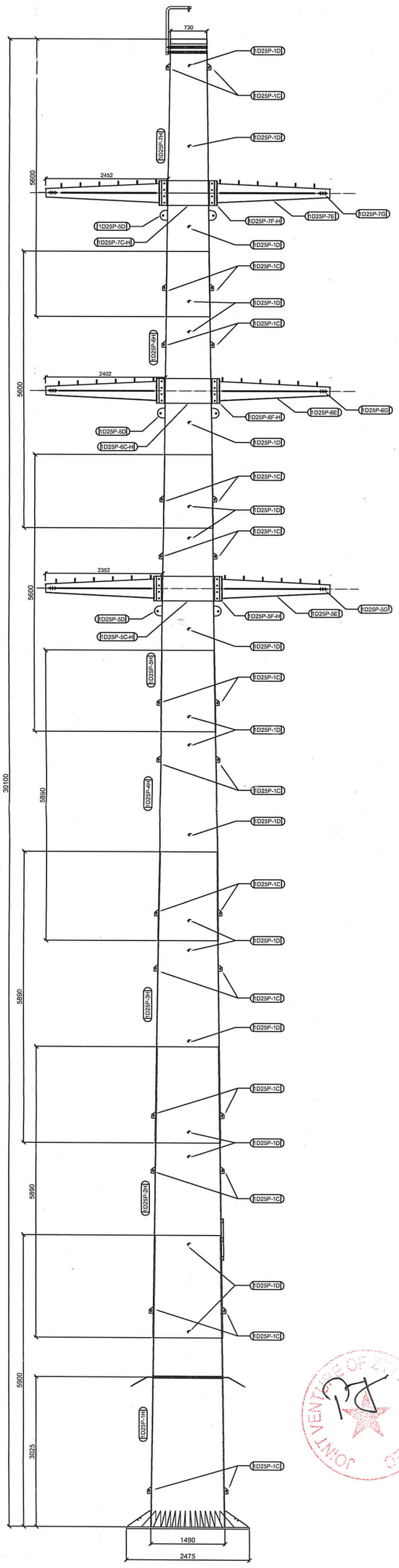
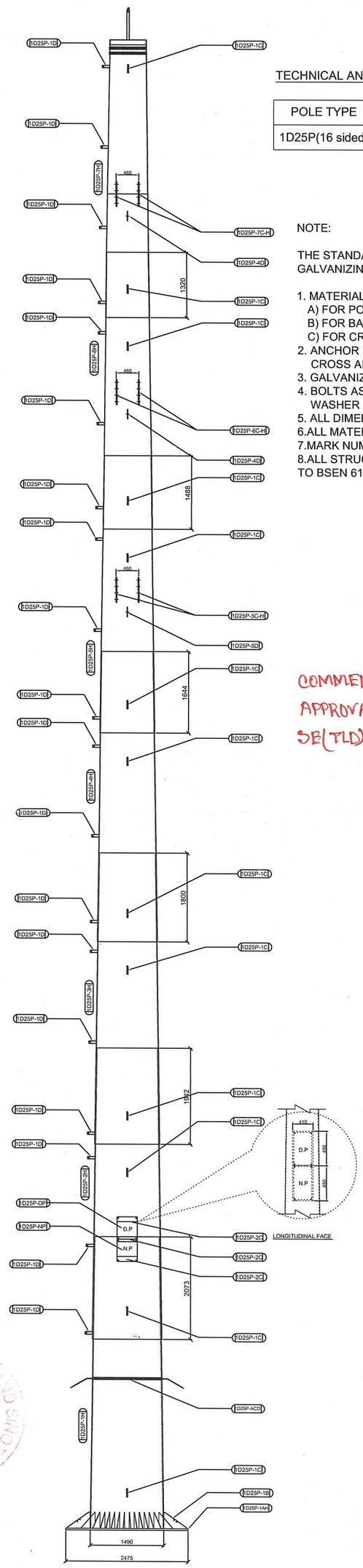


TRANSVERSE FACE



LONGITUDINAL FACE

TECHNICAL AND ECONOMICAL CONDITIONS FOR POLE DESIGN

POLE TYPE	DEVIATION ANGLE	WIND SPAN (m)	WEIGHT SPAN (m) (max/min)
1D25P(16 sided)	0°~25°	165	300/0

NOTE:

THE STANDARDS FOR MATERIAL, FABRICATION, WORKMANSHIP, GALVANIZING, WELDING, INSPECTION, ETC.

1. MATERIAL SPECIFICATION:
   A) FOR POLE, MATERIAL GRADE IS S355JR.
   B) FOR BASE PLATE, MATERIAL GRADE IS S355JR.
   C) FOR CROSS ARM MATERIAL GRADE IS S275JR.
2. ANCHOR BOLT IS 5.6 GRADE;
   CROSS ARM CONNECTING BOLT GRADE 8.8.
3. GALVANIZING AS PER BSEN 1461:2009.
4. BOLTS AS PER ISO 898-1:2009; NUTS AS PER ISO 4034;
   WASHER AS PER DIN127.
5. ALL DIMENSION ARE IN MM.
6. ALL MATERIALS ARE MILD STEEL IF NOT STATED OTHERWISE.
7. MARK NUMBER WITH "H" ALPHABET INDICATES HIGH TENSILE STEEL.
8. ALL STRUCTURAL WELDING SHOULD BE CARRIED OUT ACCORDING TO BSEN 61011-1 & 2.

POWER GRID COMPANY OF BANGLADESH
APPROVED WITH COMMENT
This approvel is general only and does not release the manufaturer/contrctor/Supplier from compliance with specification and Standards for Design, workmanship and performance as stipulated in the contra...

COMMENT: THIS APPROVAL SUPERSEDES EARLIER APPROVAL GIVEN VIDE PGCB LETTER NO 04/PGCB/SE(TLD), DESIGN & QC/2017/25 DATED 12.01.2017

...sdoeb Hasan
...ri-Divisional Engineer
...sign & Quality Control
PGCB Ltd.

(Engr. S.M. Zafrul Hasan)
Executive Engineer (TL-1)
Design & Quality Control
PGCB

...Abdur Rashid Khan)
...Superintending Engineer(TLD)
...Design & Quality Control
PGCB Ltd.

JOINT VENTURE OF ZTT AND SINOTEC

CLIENT :	POWER GRID COMPANY OF BANGLADESH LIMITED (PGCB)
CONTRACTOR :	JOINT VENTURE OF ZTT & SINOTEC
MANUFACTURER :	CONFIDENCE™ Steel Limited
TITLE:	DESIGN, SUPPLY, ERECTION, TESTING AND COMMISSIONING OF ISHURDI–ROOPPUR 132KV DOUBLE CIRCUIT TRANSMISSION LINE ON TURNKEY BASIS

DRAWN	CHECKED	APPROVED	POLE TYPE:	SCALE
M.M.R	M.R.C		1D25P	N.T.S

Drawing Name: 1D25P Erection Drawing

DATE	Dwg No:	SHT. NO.	REV :
08.03.17	CSL/ZTT-SINOTEC/SD/1D25P	1/15	2

WARNING:
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NOTE FOR WELDING:



Length of Weld leg,L = 6mm
Length of Weld Throat,T= 4.24mm
Welding strength, Fu=540 MPa

POWER GRID COMPANY OF BANGLADESH
APPROVED
This approval is general only and does not Release the manufacturer/contructor/supplier From compliance with specification and Standards for Design workmanship and Performance as stipulated in the contract

Md. Shoeb Hasan
Assistant Engineer
Design & QC (TLD-1)
PGCB Ltd. Dhaka.

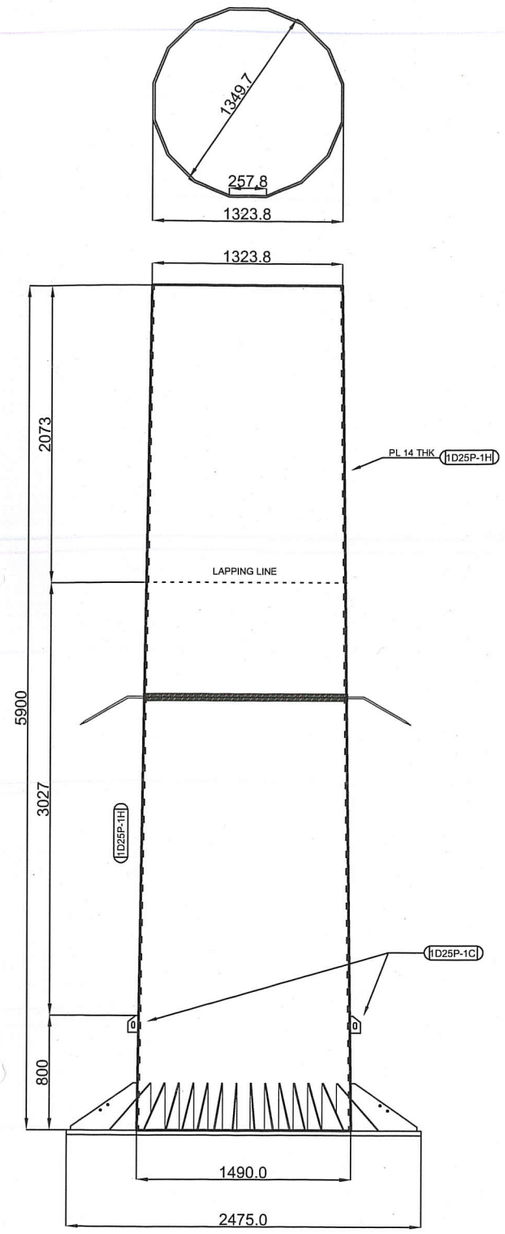
(Engr. S.M. Zafrul Hasan)
Executive Engineer (TL-1)
Design & Quality Control
PGCB

(Abdur Rashid Khan)
Superintending Engineer(TLD)
Design & Quality Control
PGCB Ltd

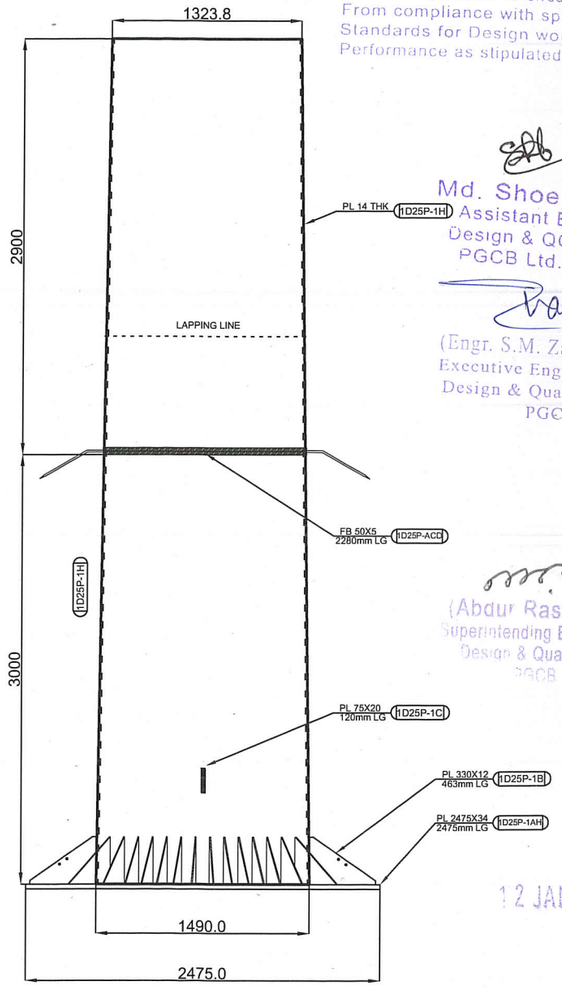
12 JAN 2017

BILL OF MATERIAL

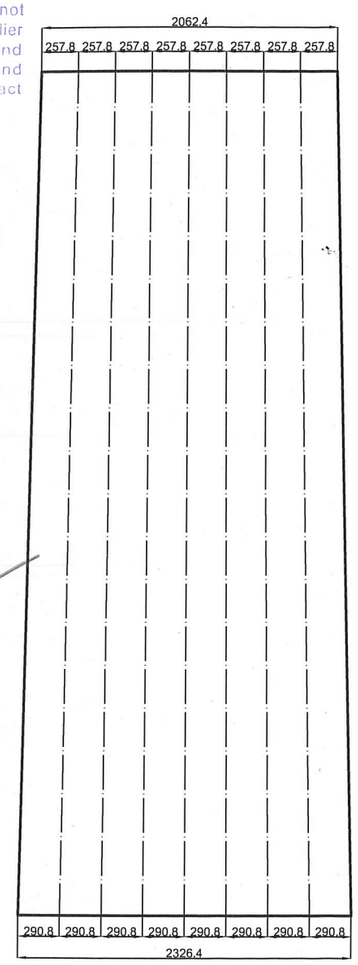
Sl/ No	Mark no	Qty/Pole	Grade	Size	Pole Size			Wt/pc	Total Wt. (kg)	Remarks
					Length	Top Dia	Bottom Dia			
1	1D25P-1H	1	S355JR	PL 14 THK	5900	1323.8	1490	3016.40	3016.40	
2	1D25P-1AH	1	S355JR	PL2475X34 THK	2475			1634.93	1634.93	
3	1D25P-1B	30	S275JR	PL330X12 THK	463			14.39	431.78	
4	1D25P-1E	2	S275JR	PL330X12 THK	463			14.39	28.79	
5	1D25P-1C	2	S275JR	PL75X20 THK	120			1.41	2.83	
								Total=	5114.73	kg
								TOTAL WEIGHT (INCLUDING 3.5%GALV)=	5293.74	kg

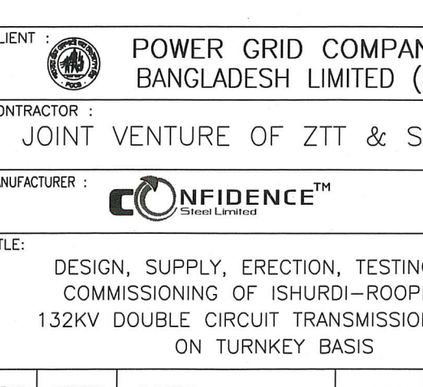


TRANSVERSE FACE



LONGITUDINAL FACE



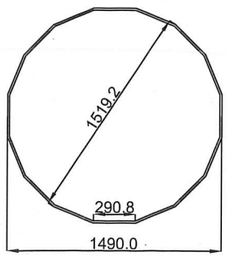


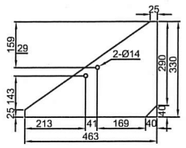
BASE PLATE (PL Ø2475X34H THK) (1D25P-1AH)
Outer dia=2475mm, Inner dia=950mm
QTY : 1 PCS

NOTE:

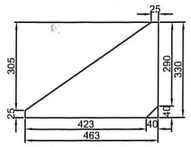
THE STANDARDS FOR MATERIAL, FABRICATION, WORKMANSHIP, GALVANIZING, WELDING, INSPECTION, ETC.

1. MATERIAL SPECIFICATION:
   A) FOR POLE, MATERIAL GRADE IS S355JR.
   B) FOR BASE PLATE, MATERIAL GRADE IS S355JR.
   C) FOR CROSS ARM MATERIAL GRADE IS S275JR.
2. ANCHOR BOLT IS 5.6 GRADE;
   CROSS ARM CONNECTING BOLT GRADE 8.8.
3. GALVANIZING AS PER BSEN 1461:2009.
4. BOLTS AS PER ISO 898-1:2009; NUTS AS PER ISO 4034;
   WASHER AS PER DIN127.
5. ALL DIMENSION ARE IN MM.
6. ALL MATERIALS ARE MILD STEEL IF NOT STATED OTHERWISE.
7. MARK NUMBER WITH "H" ALPHABET INDICATES HIGH TENSILE STEEL.
8. ALL STRUCTURAL WELDING SHOULD BE CARRIED OUT ACCORDING TO BSEN 61011-1 & 2.

