulator , Rigid through type connector suitable for twin ACSR Bersimis conductor with horizontal approach	Nos.	3	SUPPLY- CLAMPS & CONNECTORS : 400KV, 63KA FOR 1S, 2000A, BPI CONNECTOR SUITABLE FOR TWIN BERSIMIS	TB9094651734	3	THROUGH TYPE
5	13C	400kV ,3150A, 63kA for 1 Second bus post insulator ,Rigid /Expansion type connector suitable for 4" IPS Al tube with horizontal approach	Nos.	1	SUPPLY- CLAMPS & CONNECTORS : 400KV, 63KA FOR 1S, 3150A, BPI CONNECTOR SUITABLE FOR AL TUBE 4 INCH IPS, RIGID & EXPANSION TYPE WITH TUBE BREAK	TB9094675946	1	
6	59	400kV, 3150A, Tee connector suitable for 4" tube run and Quad ACSR Bersimis tap	Nos.	2	CLAMPS & CONNECTORS 400KV 63KA FOR 1S 3150A TEE CONNECTOR SUITABLE FOR AL TUBE 4 INCH IPS TO QUAD CONDUCTOR AS PER TS	TB9094672102	2	QUAD ACSR BERSIMIS
7	60	400kV, 2000A, Tee connector suitable for 4" tube run and twin ACSR Bersimis tap	Nos.	1	SUPPLY- CLAMPS & CONNECTORS : 400KV, TEE CONNECTOR SUITABLE FOR AL TUBE 4 INCH IPS TO TWIN BERSIMIS CONDUCTOR AS PER TS	TB9094006611	1	
8	61	400kV , 3150A, straight connector suitable for 4" IPS Al tube and Quad ACSR Bersimis Conductor in horizontal approach	Nos.	2	SUPPLY- CLAMPS & CONNECTORS : 400KV, 3150A, STRAIGHT CONNECTOR SUITABLE FOR AL TUBE 4 INCH IPS TO QUAD CONDUCTOR AS PER TS	TB9094071851	2	QUAD ACSR BERSIMIS
9	66	400kV, 2000A, Tee connector suitable for Quad ACSR Bersimis run and twin ACSR Bersimis tap	Nos.	1	SUPPLY- CLAMPS & CONNECTORS : 400KV, TEE CONNECTOR SUITABLE FOR QUAD BERSIMIS TO TWIN CONDUCTOR AS PER TS	TB9094002321	1	TWIN ACSR BERSIMIS

