

TECHNICAL AND ECONOMICAL CONDITIONS FOR POLE DESIGN

POLE TYPE	DEVIATION ANGLE	WIND SPAN (m)	WEIGHT SPAN (m) (max/min)
1D1P(16 sided)	0°-3°	165	263/105

NOTE:

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

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

WARNING:

THIS IS APPROVED FOR THE USE OF THE POWER GRID COMPANY OF BANGLADESH. THE 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.

POWER GRID COMPANY OF BANGLADESH
APPROVED WITH COMMENT

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COMMENT: THIS APPROVAL SUPERSEDES EARLIER APPROVAL GIVEN VIDE PGCGB LETTER NO 04/PGCB/SE(TLD), DESIGN & QC/2017/68 DATED 09.02.2017

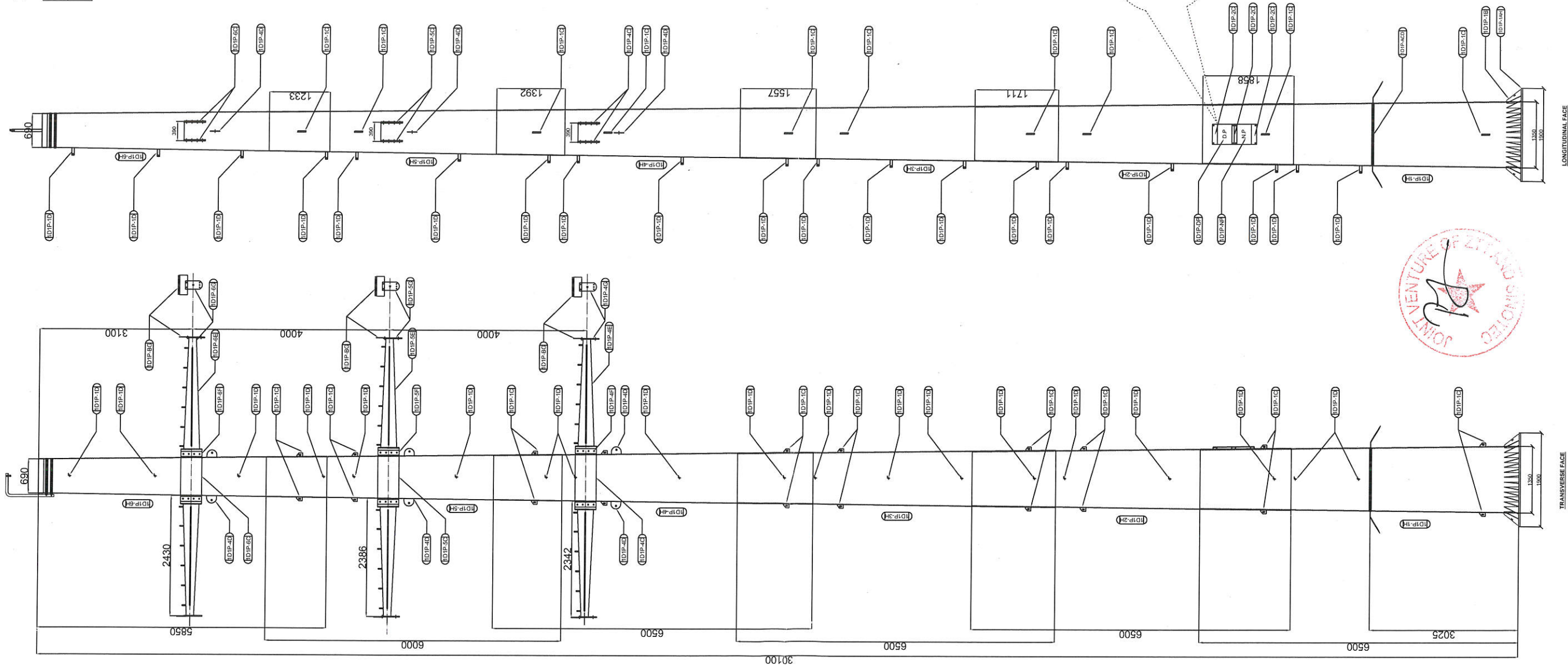
Md. Shoeab Hasan
Assistant Engineer
Design & QC (TLD-1)
PGCB Ltd. Dhaka.

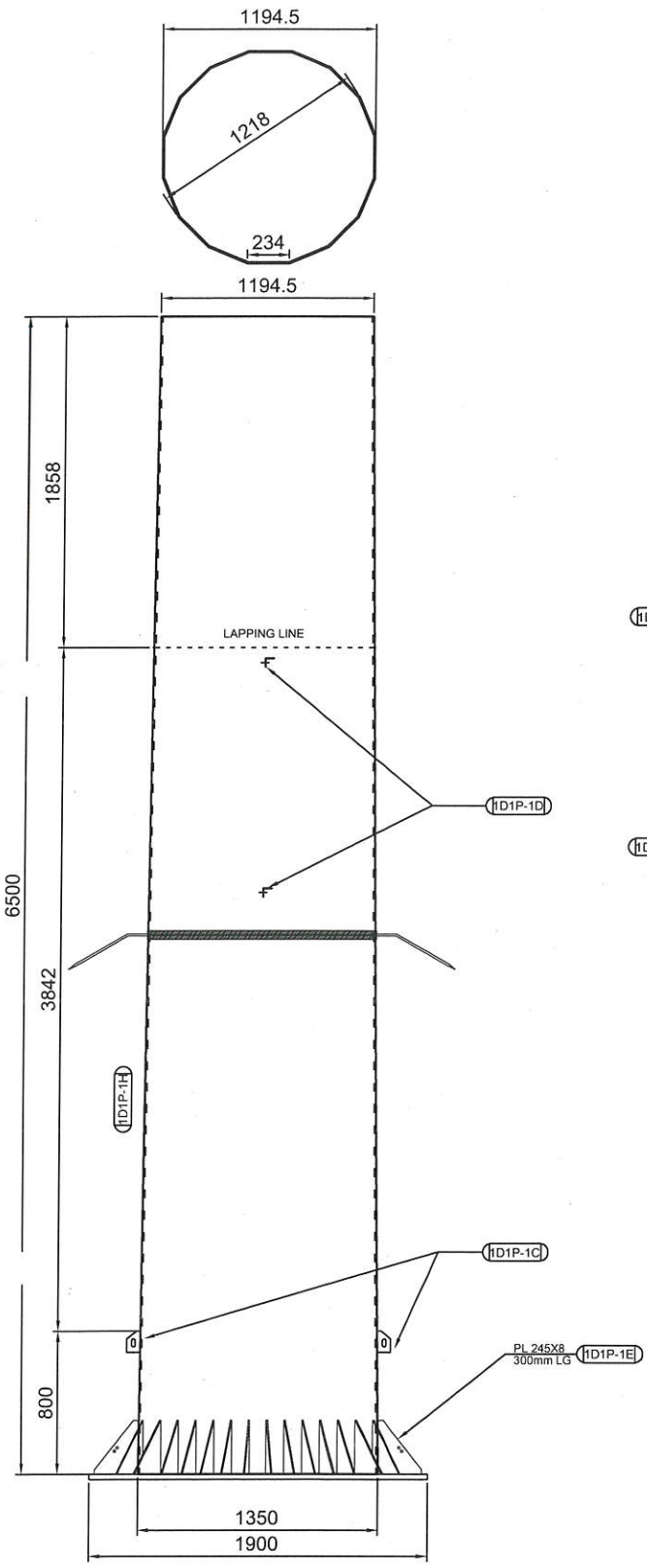
(Engr. S.M. Zafrul Hasan)
Executive Engineer (TL-1)
Design & Quality Control
PGCB

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

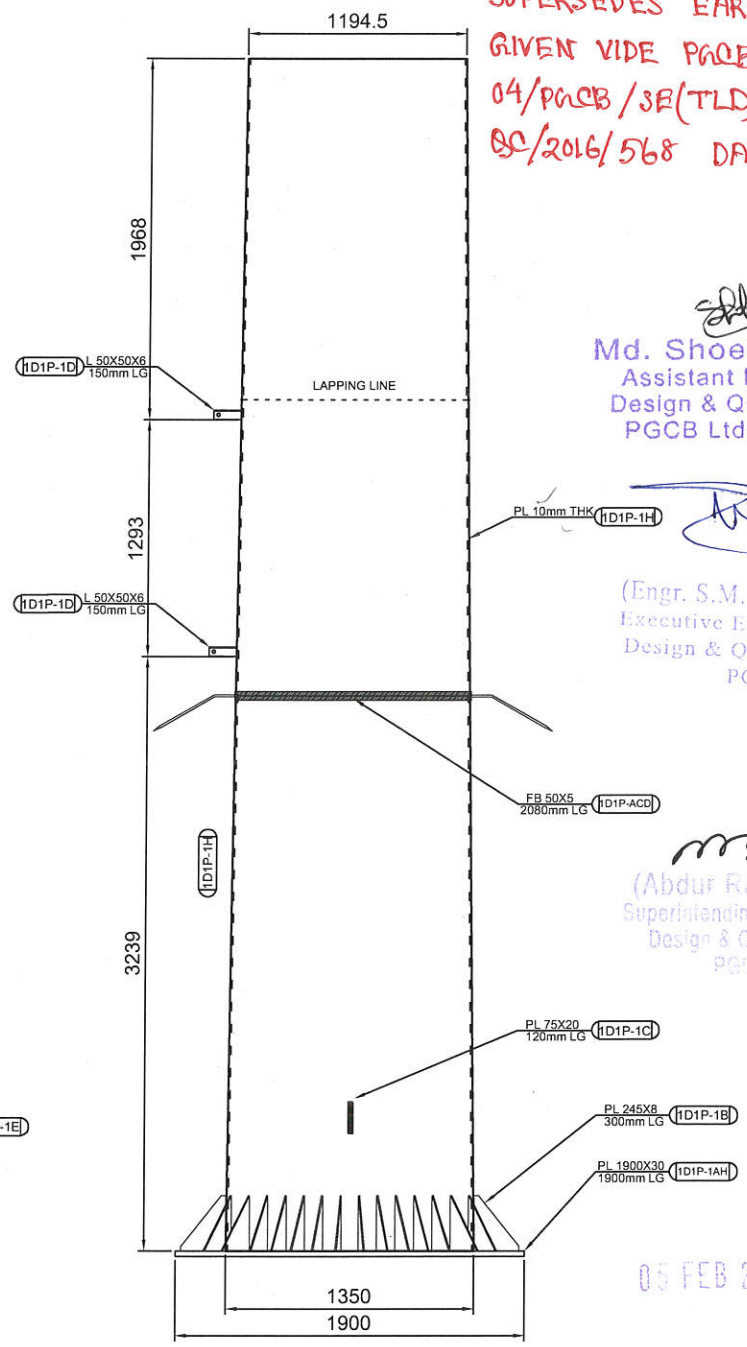
09 MAR 2017

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		1D1P	N.T.S	
DATE	20.02.17	Drawing Name: 1D1P Erection Drawing			
		Dwg No: CSL/ZTT-SINOTEC/55/1D1P	SHT. NO. 1/14	REV : 	