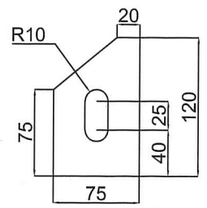




GUSSET PLATE-(1D25P-1E)
PL 330x12 THK- 463 LG
QTY:2 PCS



GUSSET PLATE-(1D25P-1B)
PL 330x12 THK- 463 LG
QTY :30 PCS



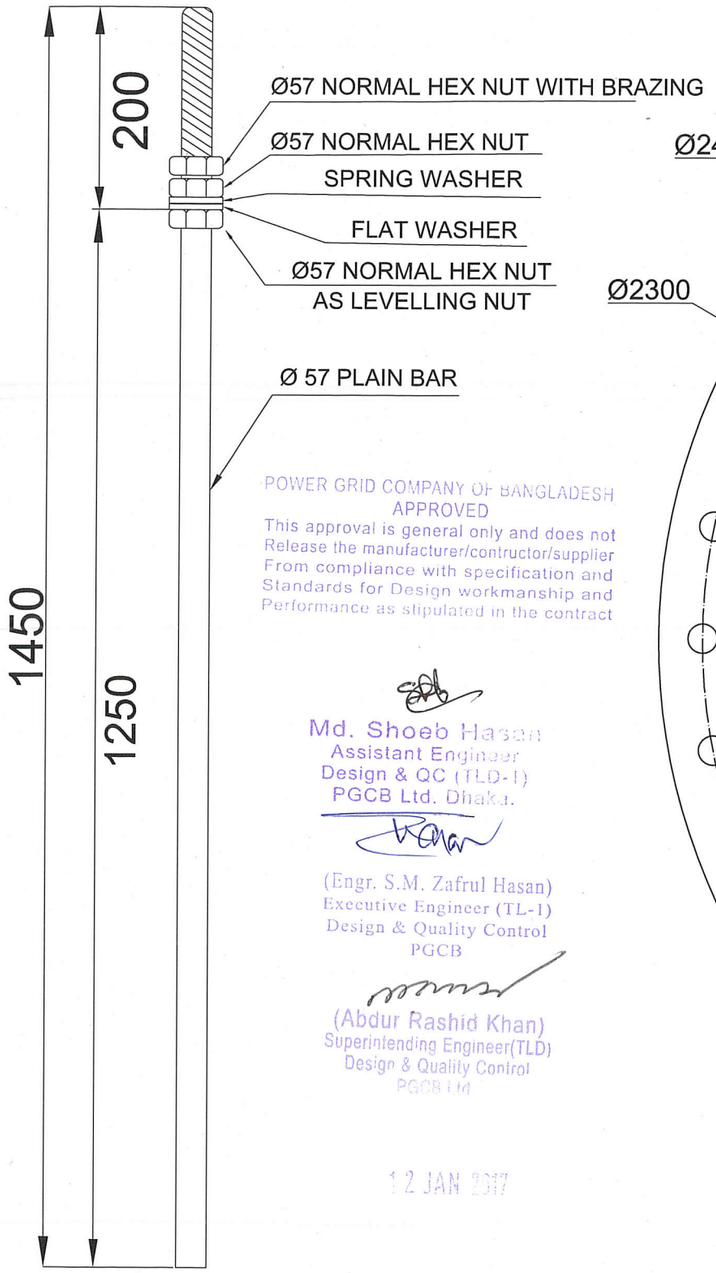
LIFTING CLEAT- (1D25P-1C)
(PL 75X20 THK- 120 LG)
QTY : 2PCS



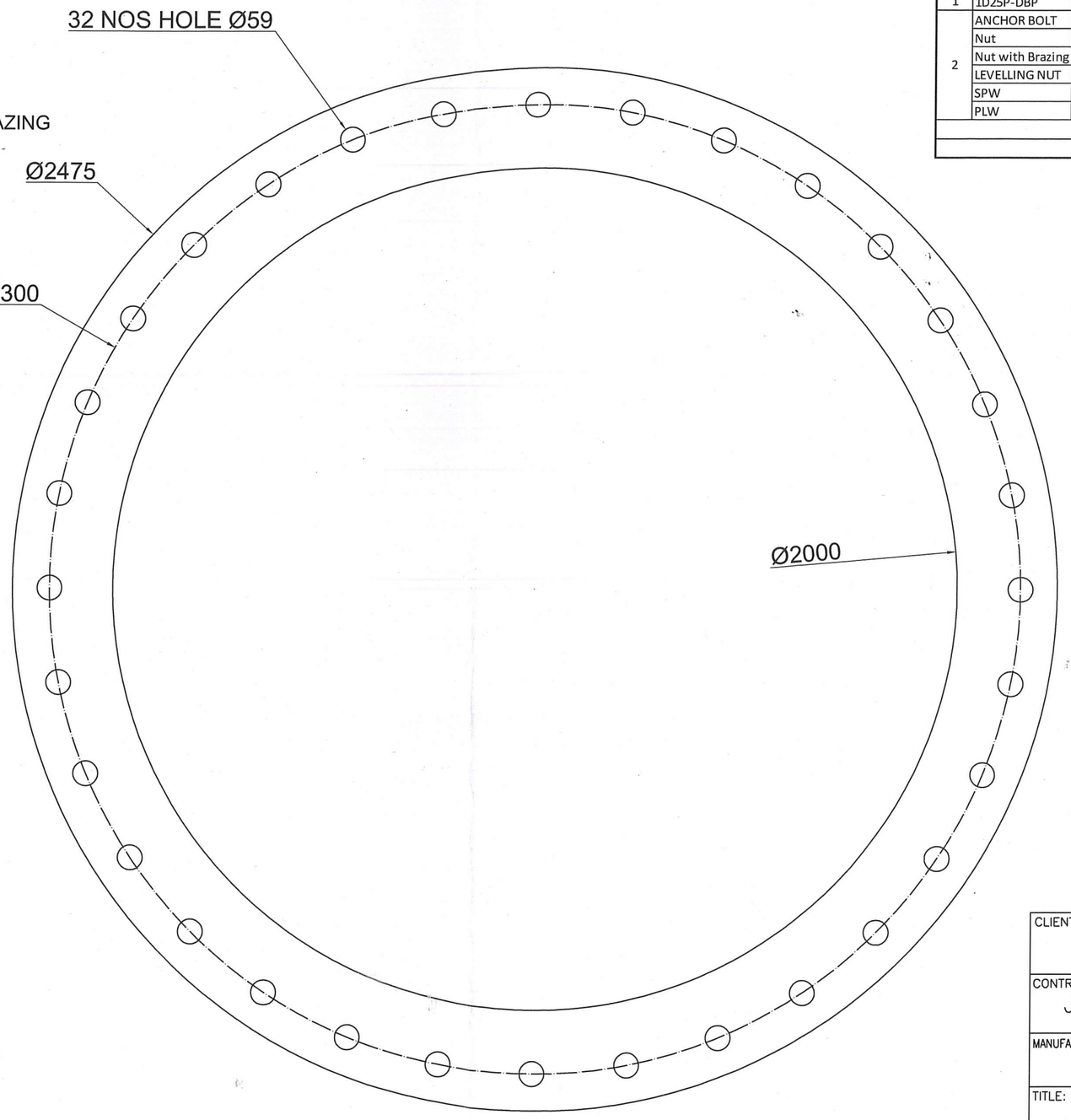
CLIENT : POWER GRID COMPANY OF BANGLADESH LIMITED (PGCB)				
CONTRACTOR : JOINT VENTURE OF ZTT & SINOTEC				
MANUFACTURER : CONFIDENCE™ Steel Limited				
TITLE: DESIGN, SUPPLY, ERECTION, TESTING AND COMMISSIONING OF ISHURDI–ROOPPUR 132KV DOUBLE CIRCUIT TRANSMISSION LINE ON TURNKEY BASIS				
DRAWN: M.S.S	CHECKED: M.R.C	APPROVED:	POLE TYPE: 1D25P	SCALE: N.T.S
Drawing Name: 1D25P Erection Drawing				
DATE: 05.01.17	Dwg No: CSL/ZTT–SINOTEC/SD/1D25P		SHT. NO. 2/15	REV : 1

BILL OF MATERIAL

Sl No	Mark No	Qty/Pole	Grade	Size	Length (mm)	Wt/pcs (KG)	Total Weight (KG)	Remarks
1	1D25P-DBP	1	S275JR	PL2475X10 THK	2475	480.86	480.86	
2	ANCHOR BOLT	32	5.6	Ø57	1450	28.85	923.08	
	Nut	32				1.40	44.80	
	Nut with Brazing	32				1.40	44.80	
	LEVELLING NUT	32				1.40	44.80	
	SPW	32				0.48	15.36	
	PLW	32				0.44	14.08	
						Total=	1567.78	Kg
						TOTAL WEIGHT (INCLUDING 3.5%GALV)=	1622.66	Kg



DETAIL OF ANCHOR BOLT
QTY= 32 PCS, Ø=57mm
5.6GRADE



Dummy Base plate (PL Ø2475X10mm THK)
(1D25P-DBP)
Outer dia=2475mm, Inner dia=2000mm

POWER GRID COMPANY OF BANGLADESH
APPROVED
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Md. Shoeb Hasan
Assistant Engineer
Design & QC (TLD-1)
PGCB Ltd. Dhaka.

(Engr. S.M. Zafrul Hasan)
Executive Engineer (TL-1)
Design & Quality Control
PGCB

(Abdur Rashid Khan)
Superintending Engineer(TLD)
Design & Quality Control
PGCB Ltd

12 JAN 2017

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JOINT VENTURE OF ZTT AND SINOTEC

NOTE:

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   CROSS ARM CONNECTING BOLT GRADE 8.8.
3. GALVANIZING AS PER BSEN 1461:2009.
4. BOLTS AS PER ISO 898-1:2009; NUTS AS PER ISO 4034;
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6. ALL MATERIALS ARE MILD STEEL IF NOT STATED OTHERWISE.
7. MARK NUMBER WITH "H" ALPHABET INDICATES HIGH TENSILE STEEL.
8. ALL STRUCTURAL WELDING SHOULD BE CARRIED OUT ACCORDING TO BSEN 61011-1 & 2.

CLIENT : POWER GRID COMPANY OF BANGLADESH LIMITED (PGCB)

CONTRACTOR : JOINT VENTURE OF ZTT & SINOTEC

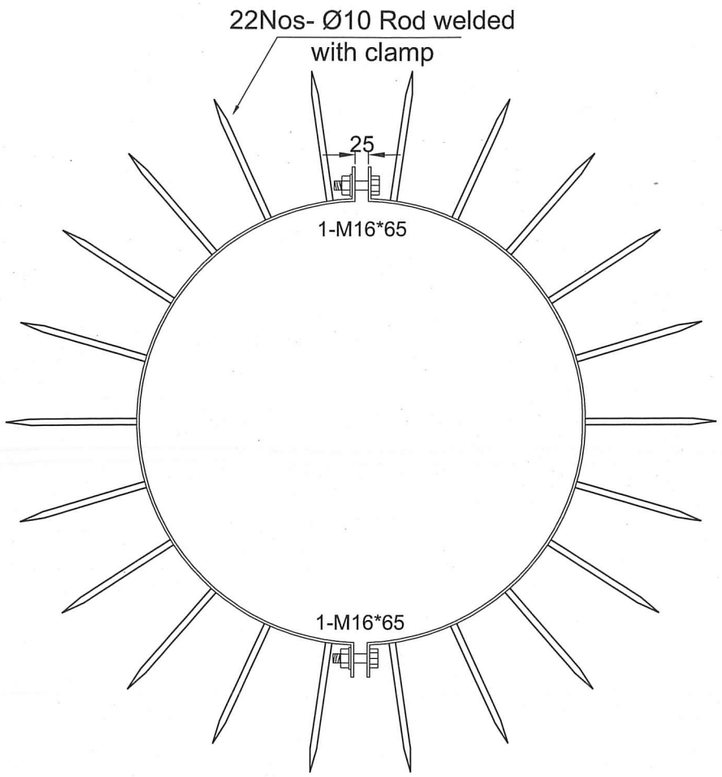
MANUFACTURER : CONFIDENCE™ Steel Limited

TITLE: DESIGN, SUPPLY, ERECTION, TESTING AND COMMISSIONING OF ISHURDI–ROOPPUR 132KV DOUBLE CIRCUIT TRANSMISSION LINE ON TURNKEY BASIS

DRAWN	CHECKED	APPROVED	POLE TYPE:	SCALE
M.S.S	M.R.C		1D25P	N.T.S

Drawing Name: 1D25P Erection Drawing

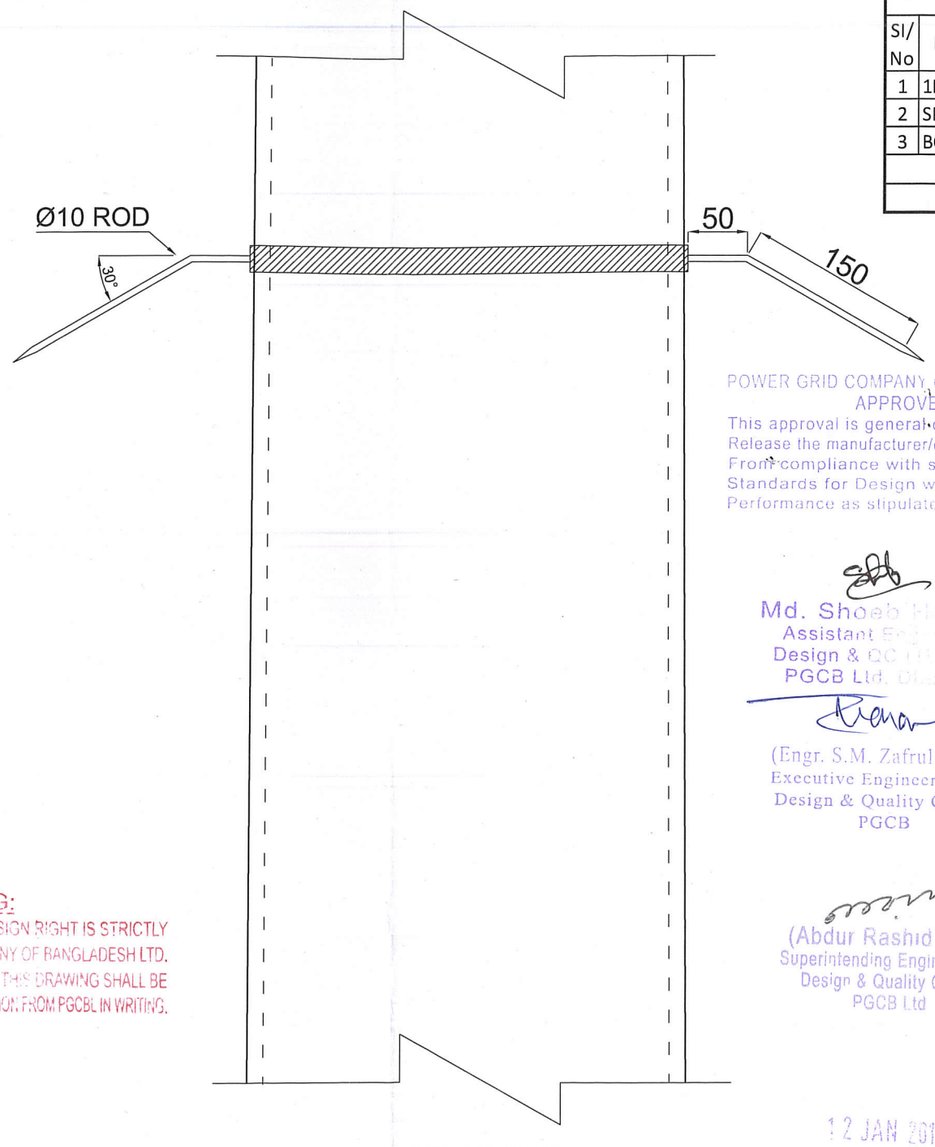
DATE	Dwg No:	SHT. NO.	REV :
05.01.17	CSL/ZTT–SINOTEC/SD/1D25P	3/15	1



CROSS SECTION

1D25P-ACD

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ELEVATION

BILL OF MATERIAL

Sl/ No	Mark no	Qty/Pole	Greade	Size	Length	Wt/pc	Total Wt. (kg)	Remarks
1	1D25P-C1	2	S275JR	FB50X5 THK	2280	4.47	8.95	
2	SPIKE ROD	22	40	Ø10	200	0.12	2.69	
3	BOLT	2	8.8	M16	65	0.17	0.35	
						Total=	11.99	kg
						TOTAL WEIGHT (INCLUDING 3.5%GALV)=	12.41	kg

POWER GRID COMPANY OF BANGLADESH
APPROVED
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Md. Shoeb Hasan
Assistant Engineer
Design & QC (TL)
PGCB Ltd.