ANNEXURE-1B: BILL OF QUANTITY FOR 400/132/66/54/52/33KV CLAMPS & CONNECTORS

Information for reference as per EKD					Information for procurement			
S. no.	EKD NO.	Description of connector with rating as per technical specification	Unit of Qty.	Qty required (AS PER SITE)	Item description as per material code	Material code	Qty for INDENT	REMARKS IN PI
10	16B	132kV , 1250A, 40kA for 1 Second NGR Neutral bushing (towards LA side) , Rigid type connector suitable for single AAC Bull conductor with horizontal approach	Nos.	3	SUPPLY- CLAMPS & CONNECTORS : 132KV, 40KA FOR 1S, 1250A, NGR NEUTRAL BUSHING (TOWARDS LA SIDE) , RIGID TYPE CONNECTOR SUITABLE FOR SINGLE AAC BULL CONDUCTOR WITH HORIZONTAL APPROACH	TB9091436806	3	
11	16C	132kV , 1250A, 40kA for 1 Second NGR Neutral bushing (towards CT side) , Rigid type connector suitable for single AAC Bull conductor with horizontal approach	Nos.	3	SUPPLY- CLAMPS & CONNECTORS : 132KV, 40KA FOR 1S, 1250A, NGR NEUTRAL BUSHING (TOWARDS CT SIDE) , RIGID TYPE CONNECTOR SUITABLE FOR SINGLE AAC BULL CONDUCTOR WITH HORIZONTAL APPROACH	TB9091436815	3	
12	19A	132kV , 40kA for 1 Second bus post insulator , through sliding type connector suitable for 3" IPS Al tube with horizontal approach	Nos.	3	SUPPLY- CLAMPS & CONNECTORS : 145KV, 40KA FOR 1S, BPI CONNECTOR SUITABLE FOR AL TUBE 3 INCH IPS, SLIDING THROUGH TYPE	TB9091401541	3	
13	19B	132kV , 40kA for 1 Second bus post insulator , Rigid through type connector suitable for 3" IPS Al tube with horizontal approach	Nos.	3	SUPPLY- CLAMPS & CONNECTORS : 145KV, 40KA FOR 1S, BPI CONNECTOR SUITABLE FOR AL TUBE 3 INCH IPS, RIGID THROUGH TYPE	TB9091401533	3	
14	19C	132kV ,1250A, 40kA for 1 Second bus post insulator , Rigid /Expansion type connector suitable for 3" IPS Al tube with horizontal approach	Nos.	3	SUPPLY- CLAMPS & CONNECTORS : 145KV, 40KA FOR 1S, 1250A, BPI CONNECTOR SUITABLE FOR AL TUBE 3 INCH IPS, RIGID - EXPANSION TYPE	TB9091431564	3	
15	23A	132kV , 40kA for 1 Second Surge Arrester , Rigid type connector suitable for single AAC Bull conductor with horizontal approach	Nos.	3	SUPPLY- CLAMPS & CONNECTORS : 132KV, LA CONNECTOR SUITABLE FOR SINGLE BULL	TB9091001233	3	
16	72	132kV, 1250A, Tee connector suitable for 3" tube run and single AAC Bull tap	Nos.	2	SUPPLY- CLAMPS & CONNECTORS : 132KV, 1250A, TEE CONNECTOR SUITABLE FOR AL TUBE 3 INCH IPS TO SINGLE CONDUCTOR AS PER TS	TB9091032066	2	SINGLE AAC BULL
17	73	132kV, 1250A, Tee connector suitable for single AAC Bull run and single AAC Bull tap	Nos.	1	SUPPLY- CLAMPS & CONNECTORS : 132KV, 1250A, TEE CONNECTOR SUITABLE FOR SINGLE BULL TO SINGLE CONDUCTOR AS PER TS	TB9091032345	1	SINGLE AAC BULL