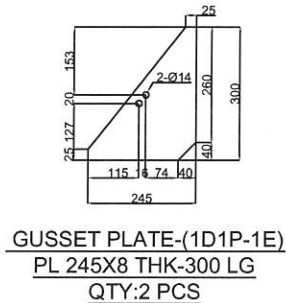




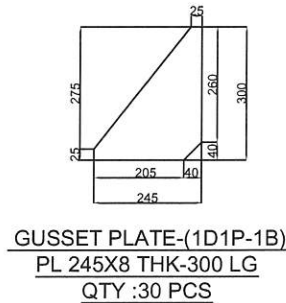
TRANSVERSE FACE



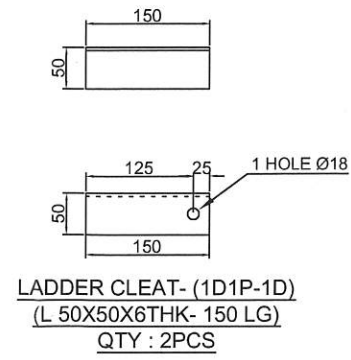
LONGITUDINAL FACE



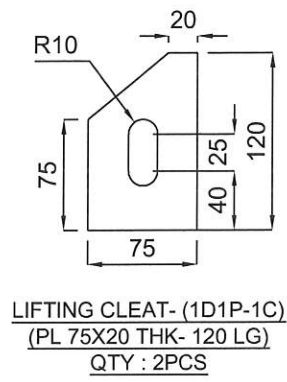
GUSSET PLATE-(1D1P-1E)
PL 245X8 THK-300 LG
QTY:2 PCS



GUSSET PLATE-(1D1P-1B)
PL 245X8 THK-300 LG
QTY :30 PCS



LADDER CLEAT-(1D1P-1D)
(L 50X50X6THK- 150 LG)
QTY : 2PCS



LIFTING CLEAT-(1D1P-1C)
(PL 75X20 THK- 120 LG)
QTY : 2PCS

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SUPERSEDES EARLIER APPROVAL
GIVEN VIDE POCB LETTER NO.
04/POCB/3E(TLD), DESIGN &
QC/2016/568 DATED 11.12.2016,

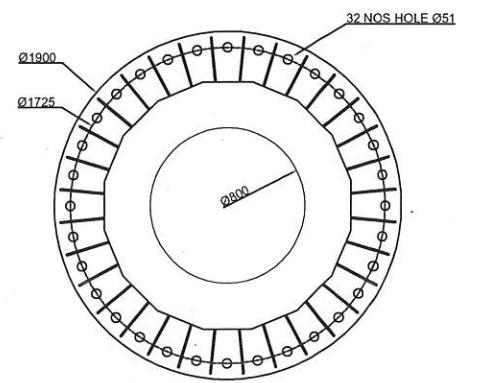
Md. Shoeb Hasan
Assistant Engineer
Design & QC (TLD-1)
PGCB Ltd. Dhaka.

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

05 FEB 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	1D1P-1H	1	S355JR	PL 10 THK	6500	1194.5	1350	2159.38	2159.38	
2	1D1P-1AH	1	S355JR	PL1900X30 THK	1900			850.16	850.16	
3	1D1P-1B	30	S275JR	PL245X8 THK	300			4.62	138.47	
4	1D1P-1E	2	S275JR	PL245X8 THK	300			4.62	9.23	
5	1D1P-1C	2	S275JR	PL75X20 THK	120			1.41	2.83	
6	1D1P-1D	2	S275JR	L 50X50X6	150			0.68	1.35	
Total=									3161.41	kg
TOTAL WEIGHT (INCLUDING 3.5%GALV)=									3272.06	kg

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

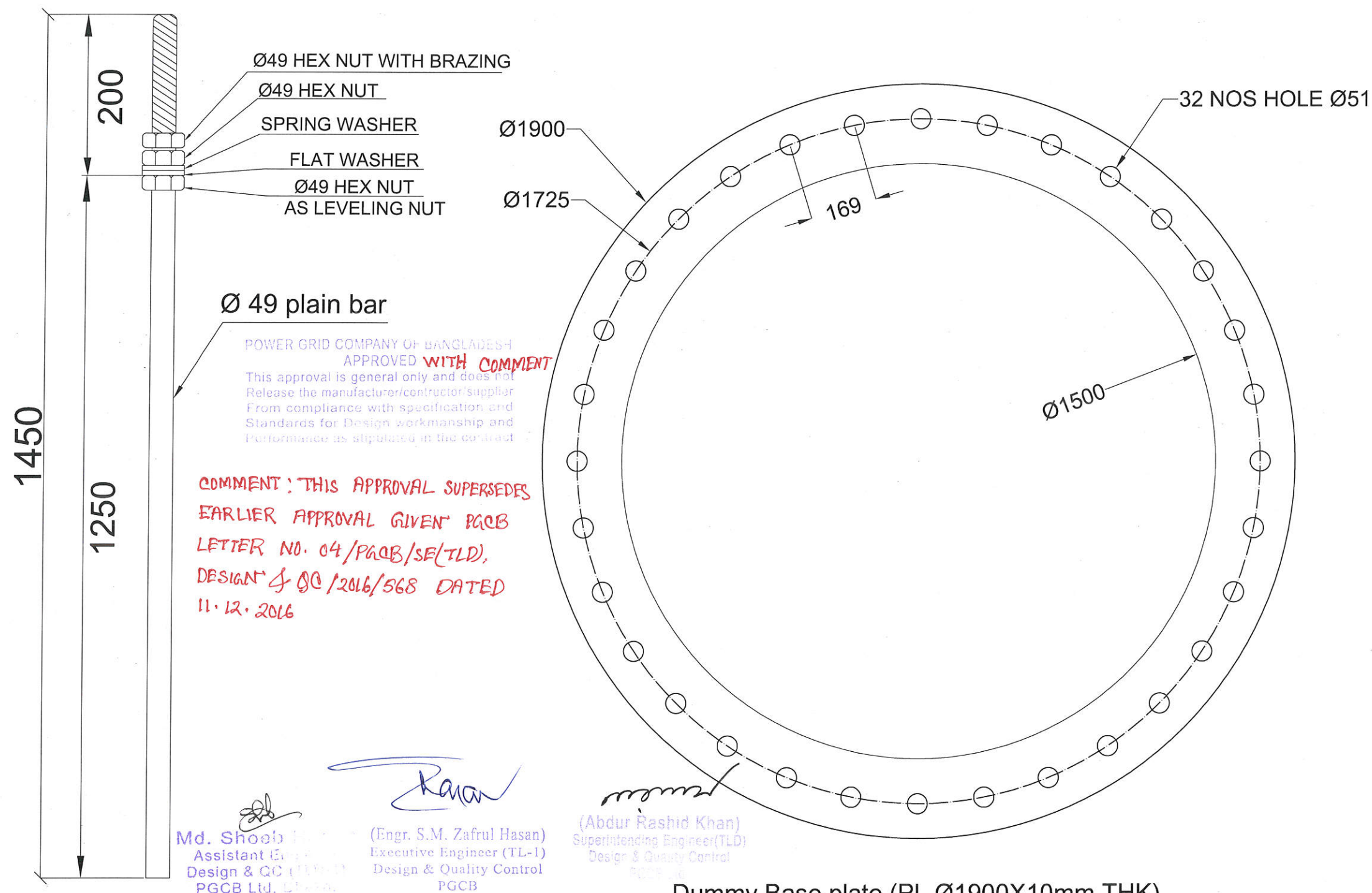


BASE PLATE (PL Ø1900X30H THK) (1D1P-1AH)
Outer dia=1900mm, Inner dia=800mm
QTY : 1 PCS(GRADE-S355JR)

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CROSS ARM CONNECTING BOLT GRADE 8.8.
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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.
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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 TM 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		1D1P	N.T.S
Drawing Name: 1D1P Erection Drawing				
DATE	02.02.17	Dwg No: CSL/ZTT-SINOTEC/SD/1D1P	SHT. NO. 2/14	REV : A



DETAIL OF ANCHOR BOLT
QTY= 32 PCS, Ø=49mm
GRADE-5.6

Dummy Base plate (PL Ø1900X10mm THK)
(1D1P-DBP)
Outer dia=1900mm, Inner dia=1500mm

BILL OF MATERIAL								
SI No	Mark No	Qty/Pole	Grade	Size	Length (mm)	Wt/pcs (KG)	Total Weight (KG)	Remarks
1	1D1P-DBP	1	S275JR	PL1900X10 THK	1900	283.39	283.39	
	ANCHOR BOLT	32	5.6	Ø49	1450	21.32	682.08	
	NUT	32				0.79	25.12	
2	LEVELING NUT	32				0.79	25.12	
	NUT WITH BRAZING	32				0.79	25.12	
	SPW	32				0.26	8.38	
	PLW	32				0.31	9.82	
Total=							1059.03	Kg
TOTAL WEIGHT (INCLUDING 3.5% GALV)= 1096.10 Kg								

NOTE:

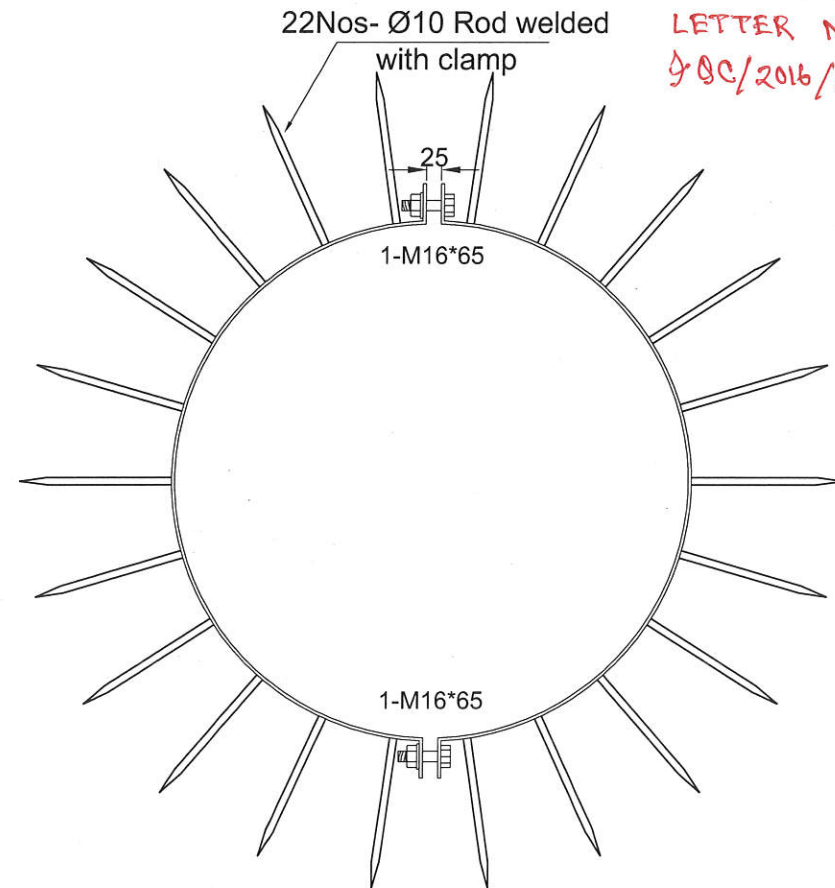
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CONTRACTOR :	JOINT VENTURE OF ZTT & SINOTEC			
MANUFACTURER :	CONFIDENCE TM Steel Limited			
TITLE:	DESIGN, SUPPLY, ERECTION, TESTING AND COMMISSIONING OF ISHURDI-ROOPPUR 132KV DOUBLE CIRCUIT TRANSMISSION LINE ON TURNKEY BASIS			
DRAWN	CHECKED	APPROVED	POLE TYPE:	SCALE
M.S.S	M.R.C		1D1P	N.T.S
Drawing Name: 1D1P Erection Drawing				
DATE	02.02.17	Dwg No: CSL/ZTT-SINOTEC/SD/1D1P	SHT. NO. 3/14	REV : A

POWER GRID COMPANY OF BANGLADESH
APPROVED **WITH COMMENT**
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Performance as stipulated in the contract

**COMMENT: THIS APPROVAL SUPERSEDES
EARLIER APPROVAL GIVEN VIDE PGOB
LETTER NO. 04/PGOB/SE(TLD), DESIGN
QC/2016/568 DATED 11.12.2016**



CROSS SECTION

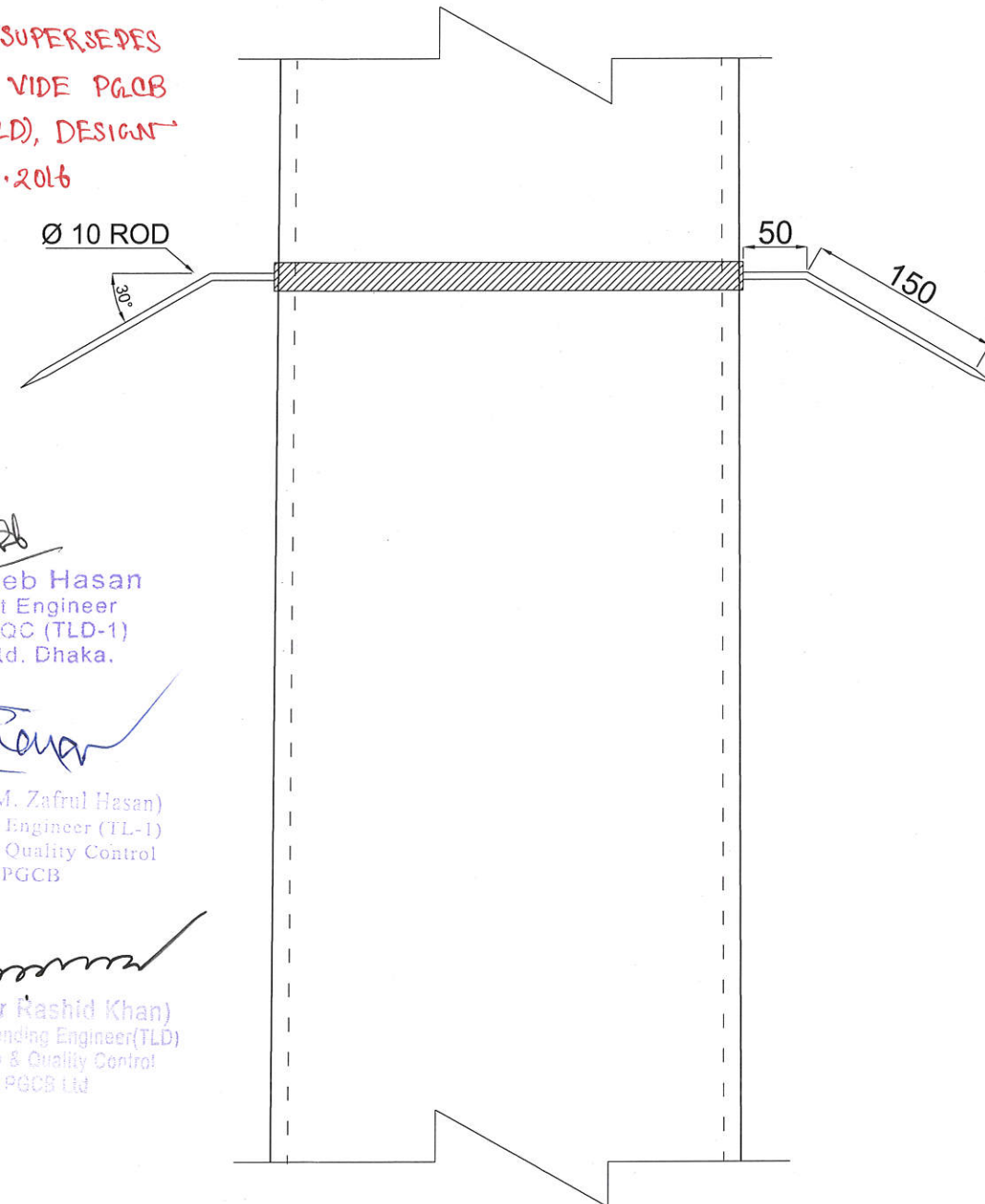
1D1P-ACD

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

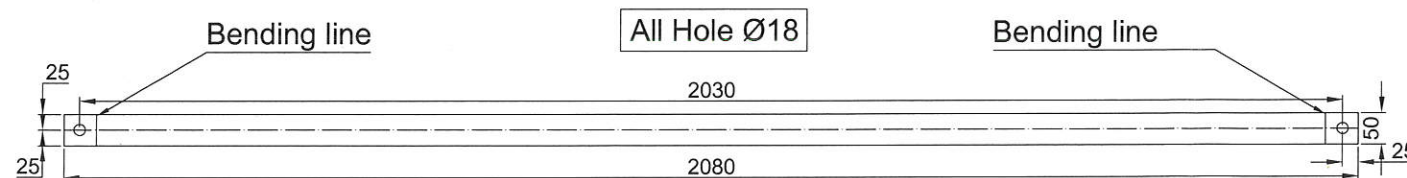
(Signature)
(Engr. S.M. Zafrul Hasan)
Executive Engineer (TL-1)
Design & Quality Control
PGCB

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

05 FEB 2017



ELEVATION



**FLAT BAR DETAIL (FB 50X5 THK - 2080 LG)
(1D1P-C1)**

BILL OF MATERIAL

SI/No	Mark no	Qty/Pole	Graade	Size	Length	Wt/pc	Total Wt. (kg)	Remarks
1	1D1P-C1	2	S275JR	FB50X5 THK	2080	4.08	8.16	
2	SPIKE ROD	22	40	Ø10	200	0.12	2.69	
3	BOLT	2	8.8	M16	65	0.18	0.36	
Total=							11.22	kg
TOTAL WEIGHT (INCLUDING 3.5% GALV)=							11.61	kg

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CLIENT :  **POWER GRID COMPANY OF BANGLADESH LIMITED (PGCB)**

CONTRACTOR : **JOINT VENTURE OF ZTT & SINOTEC**

MANUFACTURER : 

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		1D1P	N.T.S
Drawing Name: 1D1P Erection Drawing				
DATE	02.02.17	Dwg No: CSL/ZTT-SINOTEC/SD/1D1P	SHT. NO. 4/14	REV : A

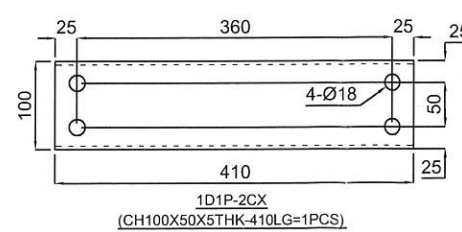
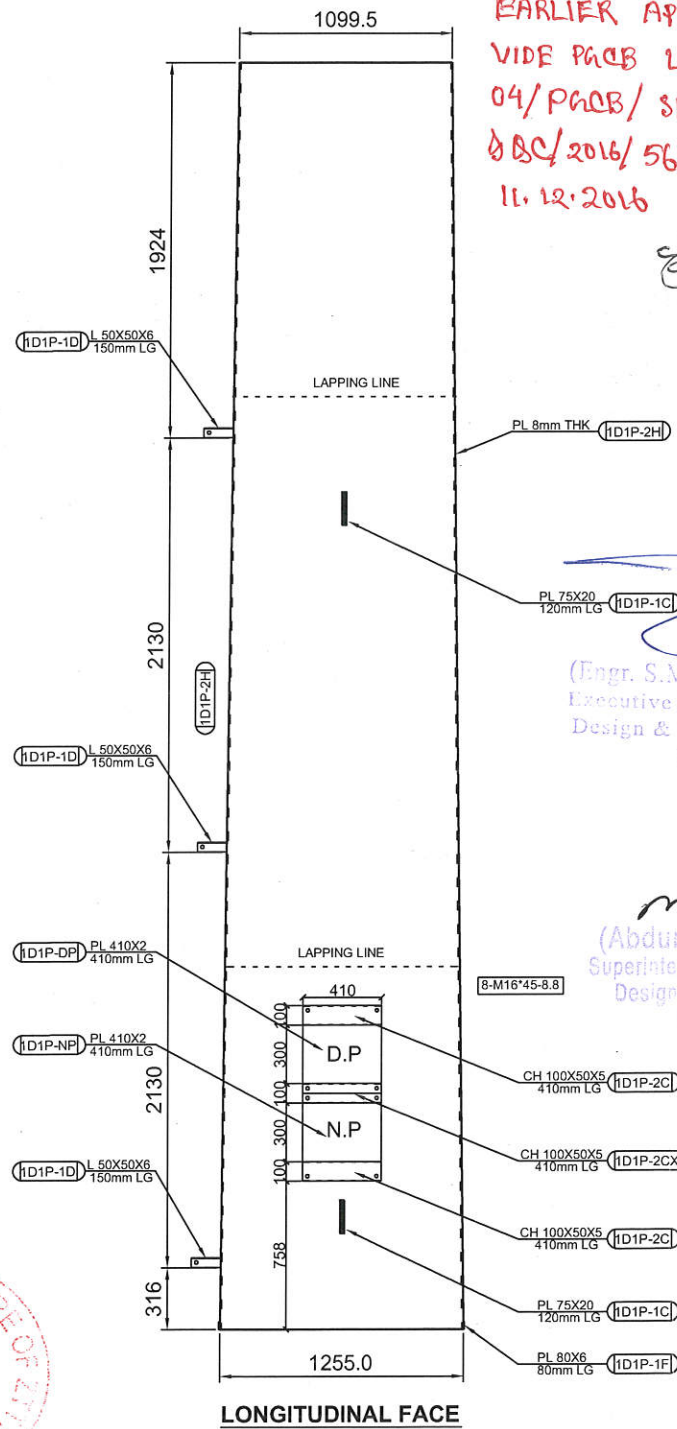
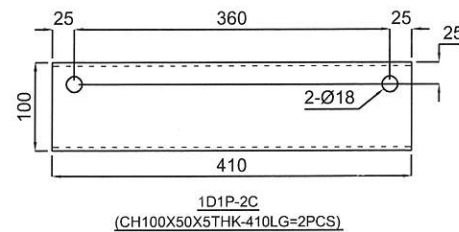
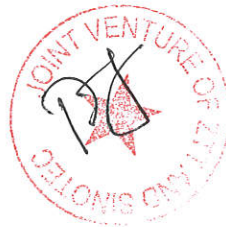
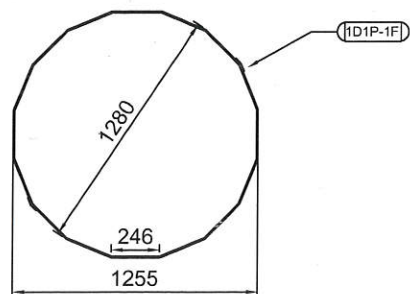
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COMMENT: THIS APPROVAL SUPERSEDES
EARLIER APPROVAL GIVEN
VIA PCB LETTER NO
04/PCB/SE(TLD), DESIGN
DBC/2016/568 DATED
11.12.2016