(Engr. S.M. Zafrul Hasan)
Executive Engineer (TL-1)
Design & Quality Control
PGCB

JOINT VENTURE OF ZTT AND SINOTEC

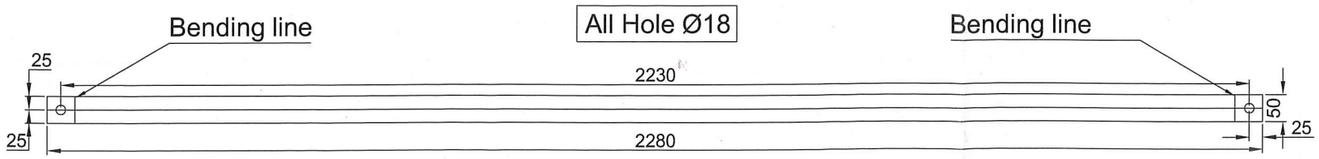
(Abdur Rashid Khan)
Superintending Engineer(TLD)
Design & Quality Control
PGCB Ltd

12 JAN 2017

NOTE:

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FLAT BAR DETAIL (FB 50X5 THK - 2280 LG)
(1D25P-C1)

CLIENT : POWER GRID COMPANY OF BANGLADESH LIMITED (PGCB)

CONTRACTOR : JOINT VENTURE OF ZTT & SINOTEC

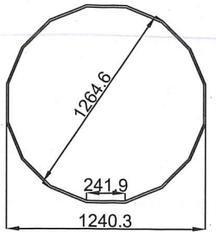
MANUFACTURER : CONFIDENCE™ Steel Limited

TITLE: DESIGN, SUPPLY, ERECTION, TESTING AND COMMISSIONING OF ISHURDI–ROOPPUR 132KV DOUBLE CIRCUIT TRANSMISSION LINE ON TURNKEY BASIS

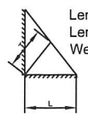
DRAWN	CHECKED	APPROVED	POLE TYPE:	SCALE
M.S.S	M.R.C		1D25P	N.T.S

Drawing Name: 1D25P Erection Drawing

DATE	05.01.17	Dwg No: CSL/ZTT–SINOTEC/SD/1D25P	SHT. NO. 4/15	REV : ⚠



NOTE FOR WELDING:



Length of Weld leg,L = 6mm
Length of Weld Throat,T= 4.24mm
Welding strength, Fu=540 MPa

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Md. Shoeb Hasan
Assistant Engineer
Design & Quality Control
PGCB Ltd

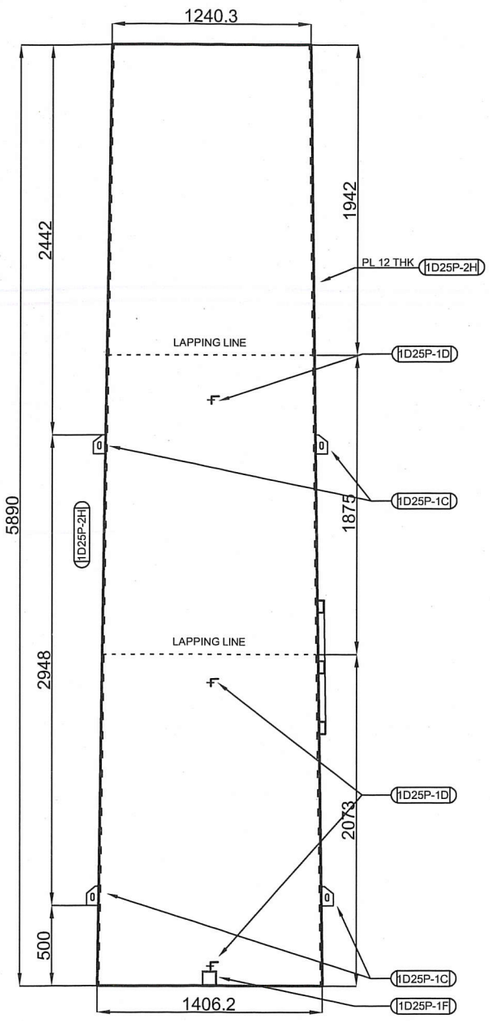
(Engr. S.M. Zafrul Hasan)
Executive Engineer (TL-1)
Design & Quality Control
PGCB

(Abdur Rashid Khan)
Superintending Engineer(TLD)
Design & Quality Control
PGCB Ltd

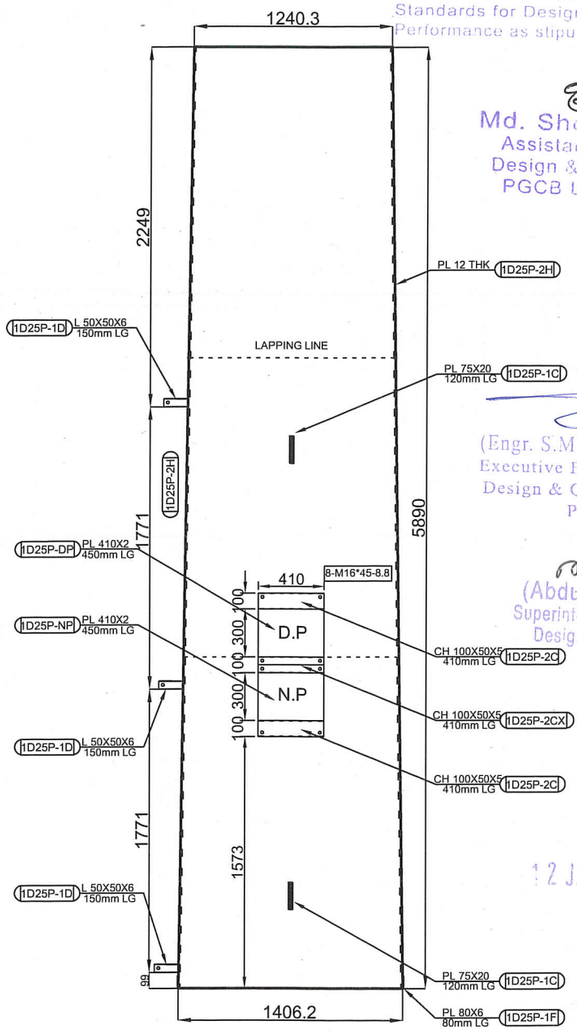
12 JAN 2017

BILL OF MATERIAL

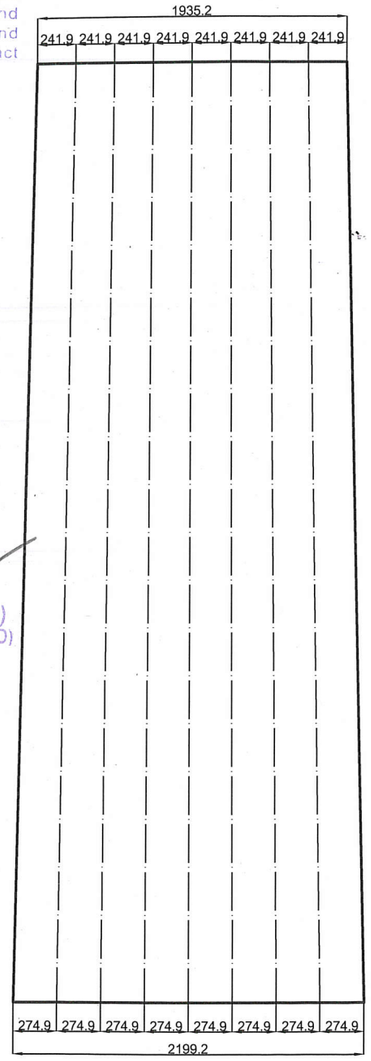
Sl/ No	Mark no	Qty/Pole	GRADE	Size	Pole Size			Wt/pc	Total Wt. (kg)	Remarks
					Length	Top Dia	Bottom Dia			
1	1D25P-2H	1	S355JR	PL12 THK	5890	1240.3	1406.2	2441.29	2441.29	
2	1D25P-1C	4	S275JR	PL75X20 THK	120			1.41	5.65	
3	1D25P-2C	2	S275JR	CH100X50X5	410			3.04	6.08	
4	1D25P-2CX	1	S275JR	CH100X50X5	410			3.04	3.04	
5	1D25P-1D	3	S275JR	L50X50X6	150			0.68	2.03	
6	1D25P-1F	2	S275JR	PL80X6 THK	80			0.30	0.60	
7	1D25P-DP	1	S275JR	PL410X2 THK	450			2.90	2.90	
8	1D25P-NP	1	S275JR	PL410X2 THK	450			2.90	2.90	
9	BOLT	8	8.8	M16	45			0.14	1.13	
								Total=	**2465.60**	**kg**
								TOTAL WEIGHT (INCLUDING 3.5%GALV)=	**2551.90**	**kg**

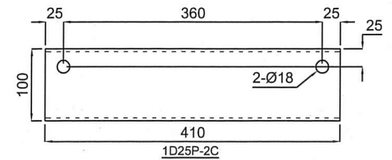


TRANSVERSE FACE

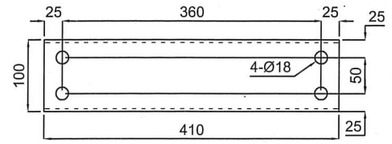


LONGITUDINAL FACE





1D25P-2C
(CH100X50X5THK-410LG=2PCS)

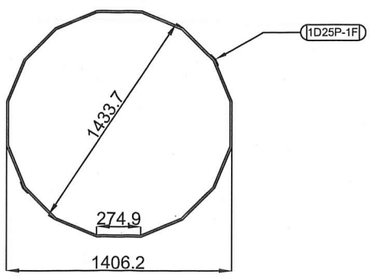


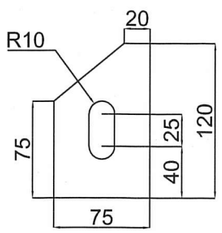
1D25P-2CX
(CH100X50X5THK-410LG=1PCS)

NOTE:

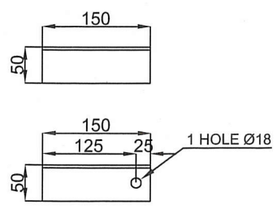
THE STANDARDS FOR MATERIAL, FABRICATION, WORKMANSHIP, GALVANIZING, WELDING, INSPECTION, ETC.

1. MATERIAL SPECIFICATION:
   A) FOR POLE, MATERIAL GRADE IS S355JR.
   B) FOR BASE PLATE, MATERIAL GRADE IS S355JR.
   C) FOR CROSS ARM MATERIAL GRADE IS S275JR.
2. ANCHOR BOLT IS 5.6 GRADE;
   CROSS ARM CONNECTING BOLT GRADE 8.8.
3. GALVANIZING AS PER BSEN 1461:2009.
4. BOLTS AS PER ISO 898-1:2009; NUTS AS PER ISO 4034;
   WASHER AS PER DIN127.
5. ALL DIMENSION ARE IN MM.
6. ALL MATERIALS ARE MILD STEEL IF NOT STATED OTHERWISE.
7. MARK NUMBER WITH "H" ALPHABET INDICATES HIGH TENSILE STEEL.
8. ALL STRUCTURAL WELDING SHOULD BE CARRIED OUT ACCORDING TO BSEN 61011-1 & 2.





LIFTING CLEAT- (1D25P-1C)
(PL 75X20 THK- 120 LG)
QTY : 4PCS



LADDER CLEAT- (1D25P-1D)
(L 50X50X6 THK- 150 LG)
QTY : 3PCS

JOINT VENTURE OF ZTT AND SINOTEC

CLIENT : POWER GRID COMPANY OF BANGLADESH LIMITED (PGCB)

CONTRACTOR : JOINT VENTURE OF ZTT & SINOTEC

MANUFACTURER : CONFIDENCE™ Steel Limited

TITLE:

DESIGN, SUPPLY, ERECTION, TESTING AND COMMISSIONING OF ISHURDI–ROOPPUR 132KV DOUBLE CIRCUIT TRANSMISSION LINE ON TURNKEY BASIS

DRAWN	CHECKED	APPROVED	POLE TYPE:	SCALE
M.S.S	M.R.C		1D25P	N.T.S

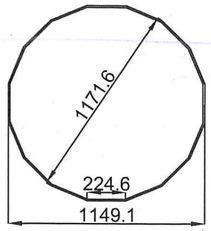
Drawing Name: 1D25P Erection Drawing

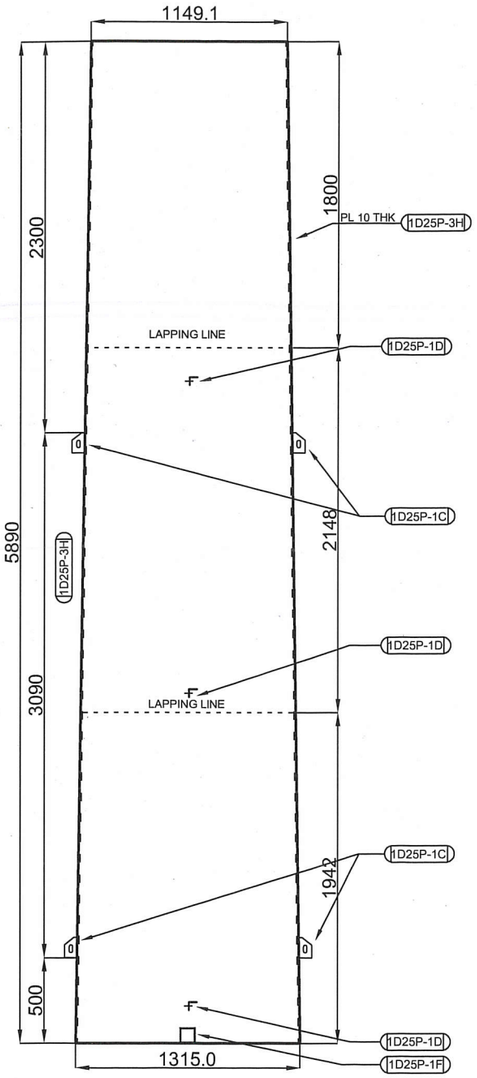
DATE	05.01.17	Dwg No: CSL/ZTT-SINOTEC/SD/1D25P	SHT. NO. 5/15	REV : 1

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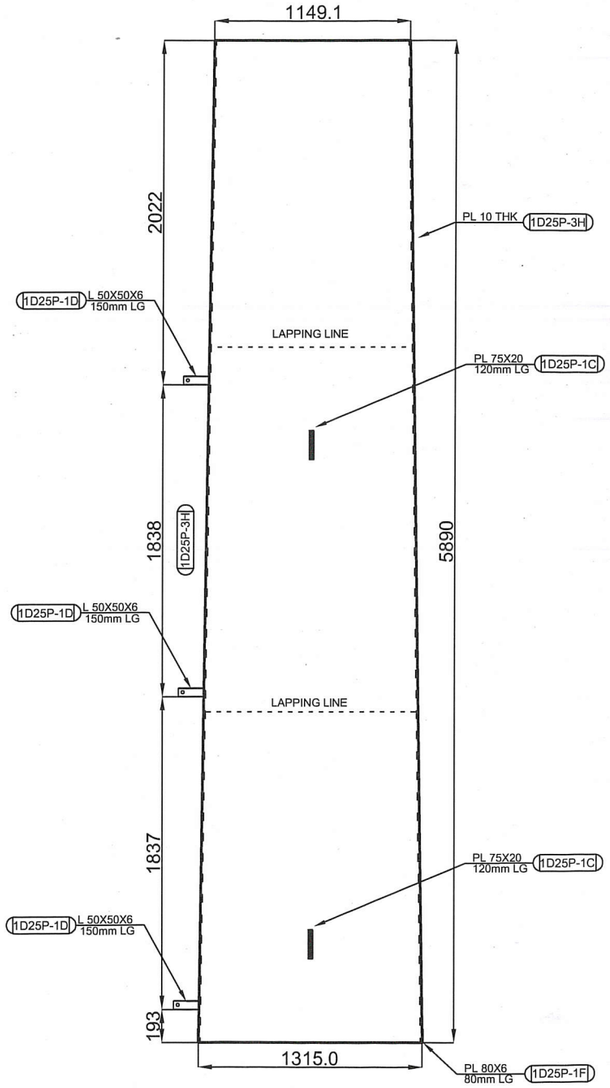
BILL OF MATERIAL

Sl/ No	Mark no	Qty/Pole	GRADE	Size	Pole Size			Wt/pc	Total Wt. (kg)	Remarks
					Length	Top Dia	Bottom Dia			
1	1D25P-3H	1	S355JR	PL10 THK	5890	1149.1	1315	1905.87	1905.87	
2	1D25P-1C	4	S275JR	PL75X20 THK	120			1.41	5.65	
2	1D25P-1F	2	S275JR	PL80X6 THK	80			0.30	0.60	
3	1D25P-1D	3	S275JR	L50X50X6	150			0.68	2.03	
								Total=	1914.15	kg
								TOTAL WEIGHT (INCLUDING 3.5%GALV)=	1981.14	kg