ANNEXURE-1B: BILL OF QUANTITY FOR 400/132/66/54/52/33KV CLAMPS & CONNECTORS

Information for reference as per EKD					Information for procurement			
S. no.	EKD NO.	Description of connector with rating as per technical specification	Unit of Qty.	Qty required (AS PER SITE)	Item description as per material code	Material code	Qty for INDENT	REMARKS IN PI
18	24A	66kV , 25kA for 1 Second bus post insulator , through sliding type connector suitable for 3" IPS Al tube with horizontal approach	Nos.	3	SUPPLY- CLAMPS & CONNECTORS : 66KV, 25KA FOR 1S, 1250A, BPI CONNECTOR SUITABLE FOR AL TUBE 3 INCH IPS, SLIDING THROUGH TYPE	TB9096231543	3	
19	24B	66kV , 25kA for 1 Second bus post insulator , rigid through type connector suitable for 3" IPS Al tube with horizontal approach	Nos.	3	SUPPLY- CLAMPS & CONNECTORS : 66KV, 25KA FOR 1S, 1250A, BPI CONNECTOR SUITABLE FOR AL TUBE 3 INCH IPS, RIGID THROUGH TYPE	TB9096231533	3	
20	24C	66kV , 1250A, 25kA for 1 Second bus post insulator ,Rigid /Expansion type connector suitable for 3" IPS Al tube with horizontal approach	Nos.	3	SUPPLY- CLAMPS & CONNECTORS : 66KV, 25KA FOR 1S, 1250A, BPI CONNECTOR SUITABLE FOR AL TUBE 3 INCH IPS, RIGID - EXPANSION TYPE	TB9096231565	3	
21	76	66kV, 1250A, Tee connector suitable for 3" tube run and single ACSR Bersimis tap	Nos.	1	SUPPLY- CLAMPS & CONNECTORS : 66KV, 25KA FOR 1S, 1250A, TEE CONNECTOR SUITABLE FOR AL TUBE 3 INCH IPS TO SINGLE CONDUCTOR AS PER TS	TB9096232062	1	SINGLE ACSR BERSIMIS
22	77	66kV, 1250A, Tee connector suitable for 3" tube run and twin ACSR Bersimis tap	Nos.	2	SUPPLY- CLAMPS & CONNECTORS : 66KV, 1250A, TEE CONNECTOR SUITABLE FOR AL TUBE 3 INCH IPS TO TWIN CONDUCTOR AS PER TS	TB9096032073	2	TWIN ACSR BERSIMIS
23	78	66kV Rigid spacers suitable for twin ACSR Bersimis conductor	Nos.	1	SUPPLY- CLAMPS & CONNECTORS : 66KV, RIGID SPACER SUITABLE FOR TWIN BERSIMIS	TB9096002562	1	
24	79	66kV Corona end bell for 3" IPS Al. tube	Nos.	2	SUPPLY- CLAMPS & CONNECTORS : END CAP SUITABLE FOR 3 INCH IPS AL TUBE	TB9090004841	2	
25	22A	54kV , 25kA for 1 Second Surge Arrester , Rigid type connector suitable for single ACSR Bersimis conductotr with horizontal approachh	Nos.	3	SUPPLY- CLAMPS & CONNECTORS : 54KV, 25KA FOR 1S, LA CONNECTOR SUITABLE FOR SINGLE BERSIMIS	TB9096201201	3	
26	17B	33kV , 1250A, 25kA for 1 Second neutral curent transformer of NGR , Rigid type connector suitable for single 75X12 mm MS flat with horizontal approach	Nos.	2	SUPPLY- CLAMPS & CONNECTORS : 33KV, 25KA FOR 1S, 1250A, NEUTRAL CURRENT TRANSFORMER OF NGR , RIGID TYPE CONNECTOR SUITABLE FOR SINGLE 75X12 MM MS FLAT WITH HORIZONTAL APPROACH	TB9093236786	2	

