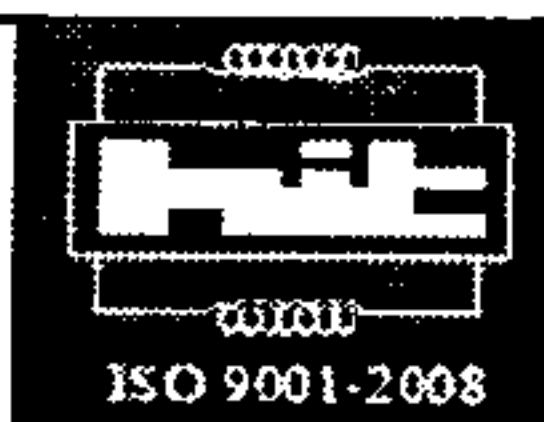


GUARANTEED TECHNICAL & OTHER PARTICULARS

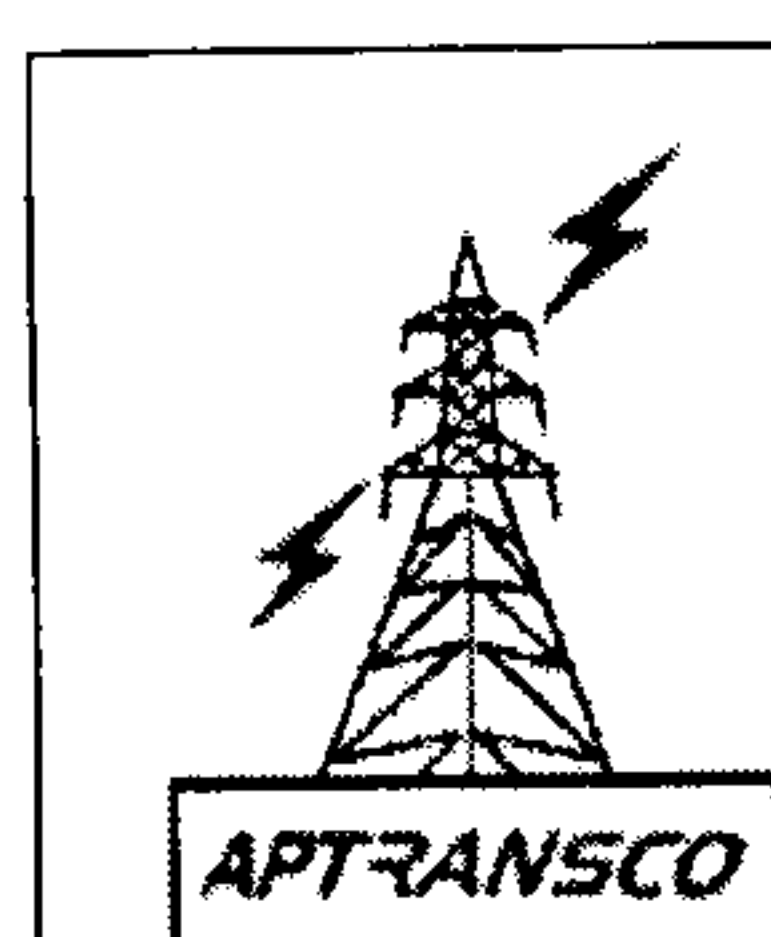
s.No	Particulars	Description
1	Make	M/S. Hyderabad Instrument Transformers private Limited. C- 62, Industrial Estate, Sanathnagar, Hyderabad - 500018.
2	Normal Full Load Output (kVA)	100 kVA
3	i) Type of transformer	Core type, 3 phase, oil Immersed.
	ii) Winding Type(HV & LV)	Double Wound
	iii) Material	Copper
4	Type of cooling	ONAN
5	Indoor OR outdoor	Outdoor
6	Rated high voltage (V)	33000
7	Rated Low voltage (V)	400
8	Connection and vector Group	Delta / Star, Dyn 11
9	Maximum Temperature rise of	
	i) Winding by resistance Deg. C	55
	ii) Oil by temperature Deg.C	50
	iii) Maximum Ambient air Temperature Deg.C	50
10	Core loss at normal Voltage and Frequency (kW)	0.325 (Subject to IS Tolerance)
11	Copper loss at normal Voltage and current (kW)	1.650 (Subject to IS Tolerance)
12	Impedance	4.5 % (Subject to IS Tolerance)
13	Tap Changer	
	i) Make	Paragon / Temp System / Aswini
	ii) Type	OFF - CIRCUIT
	iii) Indicator Arrangement	Provided
	iv) Packing Arrangement	Pad Lock arrangement provided
	v) Other Details	+5% to -5% insteps of 2.5%
14	Tapping on HV side for LV variation	Tapping on HV side
15	Impulse strength of HV winding	170 kVP
16	Impulse strength of LV winding	Not Appilcable
17	Overall dimensions of transformer in mm L x B x H	1400 x 950 x 1850