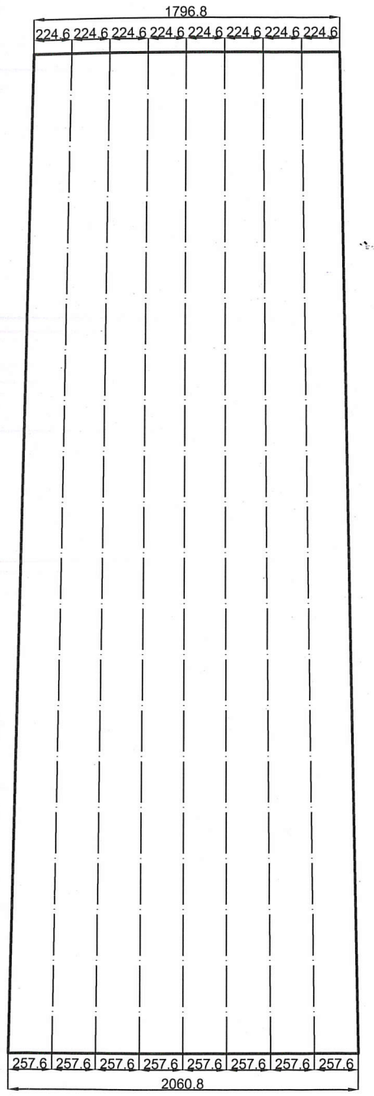


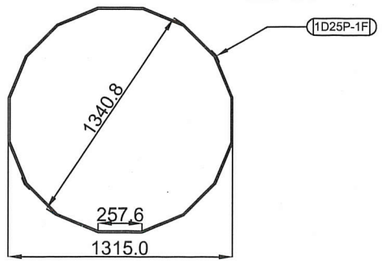


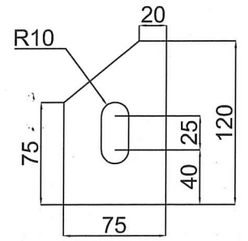
TRANSVERSE FACE



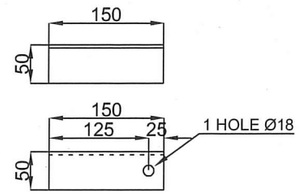
LONGITUDINAL FACE







LIFTING CLEAT- (1D25P-1C)
(PL 75X20 THK- 120 LG)
QTY : 4PCS



LADDER CLEAT- (1D25P-1D)
(L 50X50X6THK- 150 LG)
QTY : 3PCS

POWER GRID COMPANY OF BANGLADESH
APPROVED
This approval is general only and does not Release the manufacturer/contructor/supplier From compliance with specification and Standards for Design workmanship and Performance as stipulated in the contract

Md. Shoeb
Assistant Engr
Design & QC
PGCB Ltd.

(Engr. S.M. Zafrul Hasan)
Executive Engineer (TL-1)
Design & Quality Control
PGCB

(Abdur Rashid Khan)
Superintending Engineer(TLD)
Design & Quality Control
PGCB Ltd

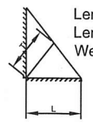
12 JAN 2017

NOTE:

THE STANDARDS FOR MATERIAL, FABRICATION, WORKMANSHIP, GALVANIZING, WELDING, INSPECTION, ETC.

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5. ALL DIMENSION ARE IN MM.
6. ALL MATERIALS ARE MILD STEEL IF NOT STATED OTHERWISE.
7. MARK NUMBER WITH "H" ALPHABET INDICATES HIGH TENSILE STEEL.
8. ALL STRUCTURAL WELDING SHOULD BE CARRIED OUT ACCORDING TO BSEN 61011-1 & 2.

NOTE FOR WELDING:



Length of Weld leg,L = 6mm
Length of Weld Throat,T= 4.24mm
Welding strength, Fu=540 MPa

JOINT VENTURE OF ZTT AND SINOTEC

CLIENT : POWER GRID COMPANY OF BANGLADESH LIMITED (PGCB)

CONTRACTOR : JOINT VENTURE OF ZTT & SINOTEC

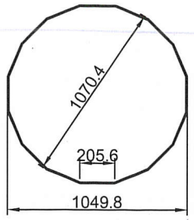
MANUFACTURER : CONFIDENCE™ Steel Limited

TITLE: DESIGN, SUPPLY, ERECTION, TESTING AND COMMISSIONING OF ISHURDI–ROOPPUR 132KV DOUBLE CIRCUIT TRANSMISSION LINE ON TURNKEY BASIS

DRAWN	CHECKED	APPROVED	POLE TYPE:	SCALE
M.S.S	M.R.C		1D25P	N.T.S

Drawing Name: 1D25P Erection Drawing

DATE	05.01.17	Dwg No: CSL/ZTT–SINOTEC/SD/1D25P	SHT. NO. 6/15	REV : 1

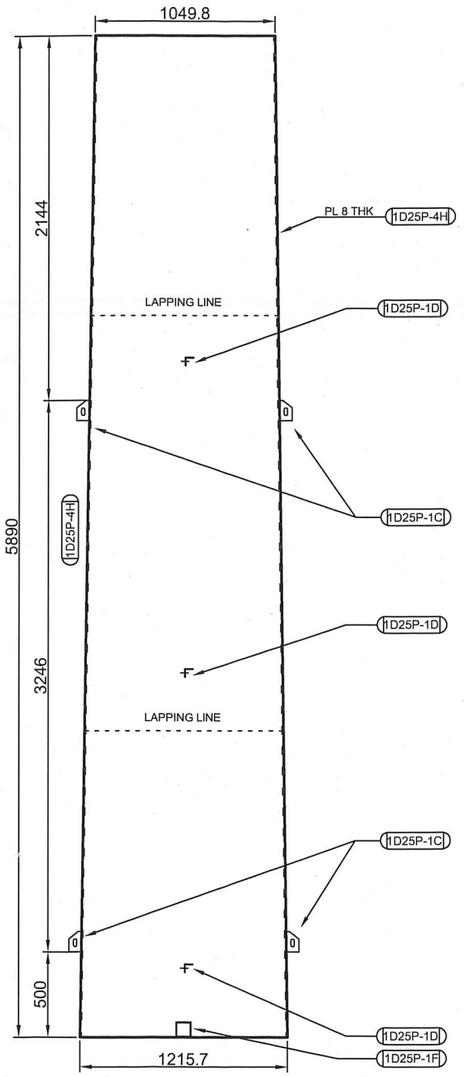


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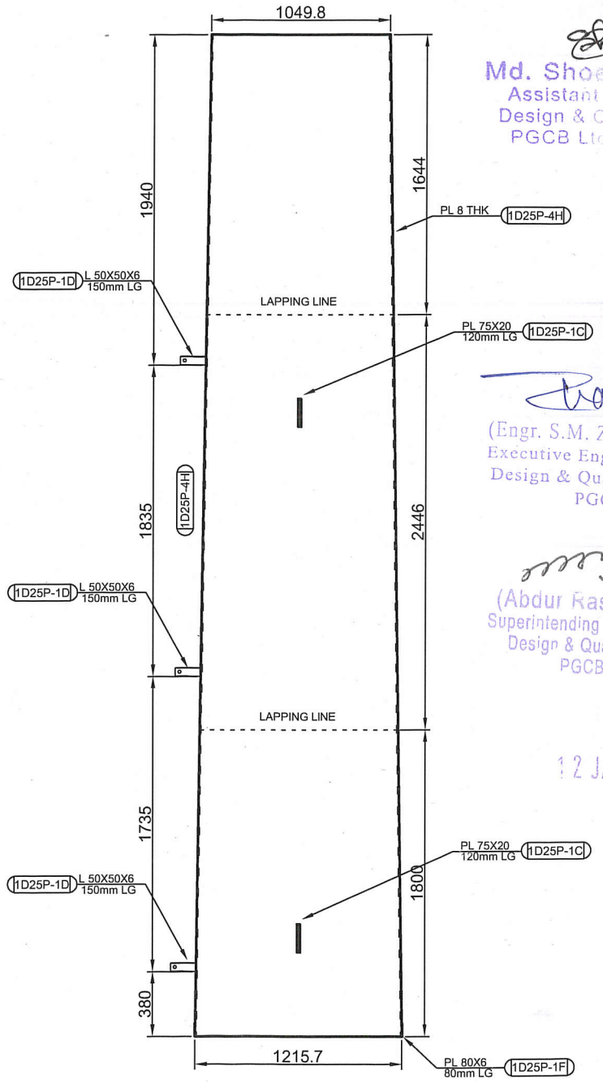
POWER GRID COMPANY OF BANGLADESH
APPROVED
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BILL OF MATERIAL

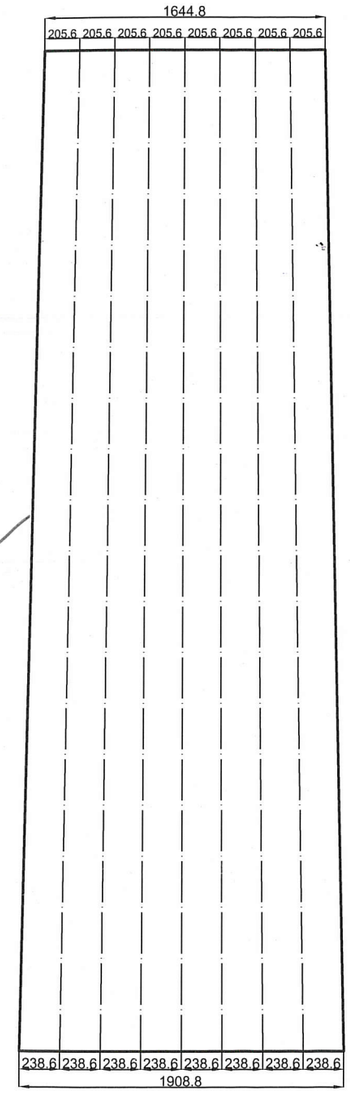
Sl/ No	Mark no	Qty/Pole	GRADE	Size	Pole Size			Wt/pc	Total Wt. (kg)	Remarks
					Length	Top Dia	Bottom Dia			
1	1D25P-4H	1	S355JR	PL8 THK	5890	1049.8	1215.7	1412.25	1412.25	
2	1D25P-1C	4	S275JR	PL75X20 THK	120			1.41	5.65	
3	1D25P-1D	3	S275JR	L50X50X6	150			0.68	2.03	
4	1D25P-1F	2	S275JR	PL80X6 THK	80			0.30	0.60	
								Total=	1420.53	kg
								TOTAL WEIGHT (INCLUDING 3.5%GALV)=	1470.25	kg



TRANSVERSE FACE



LONGITUDINAL FACE

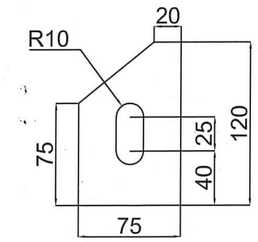


Md. Shoeb Hasan
Assistant Engineer
Design & QC (TL)
PGCB Ltd.

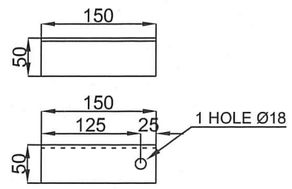
(Engr. S.M. Zafrul Hasan)
Executive Engineer (TL-1)
Design & Quality Control
PGCB

(Abdur Rashid Khan)
Superintending Engineer(TLD)
Design & Quality Control
PGCB Ltd

12 JAN 2017



LIFTING CLEAT- (1D25P-1C)
(PL 75X20 THK- 120 LG)
QTY : 4PCS

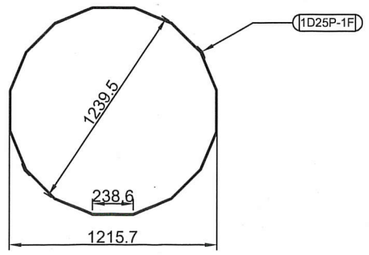


LADDER CLEAT- (1D25P-1D)
(L 50X50X6THK- 150 LG)
QTY : 3PCS

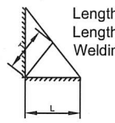
NOTE:

THE STANDARDS FOR MATERIAL, FABRICATION, WORKMANSHIP, GALVANIZING, WELDING, INSPECTION, ETC.

1. MATERIAL SPECIFICATION:
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4. BOLTS AS PER ISO 898-1:2009; NUTS AS PER ISO 4034;
   WASHER AS PER DIN127.
5. ALL DIMENSION ARE IN MM.
6. ALL MATERIALS ARE MILD STEEL IF NOT STATED OTHERWISE.
7. MARK NUMBER WITH "H" ALPHABET INDICATES HIGH TENSILE STEEL.
8. ALL STRUCTURAL WELDING SHOULD BE CARRIED OUT ACCORDING TO BSEN 61011-1 & 2.



NOTE FOR WELDING:



Length of Weld leg,L = 6mm
Length of Weld Throat,T= 4.24mm
Welding strength, Fu=540 MPa

JOINT VENTURE OF ZTT AND SINOTEC

CLIENT : POWER GRID COMPANY OF BANGLADESH LIMITED (PGCB)

CONTRACTOR : JOINT VENTURE OF ZTT & SINOTEC

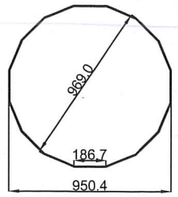
MANUFACTURER : CONFIDENCE™ Steel Limited

TITLE:
DESIGN, SUPPLY, ERECTION, TESTING AND COMMISSIONING OF ISHURDI–ROOPPUR 132KV DOUBLE CIRCUIT TRANSMISSION LINE ON TURNKEY BASIS

DRAWN	CHECKED	APPROVED	POLE TYPE:	SCALE
M.S.S	M.R.C		1D25P	N.T.S

Drawing Name: 1D25P Erection Drawing

DATE	05.01.17	Dwg No: CSL/ZTT-SINOTEC/SD/1D25P	SHT. NO. 7/15	REV : 1

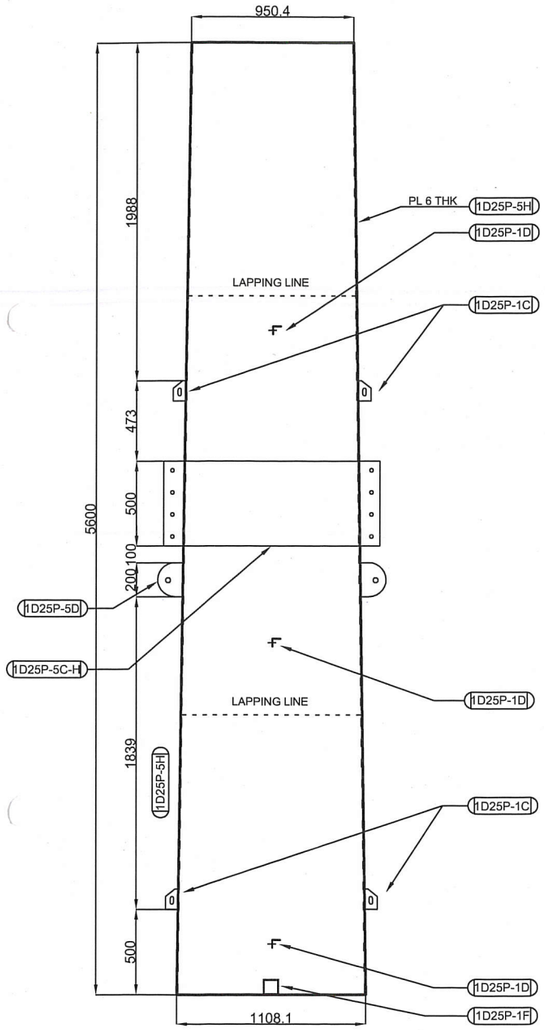


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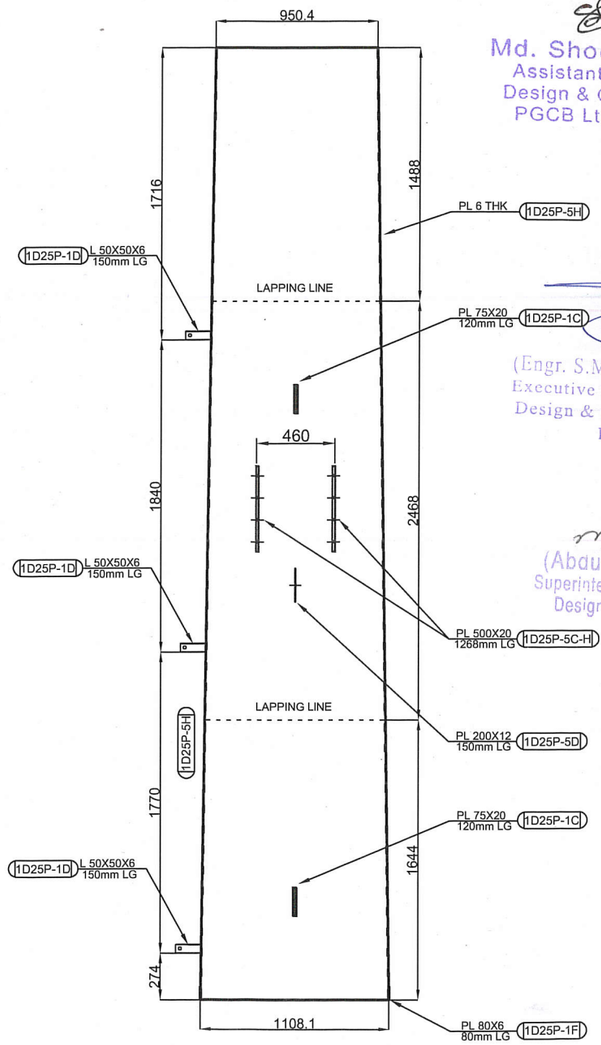
POWER GRID COMPANY OF BANGLADESH
APPROVED
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BILL OF MATERIAL