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

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



Length of Weld leg, $L = 6 \text{ mm}$
Length of Weld Throat, $T = 4.24 \text{ mm}$
Welding strength, $F_u = 540 \text{ MPa}$

The image contains two sets of technical drawings for mechanical parts.

LIFTING CLEAT - (1D1P-1C)
 (PL 75X20 THK- 120 LG)
 QTY : 4 PCS

The drawing for the LIFTING CLEAT shows a side view and a top view. The side view is a right-angled triangle with a vertical leg of 120, a horizontal leg of 75, and a hypotenuse with a radius R10. A circular hole is located on the vertical leg, 25 units from the bottom. The top view is a rectangle with dimensions 75 by 20, with the circular hole centered.

LADDER CLEAT - (1D1P-1D)
 (L 50X50X6THK- 150 LG)
 QTY : 3PCS

The drawing for the LADDER CLEAT shows a side view and a top view. The side view is a rectangle with dimensions 150 by 50. The top view is a rectangle with dimensions 150 by 125, with a circular hole of diameter 18 (Ø18) located 25 units from the right edge.

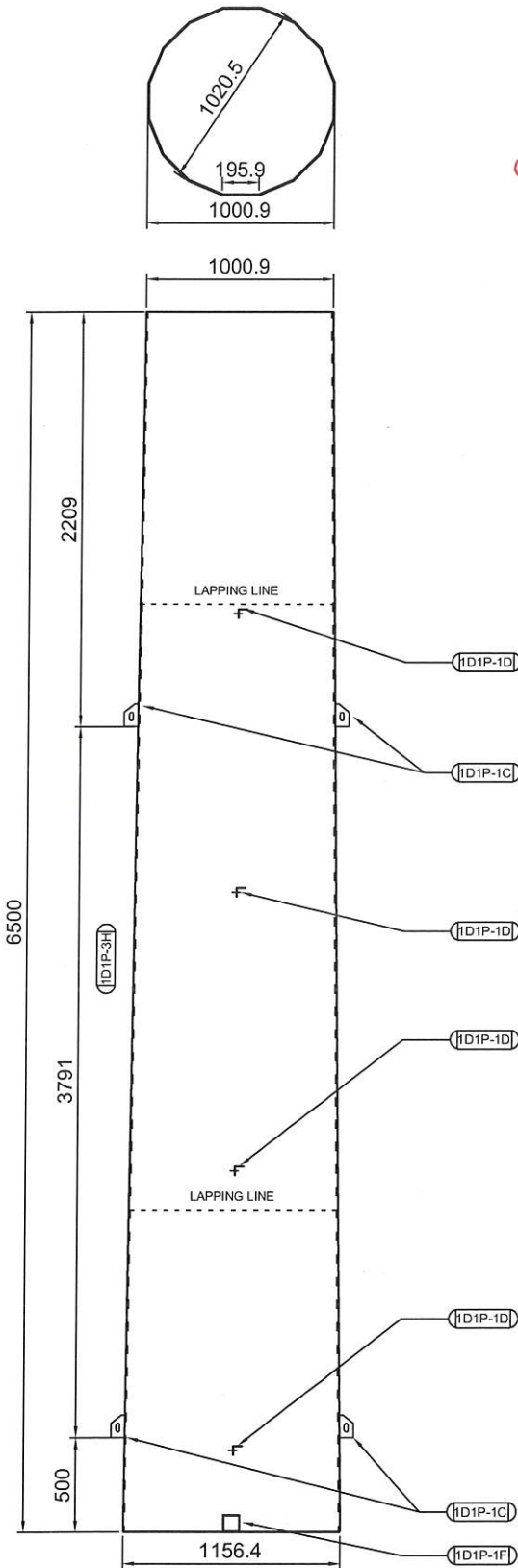
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DATE	02.02.17	Dwg No: CSL/ZTT-SINOTEC/SD/1D1P	SHT. NO. 5/14	REV : 
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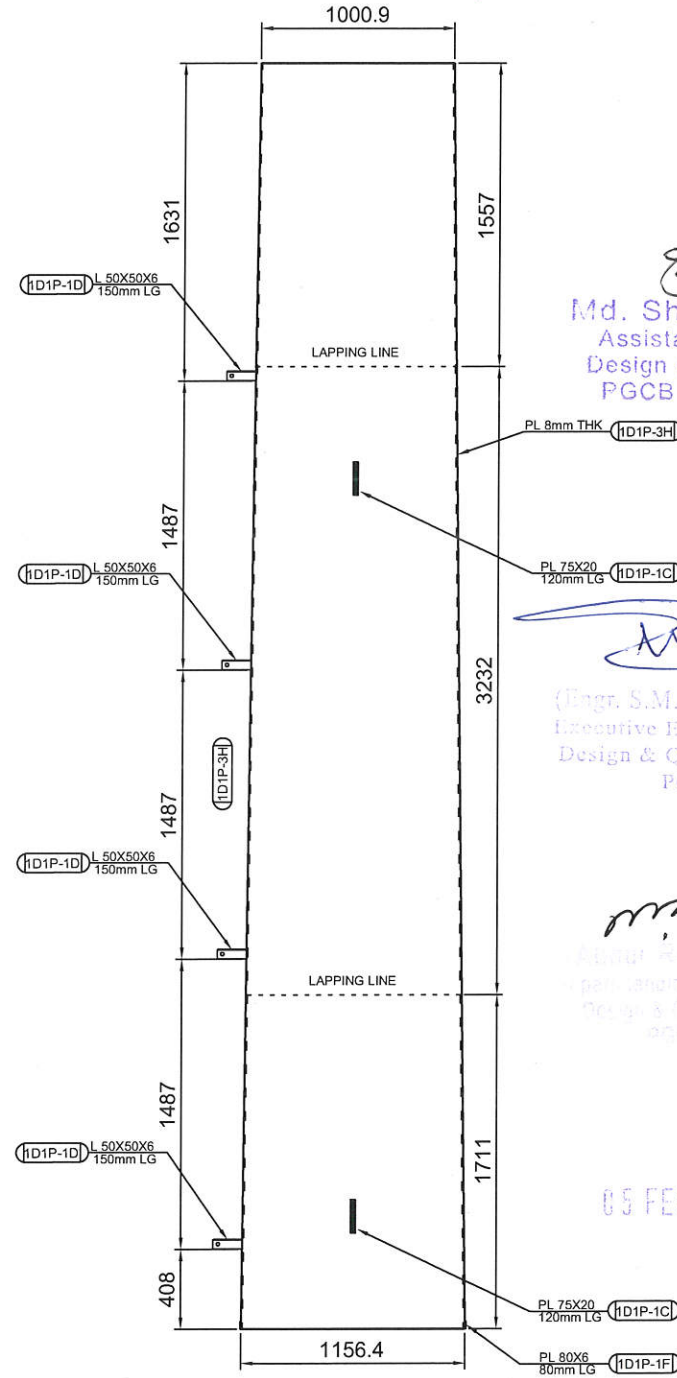
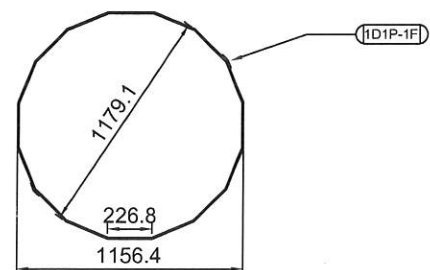
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PGCB/SE(TLD), DESIGN & QC/2016/568 DATED 11.12.2016.