APPROVED FOR TURNKEY PROJECTS

[Signature]
**CHIEF ENGINEER / CONSTRUCTION 1
APTRANSCO/VIDYUTH Soudha/HYD**



HYDERABAD INSTRUMENT TRANSFORMERS PVT LTD.
C-62, INDUSTRIAL ESTATE, SANATHNAGAR,
HYDERABAD - 500018, A.P. INDIA



**Standard Guaranteed Technical Particulars for
100 KVA, 33KV/400V Station Transformer**

STD/GTP-DWG/Approval No.233-1-1(3)/ Revision No.0

Prepared and Approved during November -2013

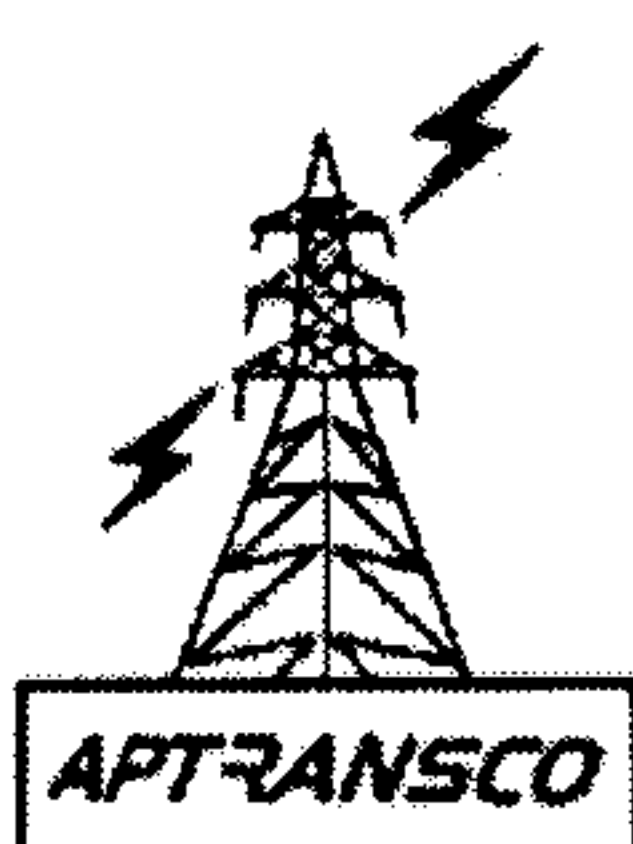
18	Approximate weight of	
	i) Core cum windings (Kg) untanking Mass	360
	ii) Oil (Kg)	255
	iii) Complete transformer with all fittings and including oil (Kg)	950
19	Type of Tank	conventional Type.
20	Make and type of breather fitted to the transformer	Suvida / Any reputable make of convectional oil seal clear view.
21	Particulars of bushings	
	i) country of origin	India
	ii) Rating	HV: 36kV 250 Amps/ LV : 1.1 kV 250 Amps
	iii) Types	
	HV bushings	Porcelain
	LV bushings	Porcelain
	iv) Impuse and flashover voltages	HV : 170kVP/LV: N.A, HV: 70kVrms/ LV: 3kVrms
22	Efficiency at u.p.f and 0.8 p.f	98.06 / 97.59
23	Regulation at full load u.p.f and 0.8 p.f	1.74 / 3.86
24	Terminal arrangements of bushings (HV & LV)	outdoor, Bare bushings/ outdoor, Bare bushings
25	Mounting arrangements for the transformer	Plinth

APPROVED FOR TURNKE / PROJECTS

[Signature]
CHIEF ENGINEER / CONSTRUCTION-1
APTRANSCO/MIDYUTH SOUDHA/HYD.