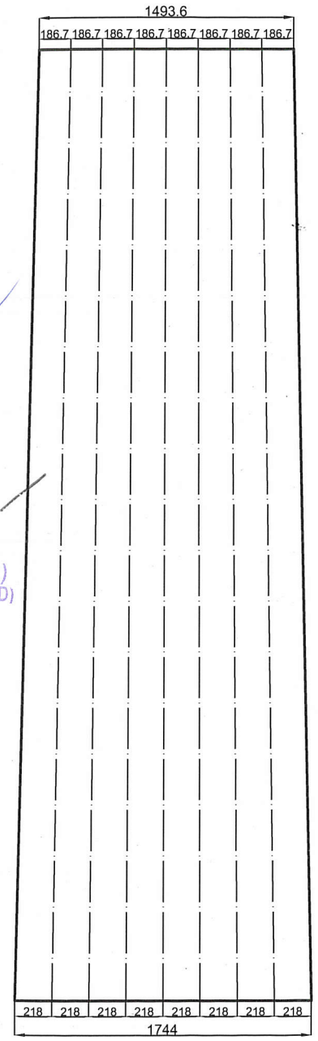
Sl/ No	Mark no	Qty/Pole	GRADE	Size	Pole Size			Wt/pc	Total Wt. (kg)	Remarks
					Length	Top Dia	Bottom Dia			
1	1D25P-5H	1	S355JR	PL6 THK	5600	950.4	1108.1	919.99	919.99	
2	1D25P-1C	4	S275JR	PL75X20 THK	120			1.41	5.65	
3	1D25P-1D	3	S275JR	L50X50X6	150			0.68	2.03	
4	1D25P-1F	2	S275JR	PL80X6 THK	80			0.30	0.60	
5	1D25P-5C-H	2	S355JR	PL500X20 THK	1268			99.54	199.08	
6	1D25P-5D	2	S275JR	PL200X12 THK	150			2.83	5.65	
								Total=	1133.00	kg
								TOTAL WEIGHT (INCLUDING 3.5%GALV)=	1172.66	kg

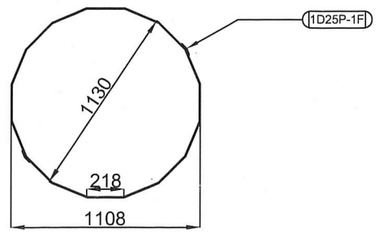


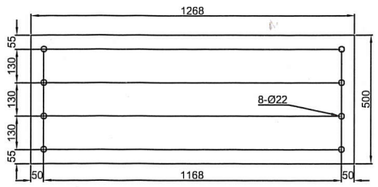
TRANSVERSE FACE



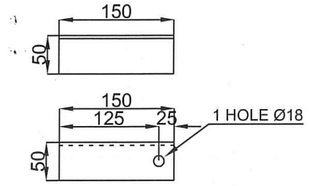
LONGITUDINAL FACE



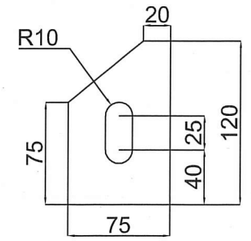




(1D25P-5C-H)
(PL 500X20 THK- 1268 LG)
QTY : 2PCS



LADDER CLEAT- (1D25P-1D)
(L 50X50X6THK- 150 LG)
QTY : 3PCS



LIFTING CLEAT- (1D25P-1C)
(PL 75X20 THK- 120 LG)
QTY : 4PCS

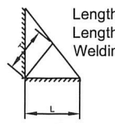
Md. Shoeb [illegible]
Assistant Engr.
Design & QC [illegible]
PGCB Ltd. Dhaka

(Engr. S.M. Zafrul Hasan)
Executive Engineer (TL-1)
Design & Quality Control
PGCB

(Abdur Rashid Khan)
Superintending Engineer(TLD)
Design & Quality Control
PGCB Ltd

12 JAN 2017

NOTE FOR WELDING:



Length of Weld leg,L = 6mm
Length of Weld Throat,T= 4.24mm
Welding strength, Fu=540 MPa

JOINT VENTURE OF ZTT AND SINOTEC

NOTE:

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CLIENT : POWER GRID COMPANY OF BANGLADESH LIMITED (PGCB)

CONTRACTOR : JOINT VENTURE OF ZTT & SINOTEC

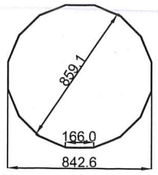
MANUFACTURER : CONFIDENCE™ Steel Limited

TITLE:
DESIGN, SUPPLY, ERECTION, TESTING AND COMMISSIONING OF ISHURDI–ROOPPUR 132KV DOUBLE CIRCUIT TRANSMISSION LINE ON TURNKEY BASIS

DRAWN	CHECKED	APPROVED	POLE TYPE:	SCALE
M.S.S	M.R.C		1D25P	N.T.S

Drawing Name: 1D25P Erection Drawing

DATE	05.01.17	Dwg No: CSL/ZTT-SINOTEC/SD/1D25P	SHT. NO. 8/15	REV : 1



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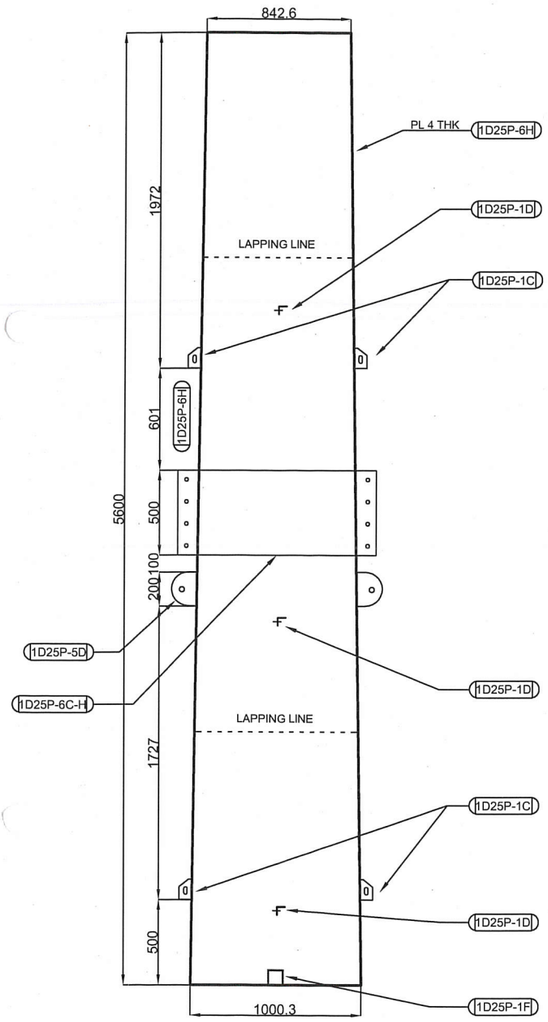
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Md. Shoeb Hasan
Assistant Engineer
Design & QC (TLD-1)
PGCB Ltd. Dhaka.

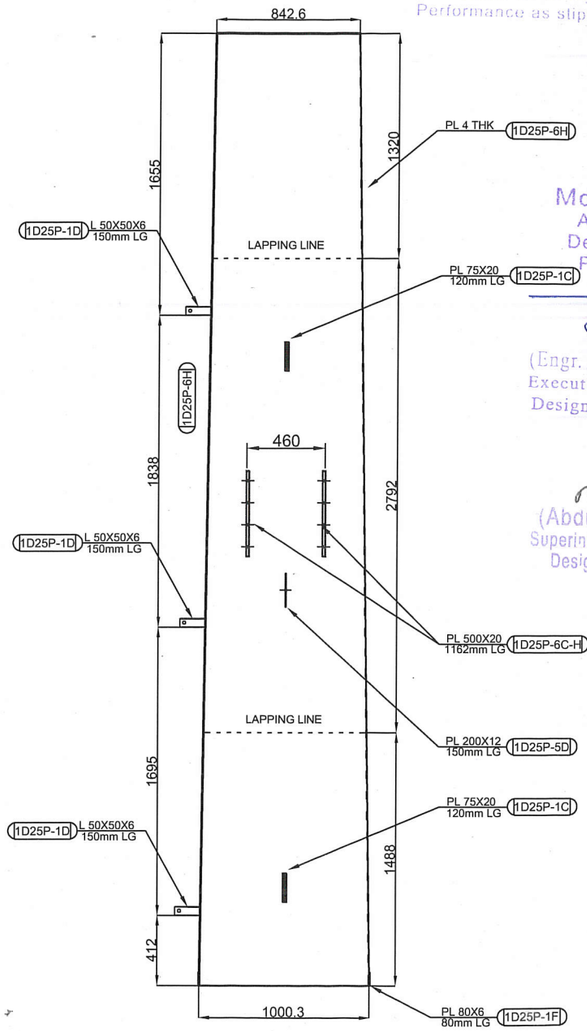
(Engr. S.M. Zafrul Hasan)
Executive Engineer (TL-1)
Design & Quality Control
PGCB

(Abdur Rashid Khan)
Superintending Engineer(TLD)
Design & Quality Control
PGCB Ltd

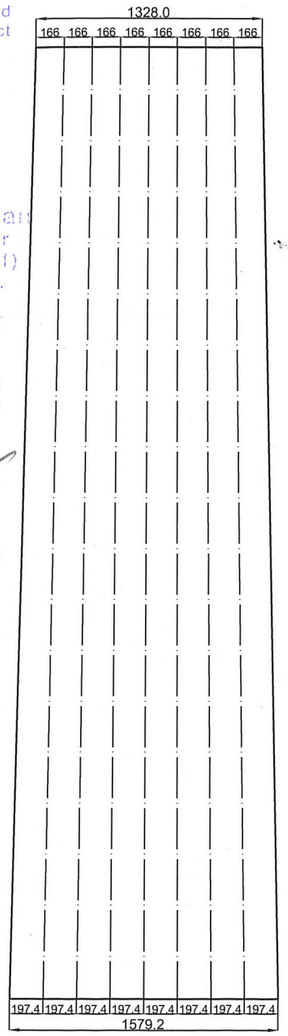
12 JAN 2017

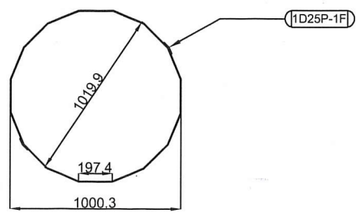


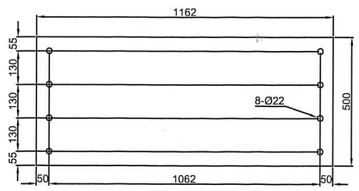
TRANSVERSE FACE



LONGITUDINAL FACE



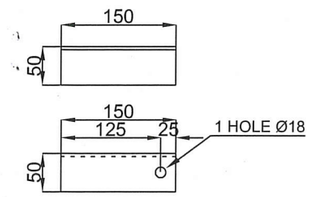




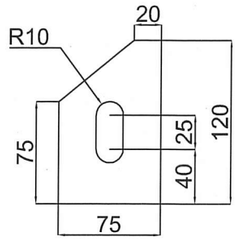
(1D25P-6C-H)
(PL 500X20 THK- 1162 LG)
QTY : 2PCS

BILL OF MATERIAL

Sl/ No	Mark no	Qty/Pole	GRADE	Size	Pole Size			Wt/pc	Total Wt. (kg)	Remarks
					Length	Top Dia	Bottom Dia			
1	1D25P-6H	1	S355JR	PL4 THK	5600	842.6	1000.3	555.30	555.30	
2	1D25P-1C	4	S275JR	PL75X20 THK	120			1.41	5.65	
3	1D25P-1D	3	S275JR	L50X50X6	150			0.68	2.03	
4	1D25P-1F	2	S275JR	PL80X6 THK	80			0.30	0.60	
5	1D25P-6C-H	2	S355JR	PL500X20 THK	1162			91.22	182.43	
6	1D25P-5D	2	S275JR	PL200X12 THK	150			2.83	5.65	
								Total=	751.67	kg
								TOTAL WEIGHT (INCLUDING 3.5%GALV)=	777.98	kg



LADDER CLEAT- (1D25P-1D)
(L 50X50X6THK- 150 LG)
QTY : 3PCS



LIFTING CLEAT- (1D25P-1C)
(PL 75X20 THK- 120 LG)
QTY : 4PCS

NOTE:

THE STANDARDS FOR MATERIAL, FABRICATION, WORKMANSHIP, GALVANIZING, WELDING, INSPECTION, ETC.

1. MATERIAL SPECIFICATION:
   A) FOR POLE, MATERIAL GRADE IS S355JR.
   B) FOR BASE PLATE, MATERIAL GRADE IS S355JR.
   C) FOR CROSS ARM MATERIAL GRADE IS S275JR.
2. ANCHOR BOLT IS 5.6 GRADE;
   CROSS ARM CONNECTING BOLT GRADE 8.8.
3. GALVANIZING AS PER BSEN 1461:2009.
4. BOLTS AS PER ISO 898-1:2009; NUTS AS PER ISO 4034;
   WASHER AS PER DIN127.
5. ALL DIMENSION ARE IN MM.
6. ALL MATERIALS ARE MILD STEEL IF NOT STATED OTHERWISE.
7. MARK NUMBER WITH "H" ALPHABET INDICATES HIGH TENSILE STEEL.
8. ALL STRUCTURAL WELDING SHOULD BE CARRIED OUT ACCORDING TO BSEN 61011-1 & 2.

NOTE FOR WELDING:



Length of Weld leg,L = 6mm
Length of Weld Throat,T= 4.24mm
Welding strength, Fu=540 MPa

JOINT VENTURE OF ZTT AND SINOTEC

CLIENT : POWER GRID COMPANY OF BANGLADESH LIMITED (PGCB)

CONTRACTOR : JOINT VENTURE OF ZTT & SINOTEC

MANUFACTURER : CONFIDENCE™ Steel Limited

TITLE: DESIGN, SUPPLY, ERECTION, TESTING AND COMMISSIONING OF ISHURDI–ROOPPUR 132KV DOUBLE CIRCUIT TRANSMISSION LINE ON TURNKEY BASIS

DRAWN	CHECKED	APPROVED	POLE TYPE:	SCALE
M.S.S	M.R.C		1D25P	N.T.S

Drawing Name: 1D25P Erection Drawing

DATE	Dwg No:	SHT. NO.	REV :
05.01.17	CSL/ZTT–SINOTEC/SD/1D25P	9/15	1

WARNING:
THIS IS PROPRIETORY ITEM AND DESIGN RIGHT IS STRICTLY RESERVED WITH POWER GRID COMPANY OF BANGLADESH LTD. (PGCBL). UNDER NO CIRCUMSTANCES THIS DRAWING SHALL BE [illegible]

POWER GRID COMPANY OF BANGLADESH
APPROVED
This approval is general only and does not Release the manufacturer/contructor/supplier From compliance with specification and Standards for Design workmanship and Performance as stipulated in the contract

Md. Shoeb Hasan
Assistant Engineer
Design & QC (TLD-1)
PGCB Ltd. Dhaka.