BILL OF MATERIAL									
Sl/No	Mark no	Qty/Pole	GRADE	Size	Pole Size			Wt/pc	Total Wt. (kg)
					Length	Top Dia	Bottom Dia		
1	1D1P-3H	1	S355JR	PL 8 THK	6500	1000.9	1156.4	1480.95	1480.95
2	1D1P-1C	4	S275JR	PL75X20 THK	120			1.41	5.65
3	1D1P-1F	2	S275JR	PL80X6 THK	80			0.30	0.60
4	1D1P-1D	4	S275JR	L 50X50X6	150			0.68	2.70
Total=								1489.90	kg
TOTAL WEIGHT (INCLUDING 3.5%GALV)=								1542.05	kg



TRANSVERSE FACE



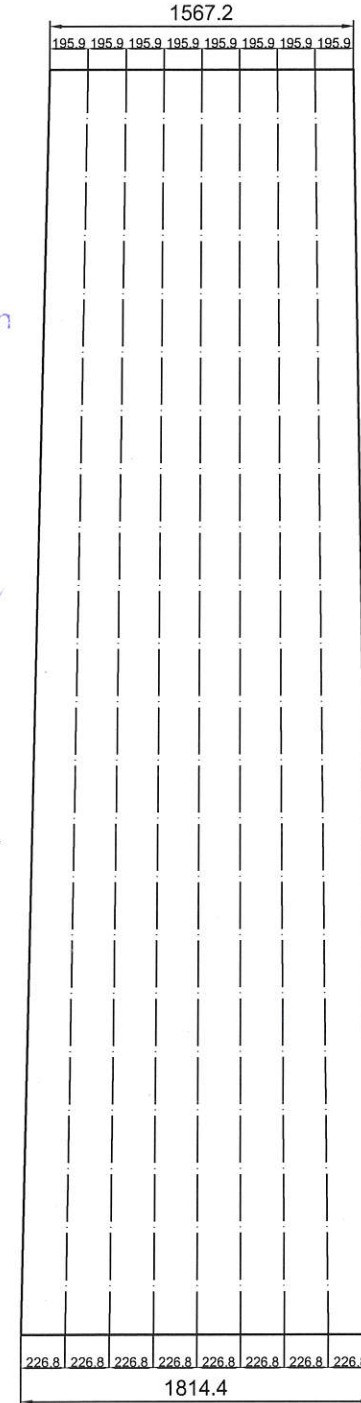
LONGITUDINAL FACE

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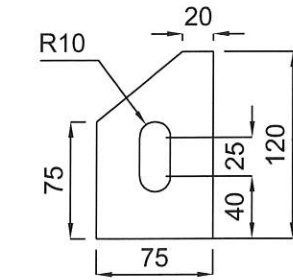
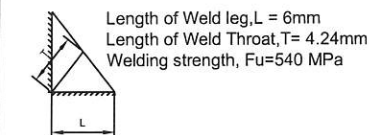
(Engr. S.M. Zafrul Hasan)
Executive Engineer (TL-1)
Design & Quality Control
PGCB

Engr. Rashid Khan
Senior Engineer (TLD)
Design & Quality Control
PGCB

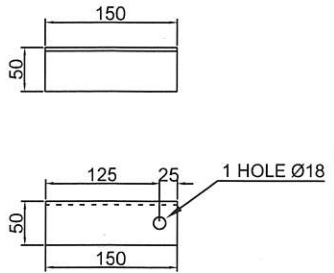
05 FEB 2017



NOTE FOR WELDING:



LIFTING CLEAT- (1D1P-1C)
(PL 75X20 THK- 120 LG)
QTY : 4 PCS



LADDER CLEAT- (1D1P-1D)
(L 50X50X6THK- 150 LG)
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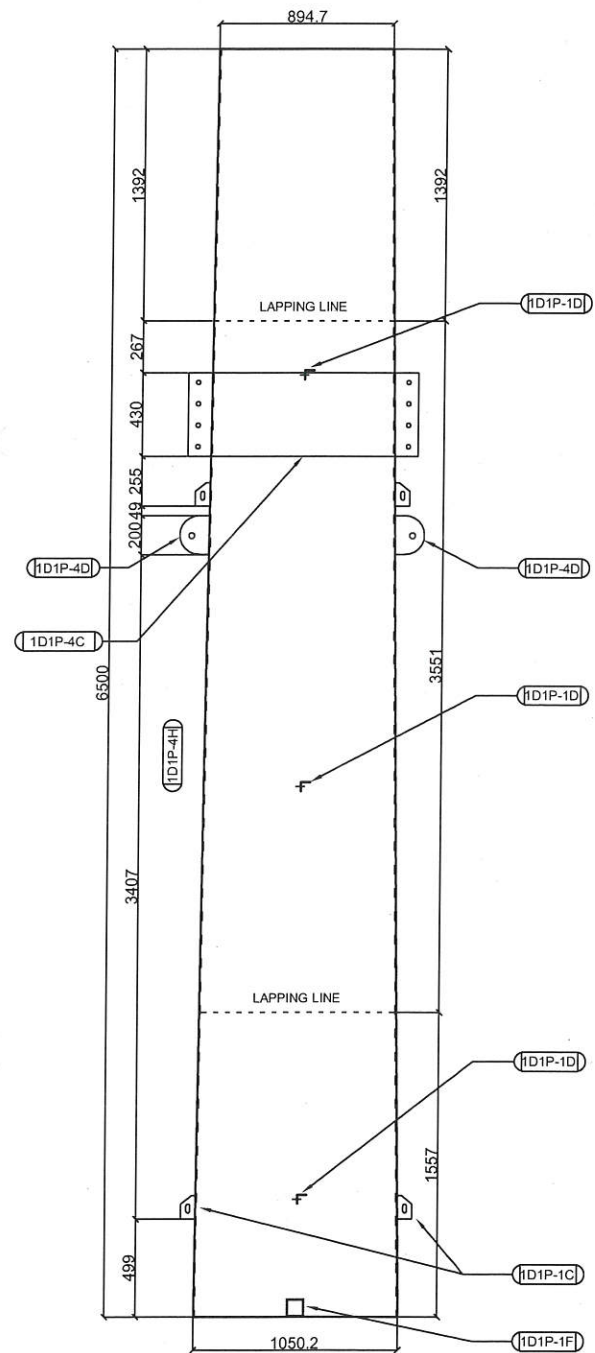
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DRAWN	CHECKED	APPROVED	POLE TYPE:	SCALE
M.S.S	M.R.C		1D1P	N.T.S
Drawing Name: 1D1P Erection Drawing				
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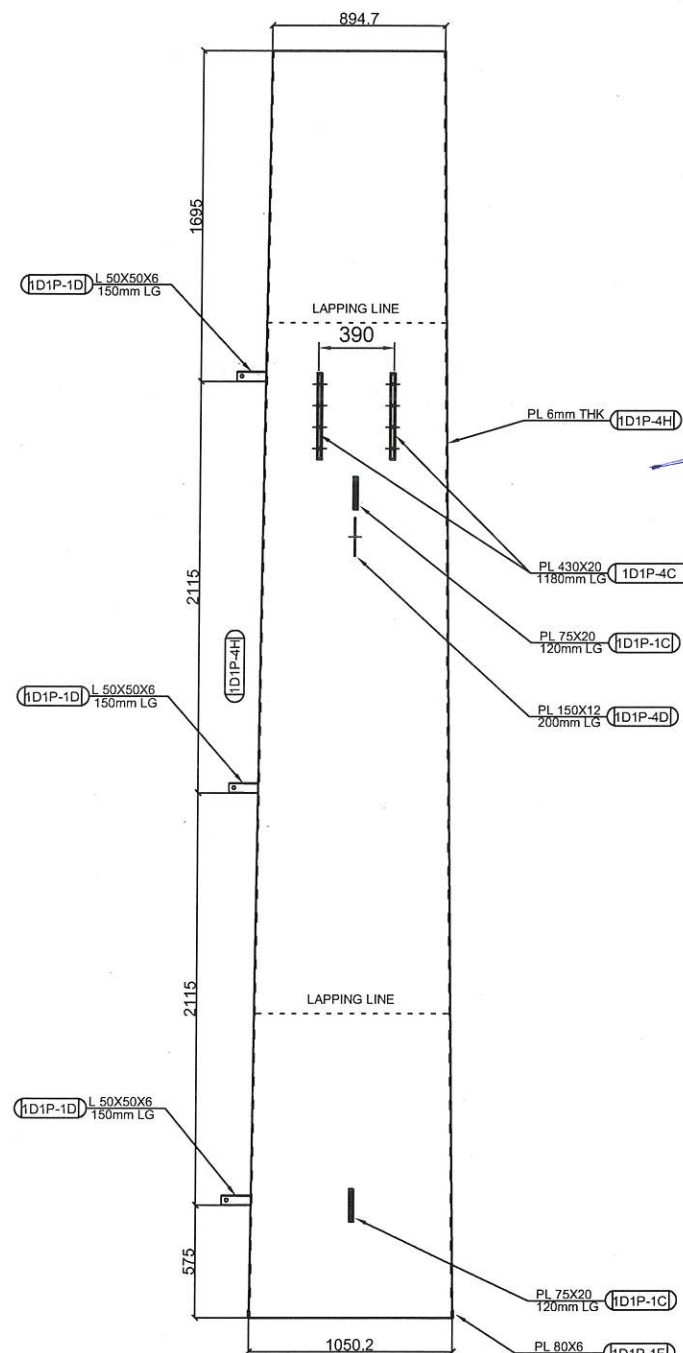
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Performance as stipulated in this contract

COMMENT: THIS APPROVAL SUPERSEDES EARLIER APPROVAL GIVEN VIDE PGOB LETTER NO. 04/PGOB/SE(TLD), DESIGNT & GO/2016/568 DATED 11.12.2016

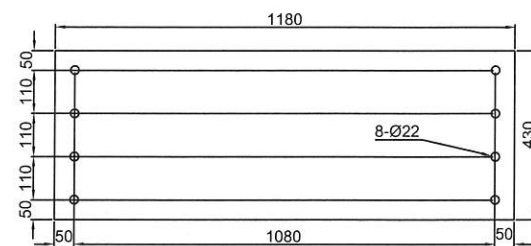
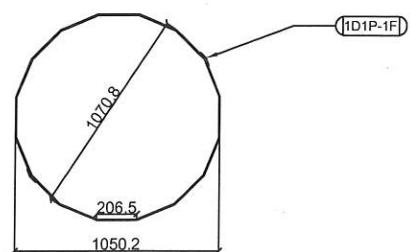
BILL OF MATERIAL										
SI/ No	Mark no	Qty/Pole	GRADE	Size	Pole Size			Wt/pc	Total Wt. (kg)	Remarks
					Length	Top Dia	Bottom Dia			
1	1D1P-4H	1	S355JR	PL 6 THK	6500	894.7	1050.2	1011.52	1011.52	
2	1D1P-1C	4	S275JR	PL75X20 THK	120			1.41	5.65	
3	1D1P-1D	3	S275JR	L 50X50X6	150			0.68	2.03	
4	1D1P-1F	2	S275JR	PL80X6 THK	80			0.30	0.60	
5	1D1P-4C	2	S275JR	PL430X20 THK	1180			79.66	159.32	
6	1D1P-4D	2	S275JR	PL200X12 THK	150			2.83	5.65	
Total=								1184.78	kg	
TOTAL WEIGHT (INCLUDING 3.5%GALV)=								1226.24	kg	



TRANSVERSE FACE



LONGITUDINAL FACE



(1D1P-4C)
(PL 430X20 THK- 1180 LG)
QTY : 2PCS

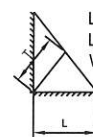
Md. Shoeb Hasan
Assistant Engineer
Design & QC (TLD-1)
PGCB Ltd. Dhaka.