HYDERABAD INSTRUMENT TRANSFORMERS PVT LTD.
C-62, INDUSTRIAL ESTATE, SANATHNAGAR,
HYDERABAD - 500018, A.P. INDIA



**Standard Guaranteed Technical Particulars for
100 KVA, 33KV/400V Station Transformer**

STD/GTP-DWG/Approval No.233-1-2(3)/ Revision No.0

Prepared and Approved during November -2013

LIST OF FITTINGS AND ACCESSORIES PROVIDED		
S.No	Description	Quantity
1	Rating and terminal marking plate	1 No
2	Earthing Terminals	2 Nos
3	Lifting Lugs	2 Nos
4	Main oil level gauge	1 No
5	Drain valve with blanking plate (20mm Dia)	1 No
6	Thermometer Pocket	1 No
7	Air release plug	1 No
8	Conservator with drain plug & oil filling hole with cap	1 No
9	Pressure Relief Vent	1 No
10	Silica Gel Breather	1 No
11	Filter valve with blanking plate (32mm)	1 No
12	Mounting channel and plain rollers	4 Nos
13	OFF Circuit Tap Switch with locking provision	1 No
14	HV outdoor Bushings	3 Nos
15	LV outdoor Bushings	4 Nos
16	Oil level indicator	1 No

APPROVED FOR TURNKEY PROJECTS

[Handwritten Signature]