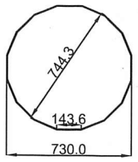
(Engr. S.M. Zafrul Hasan)
Executive Engineer (TL-1)
Design & Quality Control
PGCB

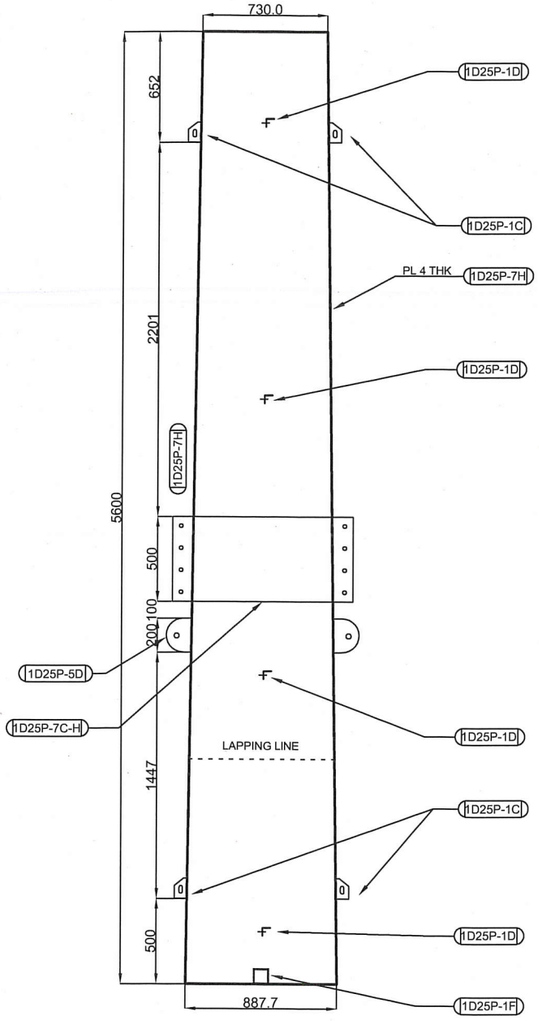
(Abdur Rashid Khan)
Superintending Engineer(TLD)
Design & Quality Control
PGCB Ltd

12 JAN 2017

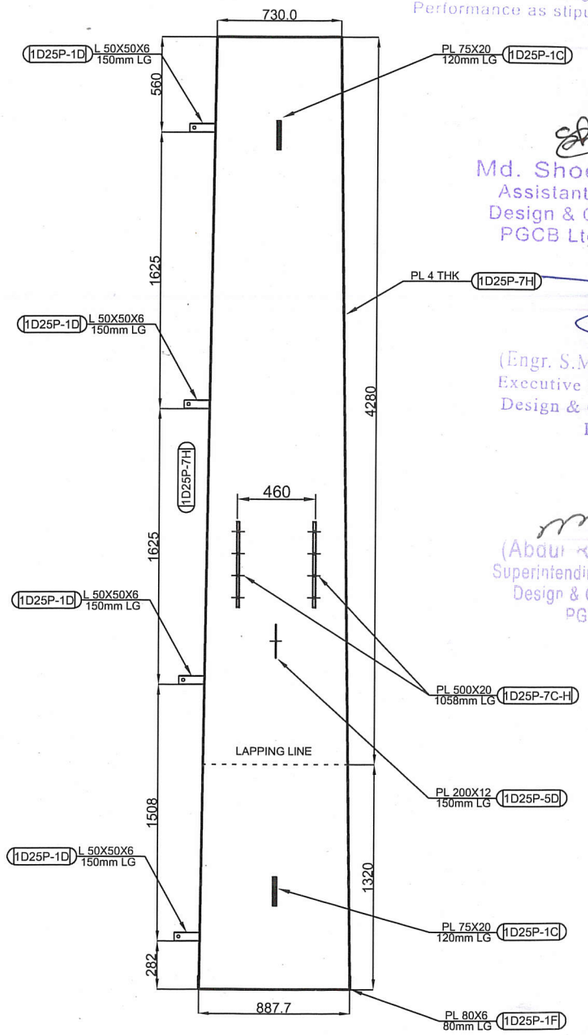
BILL OF MATERIAL

Sl/ No	Mark no	Qty/Pole	GRADE	Size	Pole Size			Wt/pc	Total Wt. (kg)	Remarks
					Length	Top Dia	Bottom Dia			
1	1D25P-7H	1	S355JR	PL4 THK	5600	730	887.7	492.35	492.35	
2	1D25P-1C	4	S275JR	PL75X20 THK	120			1.41	5.65	
3	1D25P-1D	4	S275JR	L50X50X6	150			0.68	2.70	
4	1D25P-1F	2	S275JR	PL80X6 THK	80			0.30	0.60	
5	1D25P-7C-H	2	S355JR	PL500X20 THK	1058			83.05	166.11	
6	1D25P-5D	2	S275JR	PL200X12 THK	150			2.83	5.65	
								Total=	673.06	kg
								TOTAL WEIGHT (INCLUDING 3.5%GALV)=	696.62	kg

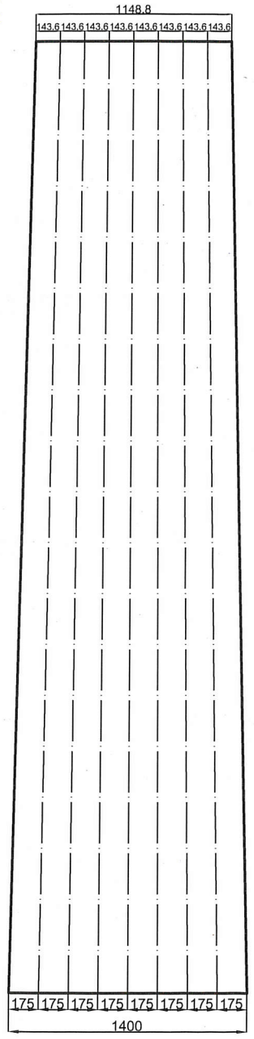


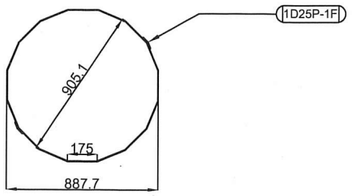


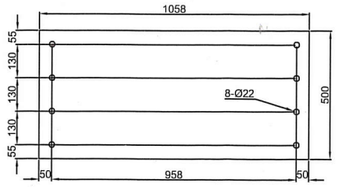
TRANSVERSE FACE



LONGITUDINAL FACE

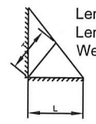




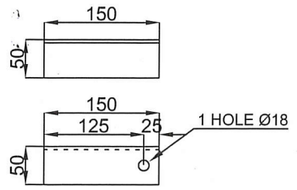


(1D25P-7C-H)
(PL 500X20 THK- 1058 LG)
QTY : 2PCS

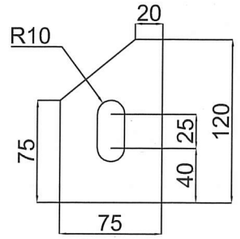
NOTE FOR WELDING:



Length of Weld leg,L = 6mm
Length of Weld Throat,T= 4.24mm
Welding strength, Fu=540 MPa



LADDER CLEAT- (1D25P-1D)
(L 50X50X6THK- 150 LG)
QTY : 4PCS



LIFTING CLEAT- (1D25P-1C)
(PL 75X20 THK- 120 LG)
QTY : 4PCS

NOTE:

THE STANDARDS FOR MATERIAL, FABRICATION, WORKMANSHIP, GALVANIZING, WELDING, INSPECTION, ETC.

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4. BOLTS AS PER ISO 898-1:2009; NUTS AS PER ISO 4034;
   WASHER AS PER DIN127.
5. ALL DIMENSION ARE IN MM.
6. ALL MATERIALS ARE MILD STEEL IF NOT STATED OTHERWISE.
7. MARK NUMBER WITH "H" ALPHABET INDICATES HIGH TENSILE STEEL.
8. ALL STRUCTURAL WELDING SHOULD BE CARRIED OUT ACCORDING TO BSEN 61011-1 & 2.

JOINT VENTURE OF ZTT AND SINOTEC

CLIENT : POWER GRID COMPANY OF BANGLADESH LIMITED (PGCB)

CONTRACTOR : JOINT VENTURE OF ZTT & SINOTEC

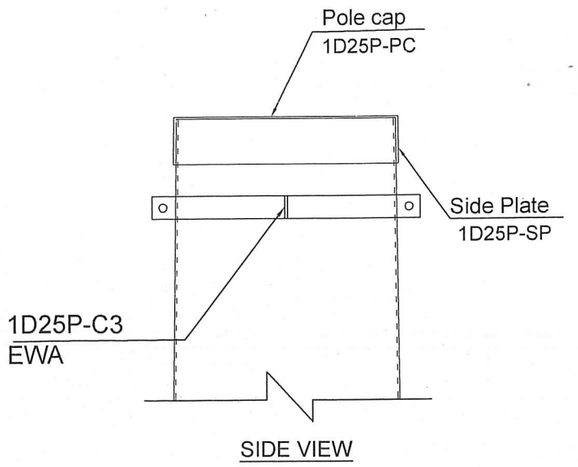
MANUFACTURER : CONFIDENCE™ Steel Limited

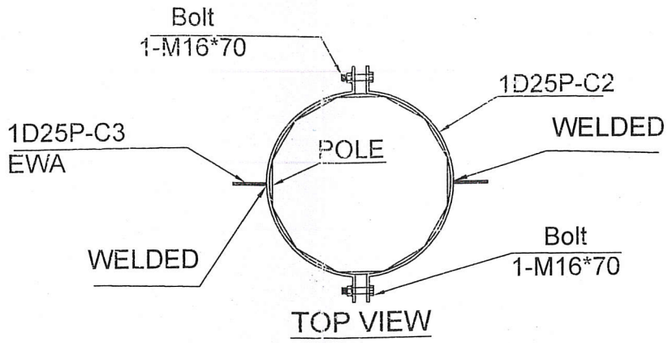
TITLE: DESIGN, SUPPLY, ERECTION, TESTING AND COMMISSIONING OF ISHURDI–ROOPPUR 132KV DOUBLE CIRCUIT TRANSMISSION LINE ON TURNKEY BASIS

DRAWN	CHECKED	APPROVED	POLE TYPE:	SCALE
M.S.S	M.R.C		1D25P	N.T.S

Drawing Name: 1D25P Erection Drawing

DATE	05.01.17	Dwg No: CSL/ZTT–SINOTEC/SD/1D25P	SHT.NO. 10/15	REV : ⚠



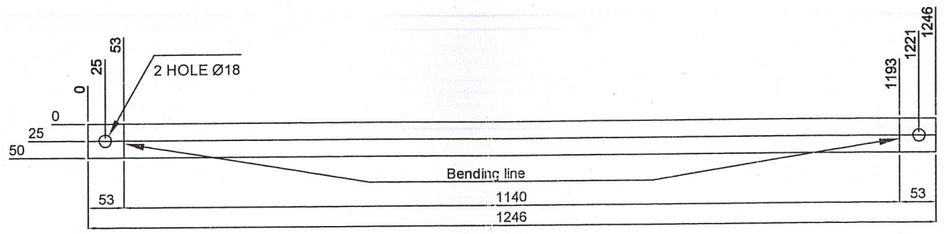


BILL OF MATERIAL

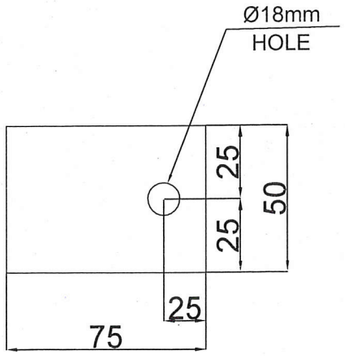
Sl/ No	Mark no	Qty/Pole	GRADE	Size	Length	Wt/pc	Total Wt. (kg)	Remarks
1	1D25P-PC	1	S275JR	PL730X4 THK	738	15.92	16.92	
2	1D25P-SP	2	S275JR	PL100X4 THK	1160	3.64	7.28	
3	1D25P-C2	2	S275JR	PL50X5 THK	1246	2.45	4.89	
4	1D25P-C3	2	S275JR	PL50X5 THK	75	0.15	0.29	
5	BOLT	2	8.8	M16	70	0.20	0.40	
						Total=	29.79	kg
				TOTAL WEIGHT (INCLUDING 3.5%GALV)=			30.83	kg

POWER GRID COMPANY OF BANGLADESH LTD
APPROVED WITH COMMENT
This appreval is general only and does not release the manufacturer/contractor/supplier from compliance with specification and standards for design. Workmanship and performance as stipulated in the contract.

COMMENT: THIS APPROVAL SUPERSEDES EARLIER APPROVAL GIVEN VIDE PGCB LETTER NO. 04/PGCB/SE(TLD), DESIGN W/RC/2017/146; DATED: 15.03.2017



PL 50X5THK-1246 LG
1D25P-C2



PL 50X5 THK- 75 LG
1D25P-C3

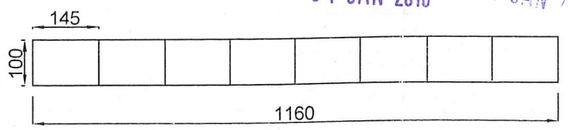
(Md. Abdur Rahim)
Assistant Engineer
Transmission Line Design
PGCB, Dhaka

Md. Shoeb Hasan
Sub-Divisional Engineer
Design & Quality Control
PGCB Ltd.

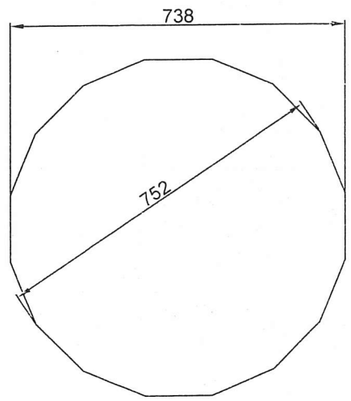
(Engr. Md. Azizul Islam Sarkar)
Executive Engineer (TLD-I)
Design & Quality Control
PGCB.

31 JAN 2018 31 JAN 2018

(Engr. S. M. Zafrul Hasan)
Superintending Engineer (TLD)
Design & QC, PGCB, Dhaka.

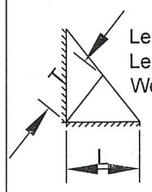


SIDE PLATE(1D25P-SP)
PL100X4 THK-1160LG
QTY: 2PCS



POLE CAP(1D25P-PC)
PL Ø730X4 THK
QTY: 1PCS

NOTE FOR WELDING:



Length of Weld leg,L = 6mm
Length of Weld Throat,T= 4.24mm
Welding strength, Fu=540 MPa

NOTE:

THE STANDARDS FOR MATERIAL, FABRICATION, WORKMANSHIP, GALVANIZING, WELDING, INSPECTION, ETC.