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

05 FEB 2017

NOTE FOR WELDING:

Length of Weld leg, $L = 6\text{mm}$
Length of Weld Throat, $T = 4.24\text{mm}$
Welding strength, $F_u = 540\text{ MPa}$



(1D1P-4D)
(PL 200X12 THK- 150 LG)
QTY : 2PCS

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
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DRAWN	CHECKED	APPROVED	POLE TYPE:	SCALE
M.S.S	M.R.C		101P	N.T.S

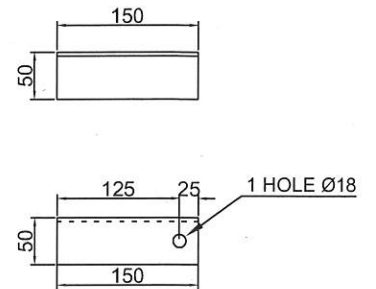
Drawing Name: 1D1P Erection Drawing

DATE	02.02.17	Dwg No: CSL/ZTT-SINOTEC/SD/1D1P	SHT. NO. 7/14	REV :
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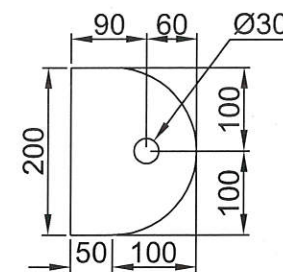


POWER GRID COMPANY OF BANGLADESH
APPROVED **with COMMENT**
This approval is general only and does not
Release the manufacturer/contractor/supplier
From compliance with specification and
Standards for Design workmanship and
Performance as stipulated in the contract

LIFTING CLEAT- (1D1P-1C)
(PL 75X20 THK- 120 LG)
QTY : 4 PCS



LADDER CLEAT- (1D1P-1D)
(L 50X50X6THK- 150 LG)
QTY : 3PCS

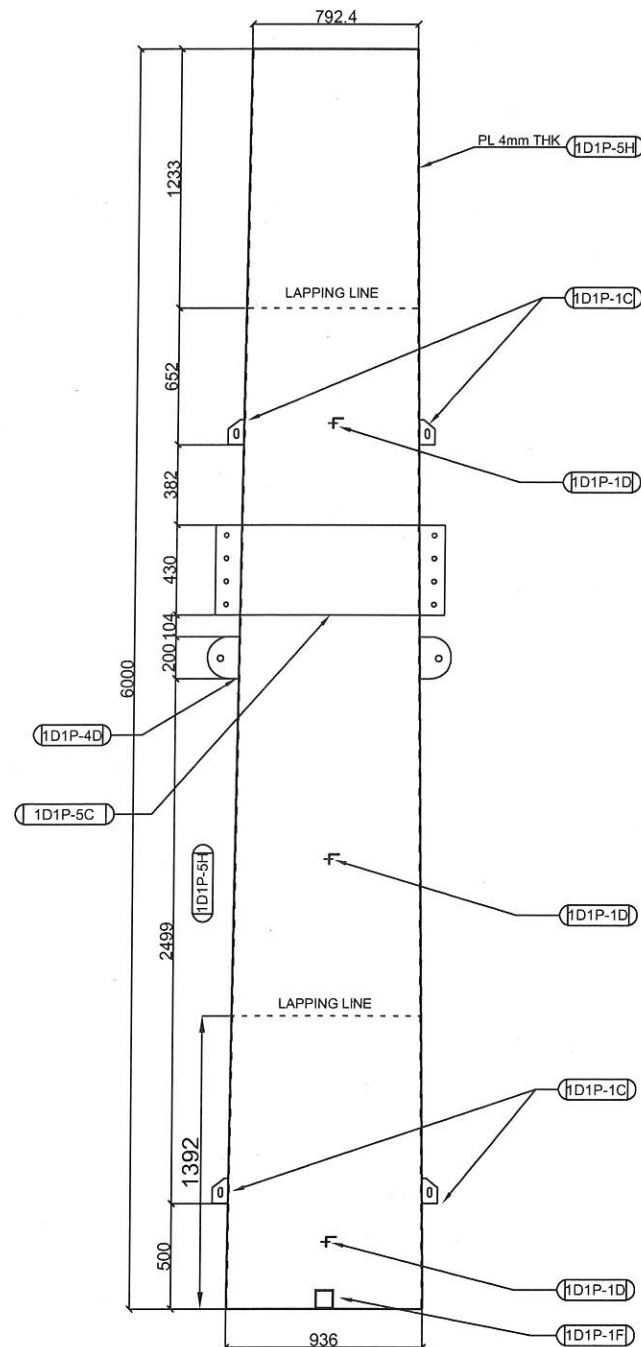


(1D1P-4D)
(PL 200X12 THK- 150 LG)
QTY : 2PCS

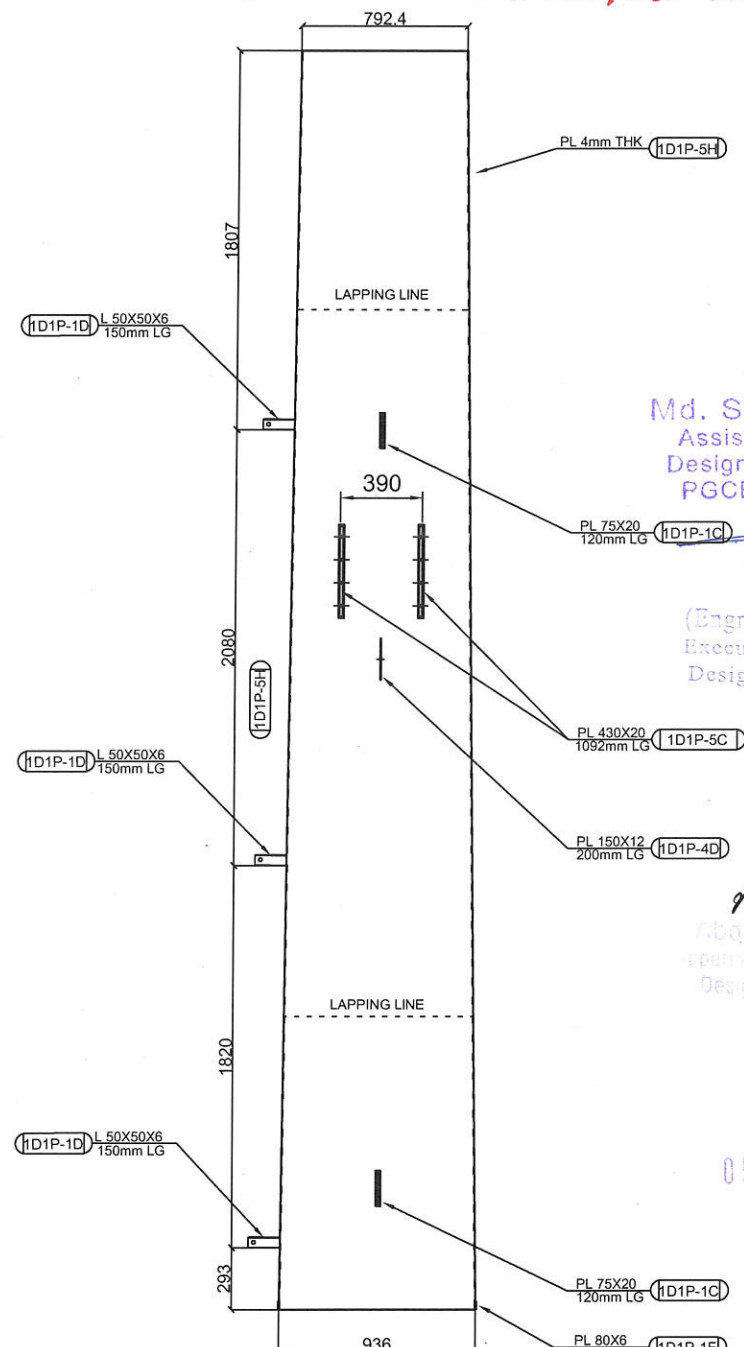
NOTE:

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

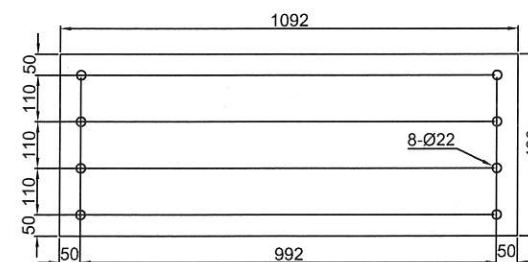
1. MATERIAL SPECIFICATION:
 - A) FOR POLE, MATERIAL GRADE IS S355JR.
 - B) FOR BASE PLATE, MATERIAL GRADE IS S355JR.
 - C) FOR CROSS ARM MATERIAL GRADE IS S275JR.
2. ANCHOR BOLT IS 5.6 GRADE;
CROSS ARM CONNECTING BOLT GRADE 8.8.
3. GALVANIZING AS PER BSEN 1461:2009.
4. BOLTS AS PER ISO 898-1:2009; NUTS 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.