**CHIEF ENGINEER / CONSTRUCTION -1
APTRANSCO/VIDYUTH SOUDHA/HYD**



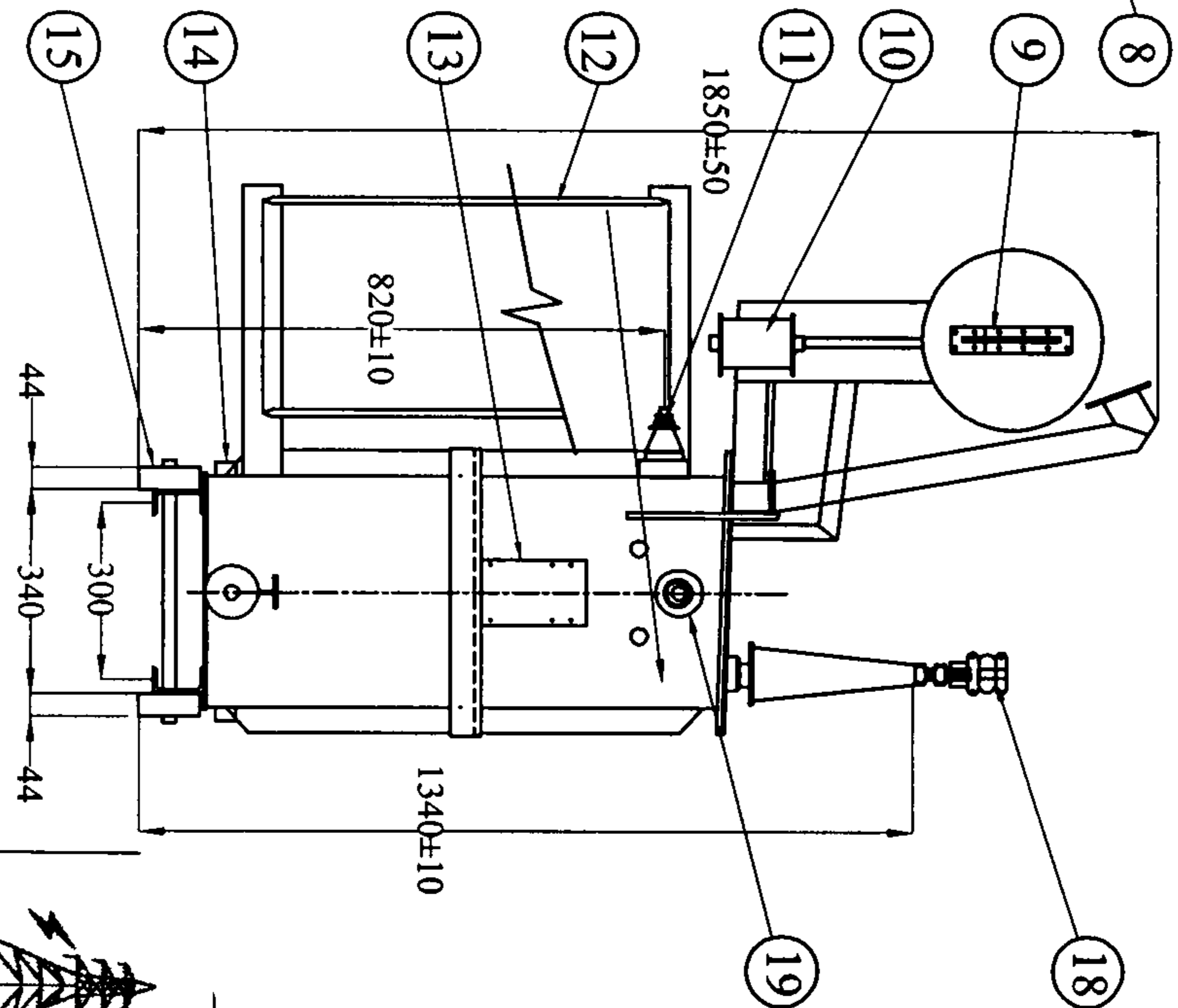
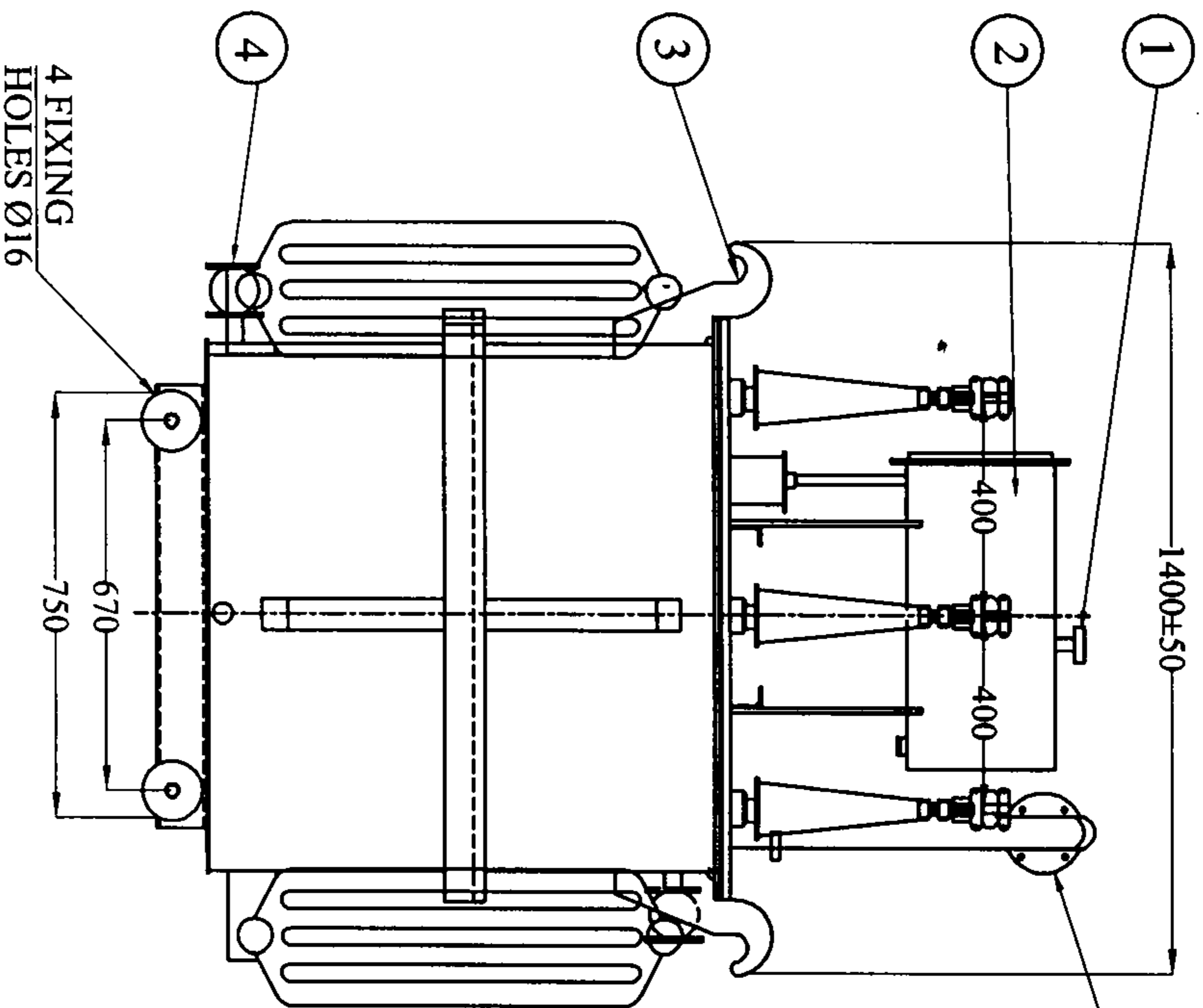
HYDERABAD INSTRUMENT TRANSFORMERS PVT LTD.
C-62, INDUSTRIAL ESTATE, SANATHNAGAR,
HYDERABAD - 500018, A.P. INDIA