ANNEXURE-1B: BILL OF QUANTITY FOR 400/132/66/54/52/33KV CLAMPS & CONNECTORS

Information for reference as per EKD					Information for procurement			
S. no.	EKD NO.	Description of connector with rating as per technical specification	Unit of Qty.	Qty required (AS PER SITE)	Item description as per material code	Material code	Qty for INDENT	REMARKS IN PI
27	17D	33kV , 1250A, 25kA for 1 Second neutral current transformer of 500MVA Auto transformer , Rigid type connector suitable for single 75X12 mm MS flat with horizontal approach	Nos.	3	SUPPLY- CLAMPS & CONNECTORS : 33KV, 25KA FOR 1S, 1250A, NEUTRAL CURRENT TRANSFORMER OF 500MVA AUTO TRANSFORMER , RIGID TYPE CONNECTOR SUITABLE FOR SINGLE 75X12 MM MS FLAT WITH HORIZONTAL APPROACH	TB9093236795	3	
28	17C	33kV , 1250A, 25kA for 1 Second neutral current transformer of 500MVA Auto transformer , Rigid type connector suitable for twin ACSR Bersimis conductor with horizontal approach	Nos.	2	SUPPLY- CLAMPS & CONNECTORS : 33KV, 25KA FOR 1S, 1250A, CT (NEUTRAL) CONNECTOR SUITABLE FOR TWIN CONDUCTOR	TB9093236374	2	TWIN ACSR BERSIMIS
29	25A	33kV , 25kA for 1 Second bus post insulator , through sliding type connector suitable for 3" IPS Al tube with horizontal approach	Nos.	3	SUPPLY- CLAMPS & CONNECTORS : 33KV, 25KA FOR 1S, BPI CONNECTOR SUITABLE FOR AL TUBE 3 INCH IPS, SLIDING THROUGH TYPE	TB9093201541	3	
30	25B	33kV , 25kA for 1 Second bus post insulator , Rigid through type connector suitable for 3" IPS Al tube with horizontal approach	Nos.	3	SUPPLY- CLAMPS & CONNECTORS : 33KV, 25KA FOR 1S, BPI CONNECTOR SUITABLE FOR AL TUBE 3 INCH IPS, RIGID THROUGH TYPE	TB9093201536	3	
31	25C	33kV , 1250A, 25kA for 1 Second bus post insulator , Rigid /Expansion type connector suitable for 3" IPS Al tube with horizontal approach	Nos.	3	SUPPLY- CLAMPS & CONNECTORS : 33KV, 25KA FOR 1S, 1250A, BPI CONNECTOR SUITABLE FOR AL TUBE 3 INCH IPS, RIGID - EXPANSION TYPE	TB9093231562	3	
32	25D	33kV , 25kA for 1 Second Bus post insulator , Rigid through type connector suitable for single 75X12 mm MS flat with horizontal approach	Nos.	3	SUPPLY- CLAMPS & CONNECTORS : 33KV, 25KA FOR 1S, BPI CONNECTOR SUITABLE FOR 75X12 MS FLAT, RIGID THROUGH TYPE	TB9093206751	3	
33	81	33kV, 1250A, Tee connector suitable for 3" tube run and twin ACSR Bersimis tap	Nos.	1	SUPPLY- CLAMPS & CONNECTORS : 36KV, 1250A, TEE CONNECTOR SUITABLE FOR AL TUBE 3 INCH IPS TO TWIN CONDUCTOR AS PER TS	TB9093032075	1	TWIN ACSR BERSIMIS

ANNEXURE-1B: BILL OF QUANTITY FOR 400/132/66/54/52/33KV CLAMPS & CONNECTORS

Information for reference as per EKD					Information for procurement			
S. no.	EKD NO.	Description of connector with rating as per technical specification	Unit of Qty.	Qty required (AS PER SITE)	Item description as per material code	Material code	Qty for INDENT	REMARKS IN PI
34	21A	36kV , 1250A, 25kA for 1 Second 500MVA Auto transformer Neutral bushing , Rigid type connector suitable for 3" IPS Aluminium tube with horizontal approach	Nos.	3	SUPPLY- CLAMPS & CONNECTORS : 36KV, 25KA FOR 1S, 1250A, BUSHING CONNECTOR SUITABLE FOR AL TUBE 3 INCH IPS, RIGID TYPE	TB9093231311	3	
35	75	132kV AL welding sleeve for 3 " Al tube	Nos.	2	SUPPLY- CLAMPS & CONNECTORS : WELDING SLEEVE SUITABLE FOR 3 INCH IPS AL TUBE	TB9090002803	7	
	80	66kV AL welding sleeve for 3 " Al tube	Nos.	3				
	83	33kV AL welding sleeve for 3 " Al tube	Nos.	2				
36	84	Tension clamps for 7/3.66mm(10.98mm dia) GI Wire	Nos.	7	SUPPLY- CLAMPS & CONNECTORS : STRAIN CLAMP FOR SHIELD WIRE 10.98MM DIA	TB9090004582	7	
37	86	For connecting 7/3.66mm(10.98mm dia) GI Wire on one side and 75x12 mm MS flat on other side	Nos.	5	CLAMPS & CONNECTORS PAD CONNECTOR TO SUIT 10.98MM DIA GS WIRE AND 75X12 MM GS FLAT	TB9090002861	5	