TRANSVERSE FACE

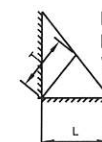


LONGITUDINAL FACE



(1D1P-5C)
(PL 430X20 THK- 1092 LG)
QTY : 2PCS

NOTE FOR WELDING:



Length of Weld leg, $L = 6\text{mm}$
Length of Weld Throat, $T = 4.24\text{mm}$
Welding strength, $F_u = 540\text{ MPa}$



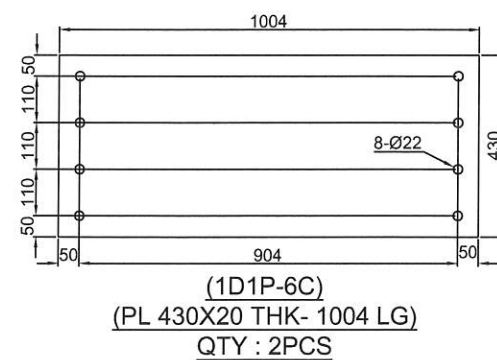
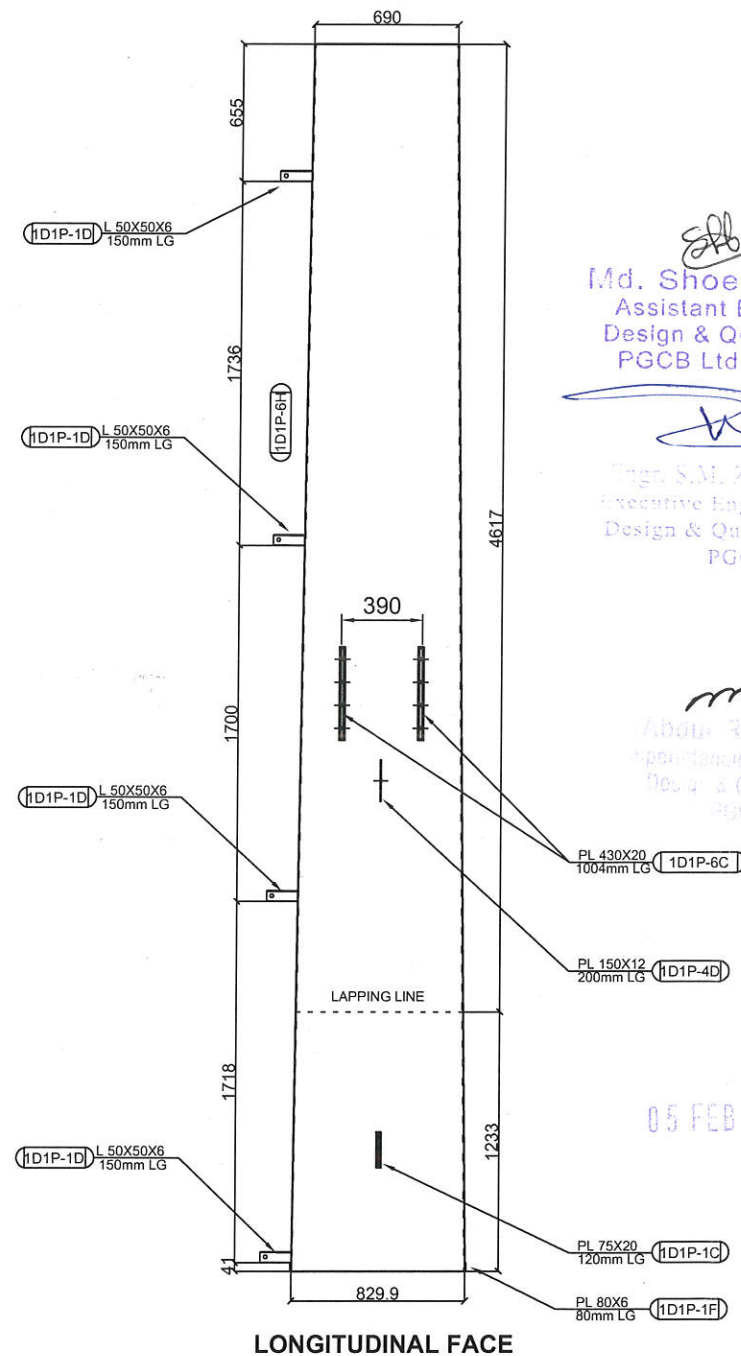
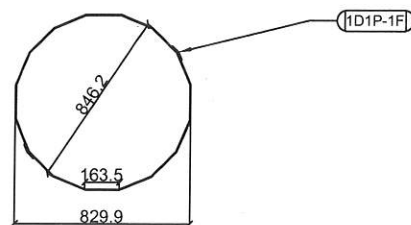
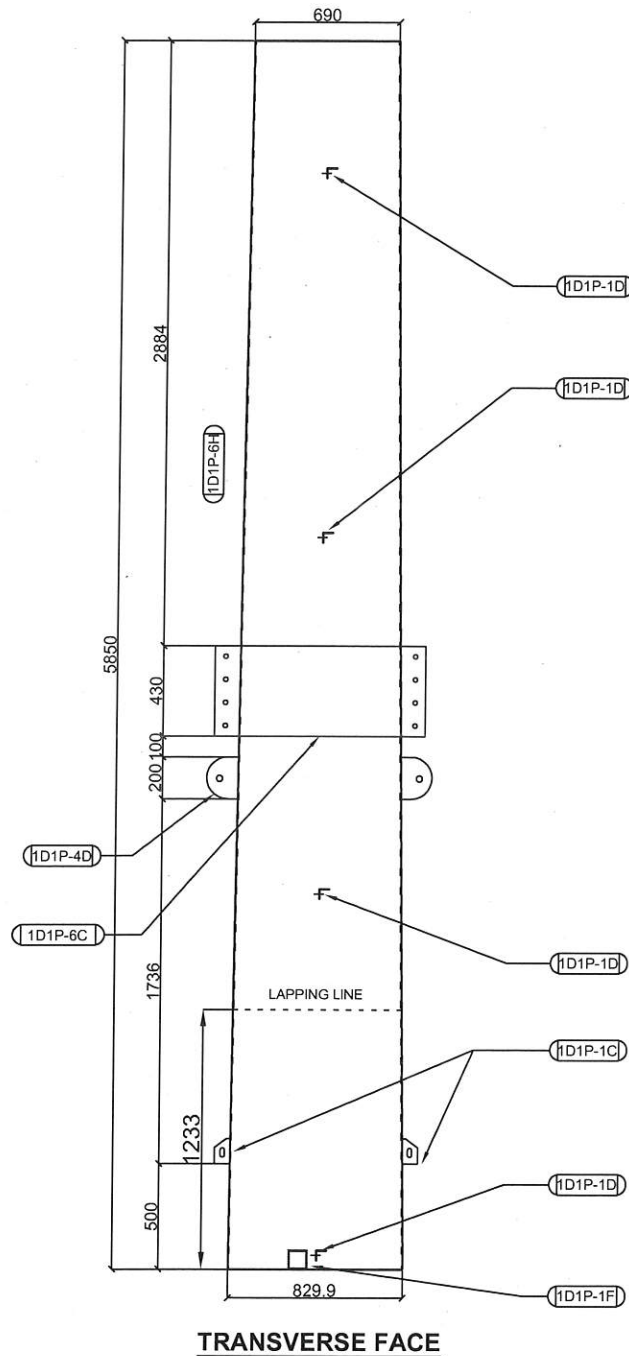
CLIENT :  POWER GRID COMPANY OF
BANGLADESH LIMITED (PGCB)

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
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DRAWN M.S.S	CHECKED M.R.C	APPROVED	POLE TYPE: 1D1P	SCALE N.T.S
Drawing Name: 1D1P Erection Drawing				
DATE	02.02.17	Dwg No: CSL/ZIT-SINOTEC/SD/1D1P	SHT. NO. 8/14	REV : 



POWER GRID COMPANY OF BANGLADESH
APPROVED WITH COMMENT
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

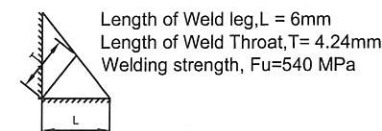
COMMENT: THIS APPROVAL SUPERSEDES EARLIER APPROVAL GIVEN VIDE PQC
LETTER NO. 04/PQC/SE(TD), DESIGN & BC/2016/568 DATED 11.12.2016

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

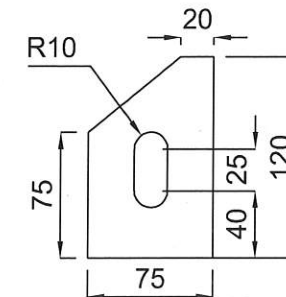
Engr. S.M. Zafrul Hasan
Executive Engineer (TL-1)
Design & Quality Control
PGCB

05 FEB 2017

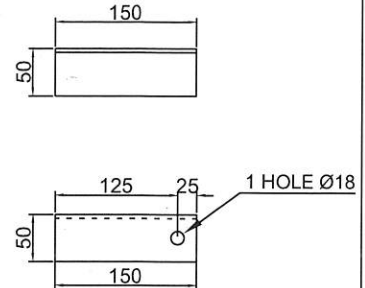
NOTE FOR WELDING:



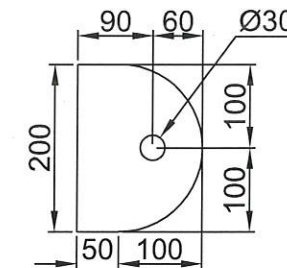
BILL OF MATERIAL										
SI/ No	Mark no	Qty/Pole	GRADE	Size	Pole Size			Wt/pc	Total Wt. (kg)	Remarks
					Length	Top Dia	Bottom Dia			
1	1D1P-6H	1	S355JR	PL 4 THK ✓	5850	690	829.9	480.53	480.53	
2	1D1P-1C	2	S275JR	PL75X20 THK	120			1.41	2.83	
3	1D1P-1D	4	S275JR	L 50X50X6	150			0.68	2.70	
4	1D1P-1F	2	S275JR	PL80X6 THK	80			0.30	0.60	
5	1D1P-6C	2	S275JR	PL430X20 THK	1004			67.78	135.56	
6	1D1P-4D	2	S275JR	PL200X12 THK	150			2.83	5.65	
Total=								627.87	kg	
TOTAL WEIGHT (INCLUDING 3.5%GALV)=								649.85	kg	