**Standard Guaranteed Technical Particulars for
100 KVA, 33KV/400V Station Transformer**

STD/GTP-DWG/Approval No.233-1-3(3)/ Revision No.0

Prepared and Approved during November -2013

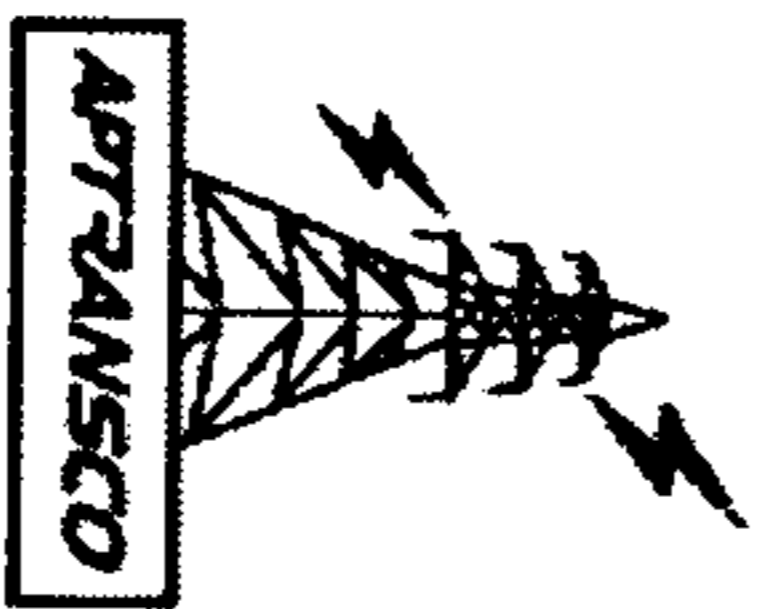


APPROXIMATE WEIGHTS & DIMENSIONS

- 1. LENGTH = 1400, WIDTH = 950, HEIGHT = 1850
- 2. UNTANKING MASS : 360 Kg.
- 3. TANK AND FITTINGS : 335 Kg.
- 4. OIL WEIGHT : 255 Kg.
- 5. TOTAL WEIGHT : 950 Kg.
- 6. OIL QUANTITY : 300 Ltrs.
- 7. PAINT :- ENAMEL DARK GREY, SHADE NO.632, OF IS:5