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   A) FOR POLE, MATERIAL GRADE IS S355JR.
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   C) FOR CROSS ARM MATERIAL GRADE IS S275JR.
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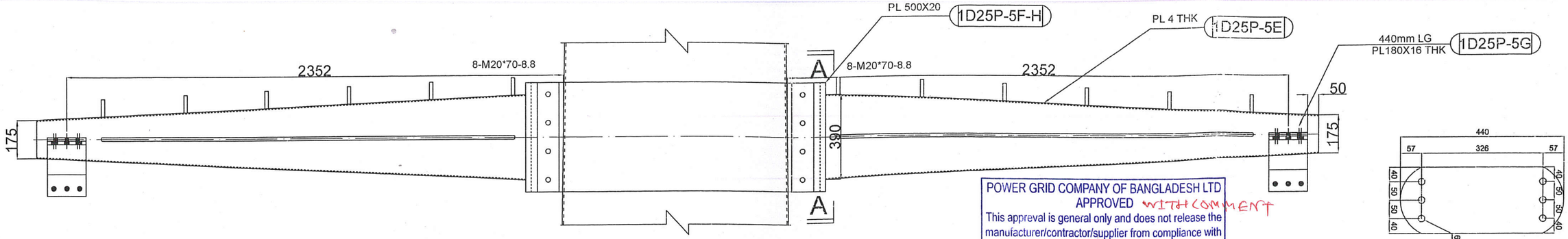
JOINT VENTURE OF ZTT AND SINOTEC 于庆东

CLIENT :	POWER GRID COMPANY OF BANGLADESH LIMITED (PGCB)
CONTRACTOR :	JOINT VENTURE OF ZTT & SINOTEC
MANUFACTURER :	CONFIDENCE Steel Limited
TITLE:	DESIGN, SUPPLY, ERECTION, TESTING AND COMMISSIONING OF ISHURDI–ROOPPUR 132KV DOUBLE CIRCUIT TRANSMISSION LINE ON TURNKEY BASIS

DRAWN	CHECKED	APPROVED	POLE TYPE	SCALE
M.S.S	M.R.C		1D25P	N.T.S

DRAWING NAME: 1D25P–EARTH WIRE AND POLE CAP ARRANGEMENT

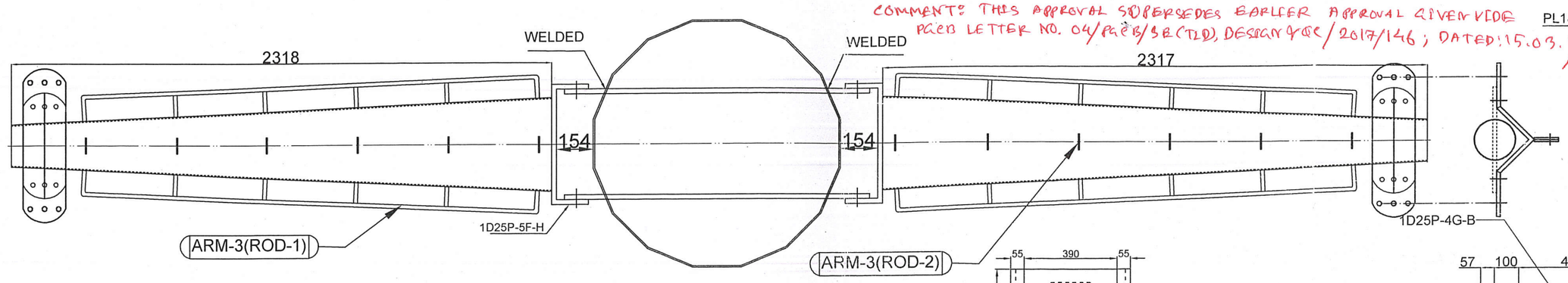
DATE	Dwg No: CSL/ZTT–SINOTEC/SD/1D25P	SHT.NO. 11/15	REV :
12.12.17			



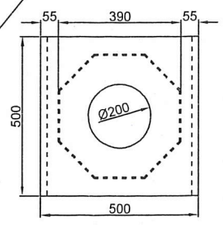
POWER GRID COMPANY OF BANGLADESH LTD
APPROVED WITH COMMENT
This appreval is general only and does not release the manufacturer/contractor/supplier from compliance with specification and standards for design. Workmanship and performance as stipulated in the contract,

COMMENT: THIS APPROVAL SUPERSEDES EARLIER APPROVAL GIVEN VIDE PGCB LETTER NO. 04/PGCB/SE(TLD), DESIGN/QSC/2017/146; DATED:15.03.2017

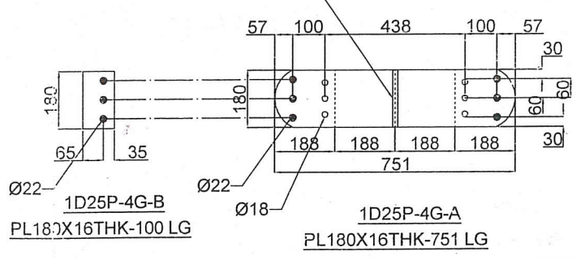
1D25P-5G
PL180X16THK-440 LG



CROSS ARM-3



SECTION-"B-B"



1D25P-4G-B
PL180X16THK-100 LG

1D25P-4G-A
PL180X16THK-751 LG

NOTE:

THE STANDARDS FOR MATERIAL, FABRICATION, WORKMANSHIP, GALVANIZING, WELDING, INSPECTION, ETC.

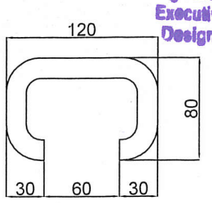
1. MATERIAL SPECIFICATION:
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   C) FOR CROSS ARM MATERIAL GRADE IS S275JR.
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4. BOLTS AS PER ISO 898-1:2009; NUTS AS PER ISO 4034; WASHER AS PER DIN127.
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Md. Shoeb Hasan
Sub-Divisional Engineer
Design & Quality Control
PGCB Ltd.

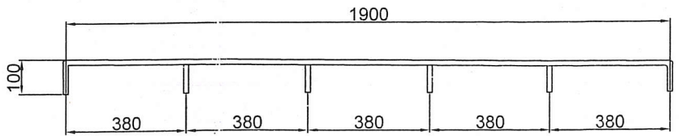
(Engr. Md. Azizul Islam Sarker)
Executive Engineer (TLD-1)
Design & Quality Control
PGCB

(Engr. S. M Zafrul Hasan)
Superintending Engineer (TLD)
Design & QC, PGCB, Dhaka.

31 JAN 2018
(Md. Abdur Rahim)
Assistant Engineer
Transmission Line Design
PGCB, Dhaka

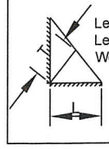


ARM-3(ROD-2)
Ø16X260mm=12PCS

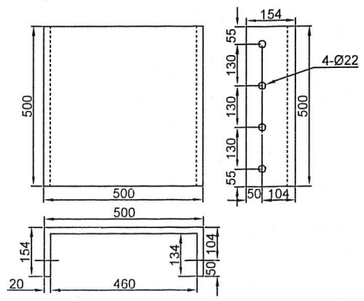


ARM-3(ROD-1)
Ø16X2420mm=4PCS

NOTE FOR WELDING:



Length of Weld leg,L = 6mm
Length of Weld Throat,T= 4.24mm
Welding strength, Fu=540 MPa



PL 500X20 THK- 768 LG
1D25P-5F-H

BILL OF MATERIAL

Sl/ No	Mark no	Qty/Pole	GRADE	Size	Pole Size			Wt/pc	Total Wt. (kg)	Remarks
					Length	Top Dia	Bottom Dia			
1	1D25P-5E	2	S275JR	PL4 THK	2318	175	390	92.15	184.29	
2	1D25P-5F-H	2	S355JR	PL500X20 THK	768			60.29	120.58	
3	1D25P-5G	2	S275JR	PL180X16 THK	440			9.95	19.90	
4	1D25P-4G-A	2	S275JR	PL180X16 THK	751			16.98	33.96	
5	1D25P-4G-B	2	S275JR	PL180X16 THK	100			2.26	4.52	
6	ARM-3(ROD-1)	4	S275JR	ϕ16	2420			3.82	15.28	
7	ARM-3(ROD-2)	12	S275JR	ϕ16	260			0.41	4.92	
8	BOLT	16	8.8	M20	70			0.35	5.60	
								Total=	389.04	kg
								TOTAL WEIGHT (INCLUDING 3.5%GALV)=	402.66	kg

CLIENT : POWER GRID COMPANY OF BANGLADESH LIMITED (PGCB)

CONTRACTOR : JOINT VENTURE OF ZTT & SINOTEC

MANUFACTURER : CONFIDENCE Steel Limited

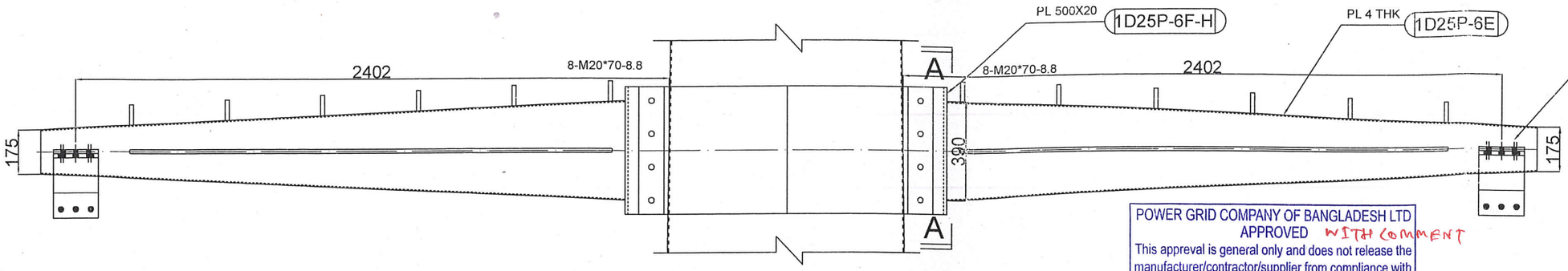
TITLE:
DESIGN, SUPPLY, ERECTION, TESTING AND COMMISSIONING OF ISHURDI–ROOPPUR 132KV DOUBLE CIRCUIT TRANSMISSION LINE ON TURNKEY BASIS

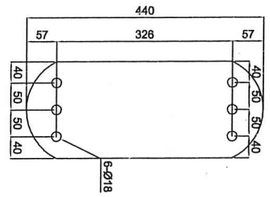
JOINT VENTURE OF ZTT AND SINOTEC 于英东

DRAWN	CHECKED	APPROVED	POLE TYPE	SCALE
M.S.S	M.R.C		1D25P	N.T.S

DRAWING NAME: DETAIL OF CROSS ARM–3

DATE	Dwg No:	SHT.NO.	REV :
12.12.17	CSL/ZTT–SINOTEC/SD/1D25P	12/15	3

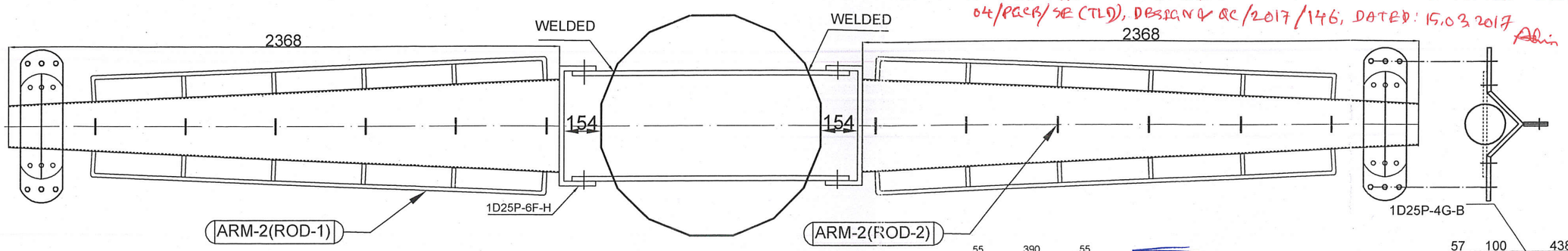




1D25P-6G
PL180X16THK-440 LG

POWER GRID COMPANY OF BANGLADESH LTD
APPROVED WITH COMMENT
This appreval is general only and does not release the manufacturer/contractor/supplier from compliance with specification and standards for design. Workmanship and performance as stipulated in the contract,

COMMENT: THIS APPROVAL SUPERSEDES EARLIER APPROVAL GIVEN VIDE PGCB LETTER NO. 04/PGCB/SE(TLD), DESIGN & QC/2017/146, DATED: 15.03.2017



CROSS ARM-2

Md. Shoeb Hasan
Sub-Divisional Engineer
Design & Quality Control
PGCB Ltd.

(Engr. Md. Azizul Islam Sarker)
Executive Engineer (TLD-I)
Design & Quality Control
PGCB.

(Engr. S. M. Zafrul Hasan)
Superintending Engineer (TLD)
Design & QC, PGCB, Dhaka.

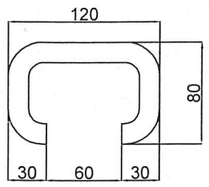
31 JAN 2018

NOTE:

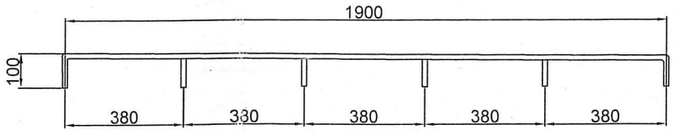
THE STANDARDS FOR MATERIAL, FABRICATION, WORKMANSHIP, GALVANIZING, WELDING, INSPECTION, ETC.

1. MATERIAL SPECIFICATION:
   A) FOR POLE, MATERIAL GRADE IS S355JR.
   B) FOR BASE PLATE, MATERIAL GRADE IS S355JR.
   C) FOR CROSS ARM MATERIAL GRADE IS S275JR.
2. ANCHOR BOLT IS 5.6 GRADE;
   CROSS ARM CONNECTING BOLT GRADE 8.8.
3. GALVANIZING AS PER BSEN 1461:2009.
4. BOLTS AS PER ISO 898-1:2009; NUTS AS PER ISO 4034;
   WASHER AS PER DIN127.
5. ALL DIMENSION ARE IN MM.
6. ALL MATERIALS ARE MILD STEEL IF NOT STATED OTHERWISE.
7. MARK NUMBER WITH "H" ALPHABET INDICATES HIGH TENSILE STEEL.
8. ALL STRUCTURAL WELDING SHOULD BE CARRIED OUT ACCORDING TO BSEN 61011-1 & 2.

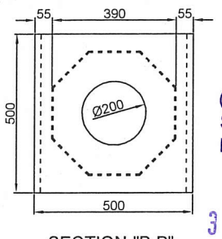
(Md. Abdur Rahim)
Assistant Engineer
Transmission Line Design
PGCB, Dhaka



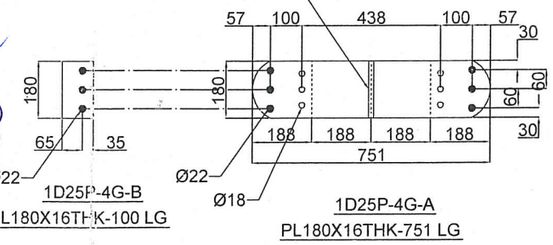
ARM-2(ROD-2)
Ø16X260mm=12PCS



ARM-2(ROD-1)
Ø16X2420mm=4PCS



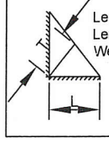
SECTION-"B-B"



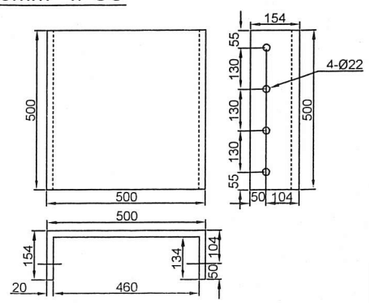
1D25P-4G-B
PL180X16THK-100 LG

1D25P-4G-A
PL180X16THK-751 LG

NOTE FOR WELDING:



Length of Weld leg,L = 6mm
Length of Weld Throat,T= 4.24mm
Welding strength, Fu=540 MPa



PL 500X20 THK- 768 LG
1D25P-6F-H

BILL OF MATERIAL

Sl/ No	Mark no	Qty/Pole	GRADE	Size	Pole Size			Wt/pc	Total Wt. (kg)	Remarks
					Length	Top Dia	Bottom Dia			
1	1D25P-6E	2	S275JR	PL4 THK	2368	175	390	94.13	188.27	
2	1D25P-6F-H	2	S355JR	PL500X20 THK	768			60.29	120.58	
3	1D25P-6G	2	S275JR	PL180X16 THK	440			9.95	19.90	
4	1D25P-4G-A	2	S275JR	PL180X16 THK	751			16.98	33.96	
5	1D25P-4G-B	2	S275JR	PL180X16 THK	100			2.26	4.52	
6	ARM-2(ROD-1)	4	S275JR	ϕ16	2420			3.82	15.28	
7	ARM-2(ROD-2)	12	S275JR	ϕ16	260			0.41	4.92	
8	BOLT	16	8.8	M20	70			0.35	5.60	
								Total=	393.02	kg
								TOTAL WEIGHT (INCLUDING 3.5%GALV)=	406.77	kg

CLIENT : POWER GRID COMPANY OF BANGLADESH LIMITED (PGCB)

CONTRACTOR : JOINT VENTURE OF ZTT & SINOTEC

MANUFACTURER : CONFIDENCE Steel Limited

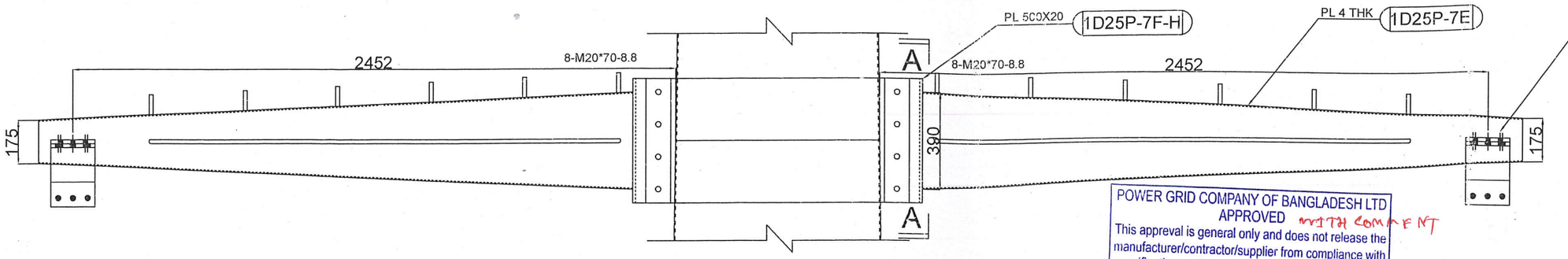
TITLE: DESIGN, SUPPLY, ERECTION, TESTING AND COMMISSIONING OF ISHURDI–ROOPPUR 132KV DOUBLE CIRCUIT TRANSMISSION LINE ON TURNKEY BASIS