LIFTING CLEAT-(1D1P-1C)
(PL 75X20 THK- 120 LG)
QTY : 2 PCS



LADDER CLEAT- (1D1P-1D)
(L 50X50X6THK- 150 LG)
QTY : 4PCS



(1D1P-4D)
(PL 200X12 THK- 150 LG)
QTY : 2PCS

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

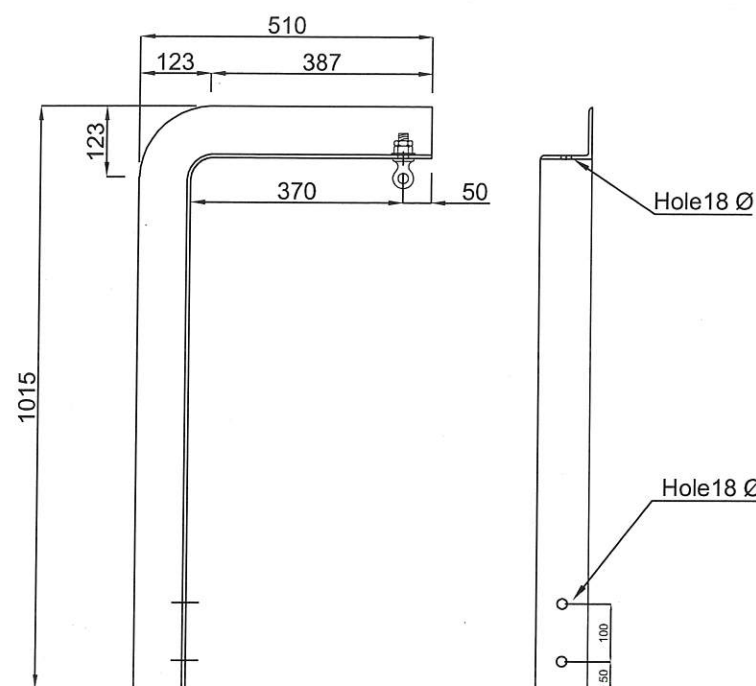
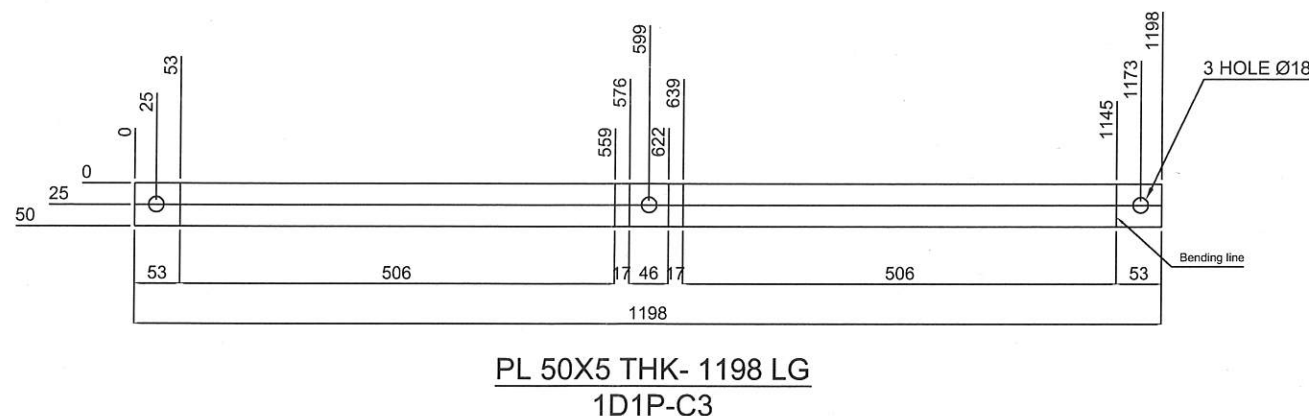
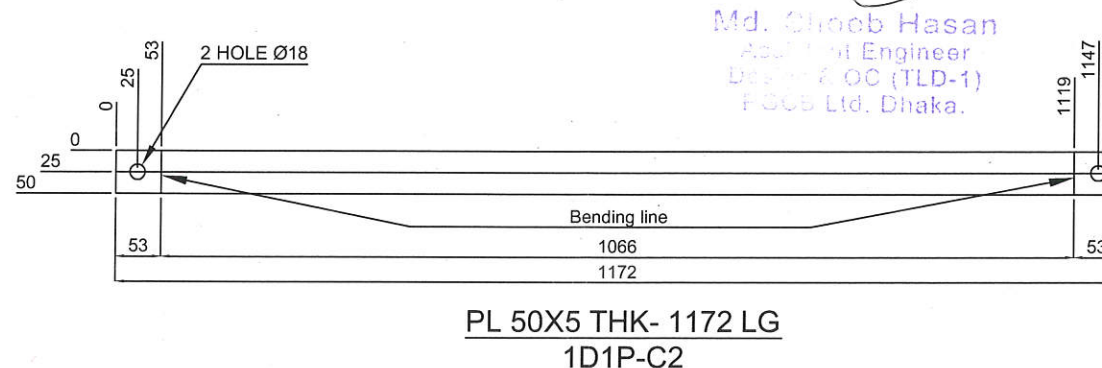
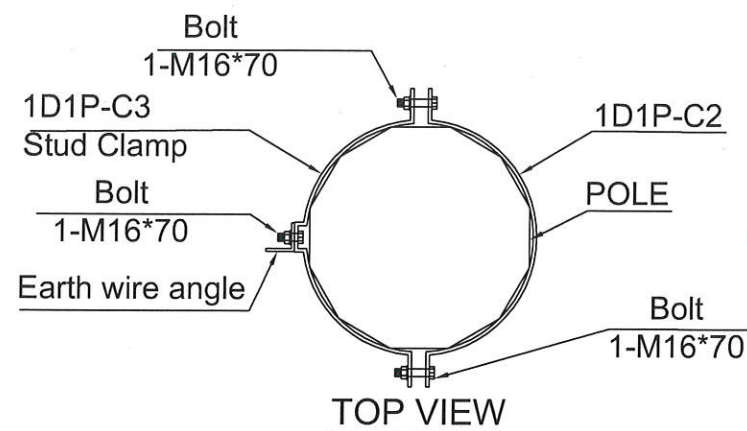
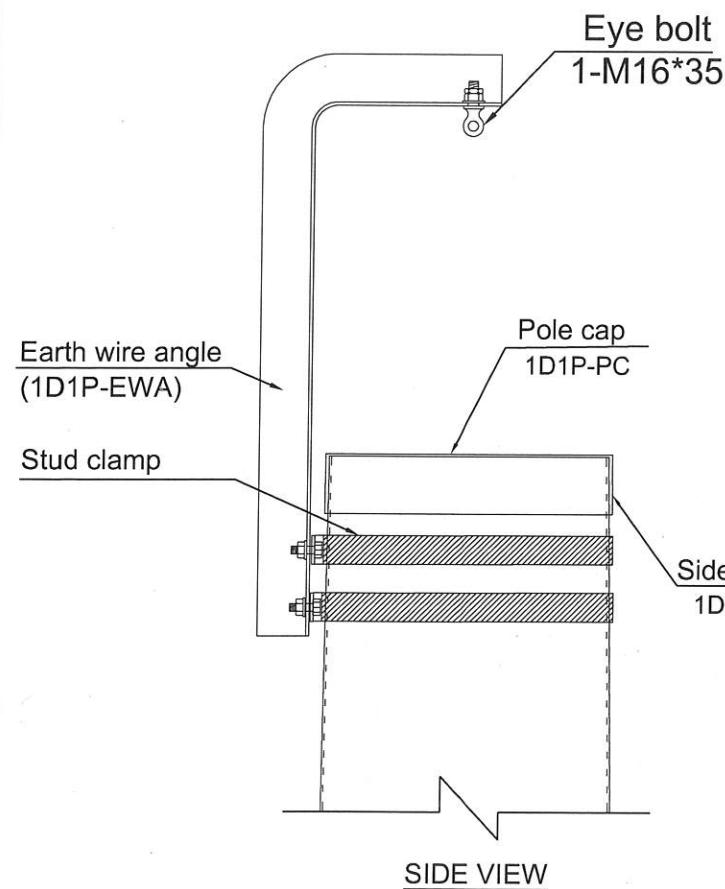
MANUFACTURER :  CONFIDENCE™
Steel Limited

TITLE:	DESIGN, SUPPLY, ERECTION, TESTING AND COMMISSIONING OF ISHURDI-ROOPPUR 132KV DOUBLE CIRCUIT TRANSMISSION LINE ON TURNKEY BASIS
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DRAWN	CHECKED	APPROVED	POLE TYPE:	SCALE
M.S.S	M.R.C		101P	N.T.S

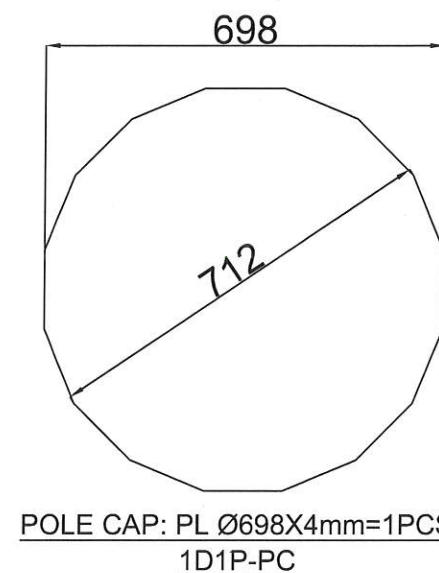
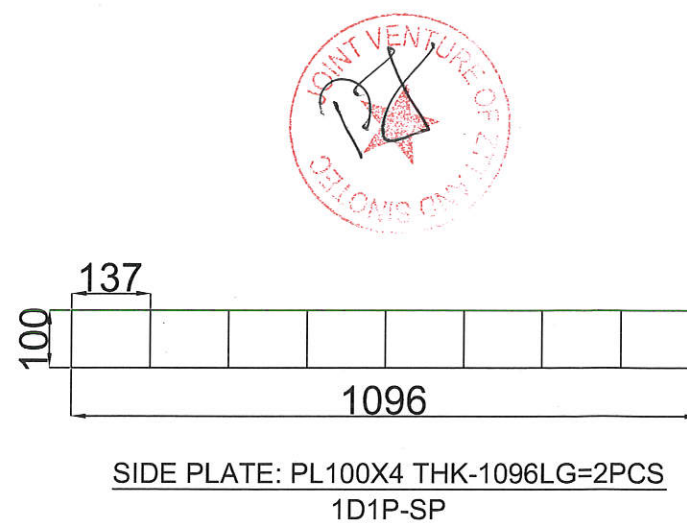
Drawing Name: 1D1P Erection Drawing

DATE	02.02.17	Dwg No: CSL/ZTT-SINOTEC/SD/1D1P	SHT. NO. 9/14	REV : 2
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EARTH WIRE ANGLE 90X90X6 (EWA) DETAIL (1 SET)

EARTHING WIRE ANGLE ARRANGEMENT
1D1P-EWA



POWER GRID COMPANY OF BANGLADESH
APPROVED WITH COMMENT
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

COMMENT: THIS APPROVAL SUPERSEDES
EARLIER APPROVAL GIVEN VIDE
PAGB LETTER NO. 04/PAGB/
SE(TLD), DESIGN & QC/2016/568
DATED 11.12.2016

Md. Shooab 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

05 FEB 2017

NOTE:

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

- 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.
- ANCHOR BOLT IS 5.6 GRADE;
CROSS ARM CONNECTING BOLT GRADE 8.8.
- GALVANIZING AS PER BSEN 1461:2009.
- BOLTS AS PER ISO 898-1:2009; NUTS AS PER ISO 4034;
WASHER AS PER DIN127.
- ALL DIMENSION ARE IN MM.
- ALL MATERIALS ARE MILD STEEL IF NOT STATED OTHERWISE.
- MARK NUMBER WITH "H" ALPHABET INDICATES HIGH TENSILE STEEL.
- 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 TM 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		1D1P	N.T.S
DRAWING NAME: 1D1P-EARTH WIRE AND POLE CAP ARRANGEMENT				
DATE	02.02.17	Dwg No: CSL/ZTT-SINOTEC/SD/1D1P	SHT.NO. 10/14	REV : 2