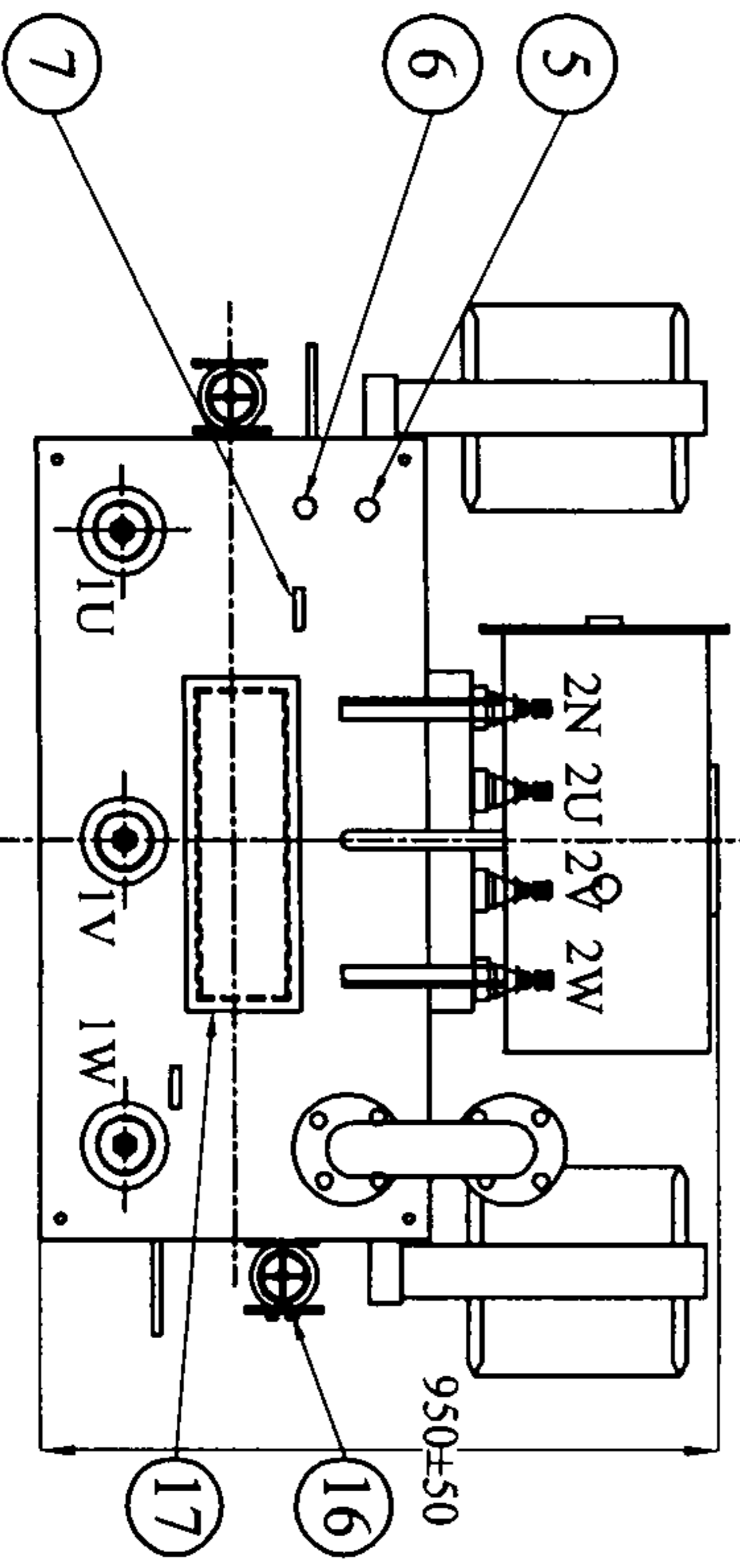
APPROVED FOR TURNKEY PROJECTS

CHIEF ENGINEER / CONSTRUCTION -1
 APTRANSCO/WIDYUTH SOUDHA/HY



**Standard Drawings for 100 KVA,
 33KV/400V Station Transformer General
 Arrangement.**
 STD/GTP-DWG/Approval No.233-2-1(8)/
 Revision No.0
 Prepared and Approved during
 November -2013

CUSTOMER : M/S. AP TRANSCO.



Ph - Ph	Ph- Earth	KVA	PHASE	FREQUENCY	VECTOR GROUP	COOLING	VOLTAGE (V)	CURRENT (A)
350	320	100	3	50 Hz	Dyn 11	ONAN	H. V. 33000	H. V. 1.75
40	40	W.O.	SCALE	PROJEC			L. V. 400	L. V. 144.3
		SL.NO.	NTS					

HYDERABAD INSTRUMENT TRANSFORMERS PVT. LTD.
 C-62, INDUSTRIAL ESTATE, SANTHINAGAR,
 HYDERABAD - 500018, A.P. INDIA.

DATE	01.05.13	TITLE	G.A. DRAWING FOR 100 KVA, 33KV/400V STATION TRANSFORMER
DRAWN	<i>Suresh</i>	DRG:NO.	HIT - APTRANSCO - 100KVA - B1
CHECKED		REV	0
SD/D	APPROVED	REV	CHANGE RECORD

NOTE: ALL DIMENSIONS ARE IN mm.