DRAWN	CHECKED	APPROVED	POLE TYPE	SCALE
M.S.S	M.R.C		1D25P	N.T.S

JOINT VENTURE OF ZTT AND SINOTEC

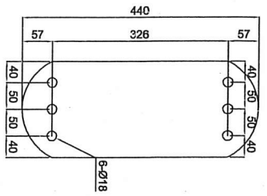
DRAWING NAME: DETAIL OF CROSS ARM-2

DATE 12.12.17 | Dwg No: CSL/ZTT-SINOTEC/SD/1D25P SHT.NO. 13/15 | REV : 3

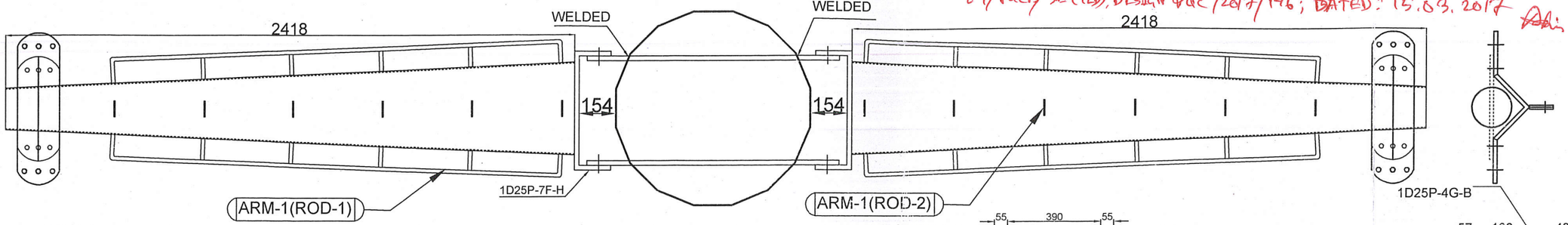


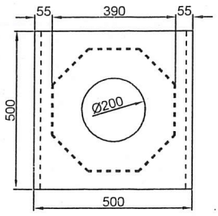
POWER GRID COMPANY OF BANGLADESH LTD
APPROVED WITH COMMENT
This appreval is general only and does not release the manufacturer/contractor/supplier from compliance with specification and standards for design. Workmanship and performance as stipulated in the contract.

COMMENT : THIS APPROVAL SUPERSEDES EARLIER APPROVAL GIVEN VIDE PGCB LETTER NO. 04/PGCB/SE(TLD), DESIGN &QC/2017/146; DATED: 15.03.2017

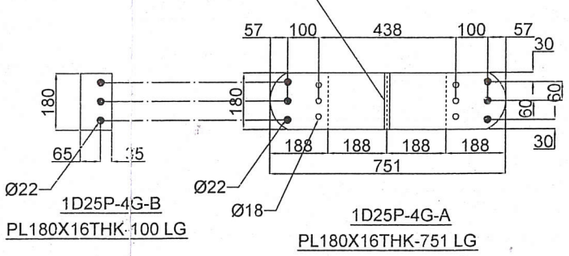


1D25P-7G
PL180X16THK-440 LG





SECTION-"A-A"



1D25P-4G-B
PL180X16THK-100 LG

1D25P-4G-A
PL180X16THK-751 LG

CROSS ARM-1

NOTE:

THE STANDARDS FOR MATERIAL, FABRICATION, WORKMANSHIP, GALVANIZING, WELDING, INSPECTION, ETC.

1. MATERIAL SPECIFICATION:
   A) FOR POLE, MATERIAL GRADE IS S355JR.
   B) FOR BASE PLATE, MATERIAL GRADE IS S355JR.
   C) FOR CROSS ARM MATERIAL GRADE IS S275JR.
2. ANCHOR BOLT IS 5.6 GRADE;
   CROSS ARM CONNECTING BOLT GRADE 8.8.
3. GALVANIZING AS PER BSEN 1461:2009.
4. BOLTS AS PER ISO 898-1:2009; NUTS AS PER ISO 4034; WASHER AS PER DIN127.
5. ALL DIMENSION ARE IN MM.
6. ALL MATERIALS ARE MILD STEEL IF NOT STATED OTHERWISE.
7. MARK NUMBER WITH "H" ALPHABET INDICATES HIGH TENSILE STEEL.
8. ALL STRUCTURAL WELDING SHOULD BE CARRIED OUT ACCORDING TO BSEN 61011-1 & 2.

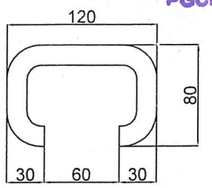
Md. Shoeb Hasan
Sub-Divisional Engineer
Design & Quality Control
PGCB Ltd.

(Engr. Md. Azizul Islam Sarkar)
Executive Engineer (TLD-1)
Design & Quality Control
PGCB

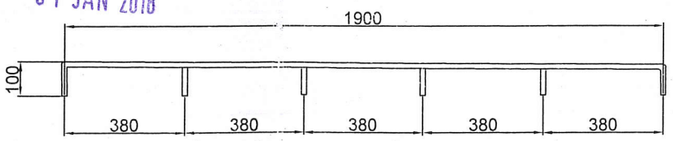
(Engr. S. M. Zafrul Hasan)
Superintending Engineer (TLD)
Design & QC, PGCB, Dhaka.

31 JAN 2018

(Md. Abdur Rahim)
Assistant Engineer
Transmission Line Design
PGCB, Dhaka



ARM-1(ROD-2)
Ø16X260mm=12PCS

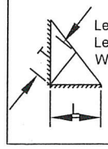


ARM-1(ROD-1)
Ø16X2420mm=4PCS

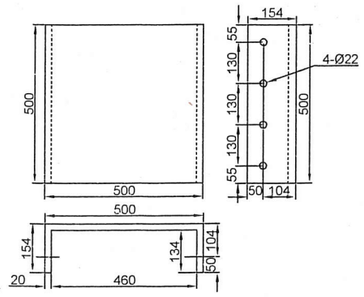
BILL OF MATERIAL

Sl/ No	Mark no	Qty/Pole	GRADE	Size	Pole Size			Wt/pc	Total Wt. (kg)	Remarks
					Length	Top Dia	Bottom Dia			
1	1D25P-7E	2	S275JR	PL4 THK	2418	175	390	96.12	192.24	
2	1D25P-7F-H	2	S355JR	PL500X20 THK	768			60.29	120.58	
3	1D25P-7G	2	S275JR	PL180X16 THK	440			9.95	19.90	
4	1D25P-4G-A	2	S275JR	PL180X16 THK	751			16.98	33.96	
5	1D25P-4G-B	2	S275JR	PL180X16 THK	100			2.26	4.52	
6	ARM-1(ROD-1)	4	S275JR	ϕ16	2420			3.82	15.28	
7	ARM-1(ROD-2)	12	S275JR	ϕ16	260			0.41	4.92	
8	BOLT	16	8.8	M20	70			0.35	5.60	
								Total=	396.99	kg
								TOTAL WEIGHT (INCLUDING 3.5%GALV)=	410.89	kg

NOTE FOR WELDING:



Length of Weld leg,L = 6mm
Length of Weld Throat,T= 4.24mm
Welding strength, Fu=540 MPa



PL 500X20 THK- 768 LG
1D25P-7F-H

CLIENT : POWER GRID COMPANY OF BANGLADESH LIMITED (PGCB)

CONTRACTOR
JOINT VENTURE OF ZTT & SINOTEC

MANUFACTURER : CONFIDENCE Steel Limited

TITLE:
DESIGN, SUPPLY, ERECTION, TESTING AND COMMISSIONING OF ISHURDI–ROOPPUR 132Kv DOUBLE CIRCUIT TRANSMISSION LINE ON TURNKEY BASIS

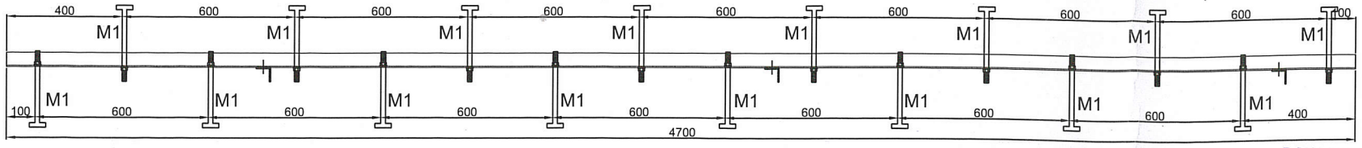
DRAWN	CHECKED	APPROVED	POLE TYPE	SCALE
M.S.S	M.R.C		1D25P	N.T.S

DRAWING NAME: DETAIL OF CROSS ARM–1

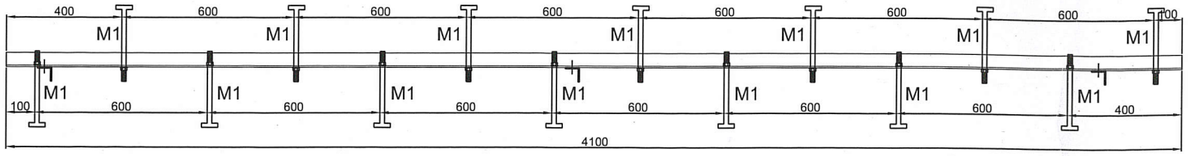
DATE 12.12.17 | Dwg No: CSL/ZTT–SINOTEC/SD/1D25P | SHT.NO. 14/15 | REV : 3

JOINT VENTURE OF ZTT & SINOTEC 于英东

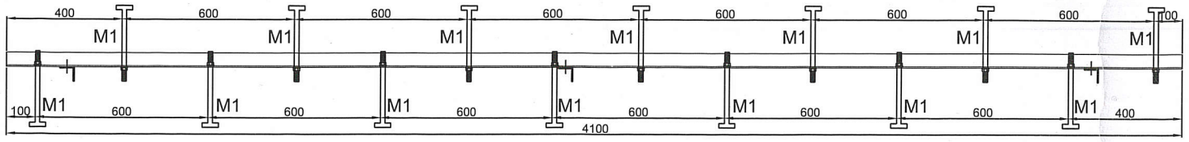
1D25P-LD1



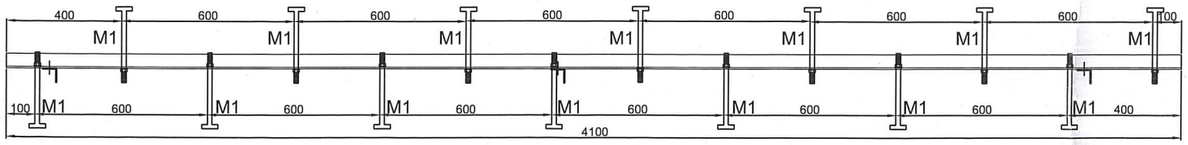
1D25P-LD2



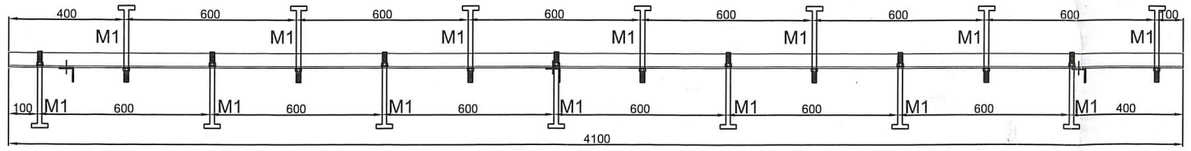
1D25P-LD3



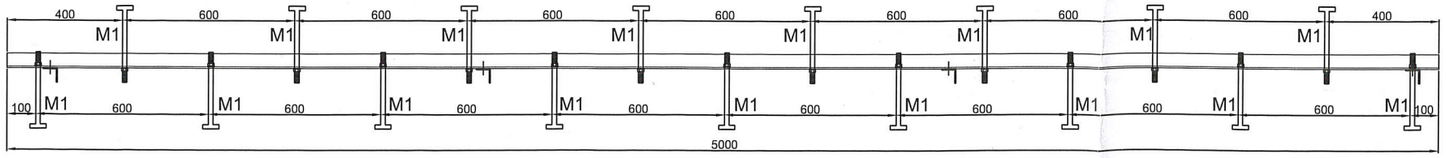
1D25P-LD4



1D25P-LD5



1D25P-LD6

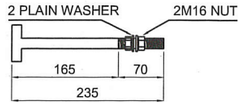


BILL OF MATERIAL(LADDER)

Sl No	Mark No	Qty/Pole	GRADE	Size	Length (mm)	Wt/pcs (KG)	Total Weight (KG)	Remarks
1	1D25P-LD1	1	S275JR	L50X50X6	4700	4.50	21.15	
2	1D25P-LD2	1	S275JR	L50X50X6	4100	4.50	18.45	
3	1D25P-LD3	1	S275JR	L50X50X6	4100	4.50	18.45	
4	1D25P-LD4	1	S275JR	L50X50X6	4100	4.50	18.45	
5	1D25P-LD5	1	S275JR	L50X50X6	4100	4.50	18.45	
6	1D25P-LD6	1	S275JR	L50X50X6	5000	4.50	22.50	
7	1D25P-M1	90	40	ϕ16mm	235	0.371	33.42	
8	BOLT	20	8.8	M16	35	0.125	2.50	
9	NUT	200	8.8	M16		0.030	6.00	
10	PW	200	8.8	M16		0.011	2.20	
						Total=	161.57	kg
					TOTAL WEIGHT (INCLUDING 3.5%GALV)=		167.22	kg

POWER GRID COMPANY
APPROVED
This approval is general only and does not
Release the manufacturer/contractor/supplier
From compliance with specification and
Standards for Design workmanship and
Performance as stipulated in the contract

Md. Shoeb
Assistant E
Design & QC
PGCB Ltd.



Step Rod (M1) Detail

(Engr. S.M. Zafrul Hasan)
Executive Engineer (TL-1)
Design & Quality Control
PGCB

(Abou kashid Khan)
Superintending Engineer(TLD)
Design & Quality Control
PGCB Ltd

JOINT VENTURE OF ZTT AND SINOTEC

12 JAN 2017

WARNING:
THIS IS PROPRIETORY ITEM AND DESIGN RIGHT IS STRICTLY RESERVED WITH POWER GRID COMPANY OF BANGLADESH LTD. (PGCBL). UNDER NO CIRCUMSTANCES THIS DRAWING SHALL BE USED BY ANYBODY WITHOUT PRIOR PERMISSION FROM PGCBL IN WRITING.

NOTE:

THE STANDARDS FOR MATERIAL, FABRICATION, WORKMANSHIP, GALVANIZING, WELDING, INSPECTION, ETC.

1. MATERIAL SPECIFICATION:
   A) FOR POLE, MATERIAL GRADE IS S355JR.
   B) FOR BASE PLATE, MATERIAL GRADE IS S355JR.
   C) FOR CROSS ARM MATERIAL GRADE IS S275JR.
2. ANCHOR BOLT IS 5.6 GRADE;
   CROSS ARM CONNECTING BOLT GRADE 8.8.
3. GALVANIZING AS PER BSEN 1461:2009.
4. BOLTS AS PER ISO 898-1:2009; NUTS AS PER ISO 4034;
   WASHER AS PER DIN127.
5. ALL DIMENSION ARE IN MM.
6. ALL MATERIALS ARE MILD STEEL IF NOT STATED OTHERWISE.
7. MARK NUMBER WITH "H" ALPHABET INDICATES HIGH TENSILE STEEL.
8. ALL STRUCTURAL WELDING SHOULD BE CARRIED OUT ACCORDING TO BSEN 61011-1 & 2.

CLIENT : POWER GRID COMPANY OF BANGLADESH LIMITED (PGCB)

CONTRACTOR : JOINT VENTURE OF ZTT & SINOTEC

MANUFACTURER : CONFIDENCE Steel Limited

TITLE: DESIGN, SUPPLY, ERECTION, TESTING AND COMMISSIONING OF ISHURDI–ROOPPUR 132KV DOUBLE CIRCUIT TRANSMISSION LINE ON TURNKEY BASIS

DRAWN	CHECKED	APPROVED	POLE TYPE	SCALE
M.S.S	M.R.C		1D25P	N.T.S

DRAWING NAME: LADDER ARRANGEMENT

DATE	05.01.17	Dwg No:CSL/ZTT–SINOTEC/SD/1D25P	SHT.NO. 15/15	REV : 1