QTY.	PT. NO.	DESCRIPTION
1	1	OIL FILLING HOLE WITH CAP
1	2	CONSERVATOR WITH DRAIN PLUG
2	3	LIFTING LUGS
1	4	DRAIN CUM FILTER VALVE WITH BLANKING PLATE (20mm Ø)
1	5	AIR RELEASE DEVICE
1	6	THERMOMETER POCKET
2	7	COVER LIFTS
1	8	PRESSURE RELIEF VENT
1	9	OIL LEVEL INDICATOR
1	10	DEHYDRATING SILICAGEL BREATHER
4	11	L.V. BARE BUSHINGS WITH CONNECTORS
2	12	RADIATORS
1	13	RATING AND TERMINAL MARKING PLATE
2	14	EARTHING TERMINALS
4	15	UNI - DIRECTIONAL FLAT ROLLERS
1	16	FILTER VALVE WITH BLANKING PLATE (32mm Ø)
1	17	INSPECTION COVER
3	18	H.V. BARE BUSHINGS WITH CONNECTORS
1	19	OFF CIRCUIT TAP CHANGING SWITCH WITH LOCKING ARRANGEMENT

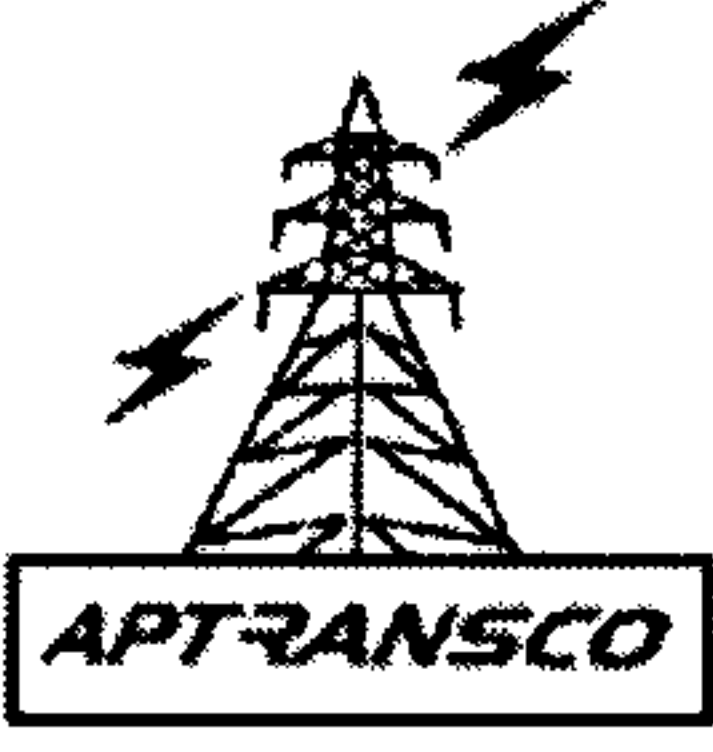
NOTE : 1. BASE DIMENSIONS OF TRANSFORMERS

LENGTH = 790, WIDTH = 530

2. MINIMUM DIMENSIONS OF THE PLINTH

LENGTH = 1400, WIDTH = 1130

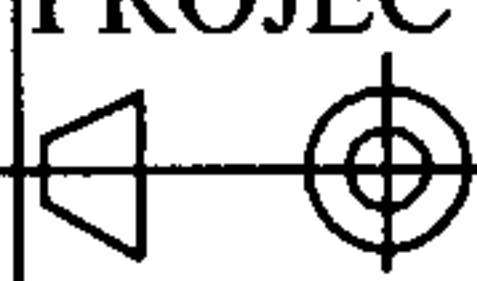

ALL DIMENSIONS ARE IN MM

	Standard Drawings for 100 KVA, 33KV/400V Station Transformer Accessories.
	STD/GTP-DWG/Approval No.233-2- 2(8)/ Revision No.0
	Prepared and Approved during November -2013

APPROVED FOR TURNKEY PROJECTS

[Signature]
**CHIEF ENGINEER / CONSTRUCTION -
APTRANSCO/VIDYUTH SOUDHA/HYD**

CUSTOMER : M/S. AP TRANSCO.

W.O.	SL.NO.	SCALE NTS	PROJEC 		HYDERABAD INSTRUMENT TRANSFORMERS PVT. LTD. C-62, INDUSTRIAL ESTATE, SANTHNAGAR, HYDERABAD - 500018, A.P. INDIA.		
				ISO 9001-2008			
				DATE	01.05.13	TITLE ACCESSORIES FOR 100 KVA , 33kV/400V STATION TRANSFORMER	
				DRAWN	<i>Sureh</i>		
				CHECKED		DRG.NO.	REV.
REV.	CHANGE RECORD	SD/D	APPROVED			HIT - APTRANSCO -100KVA - B2	0

**DISCONNECT SUPPLY BEFORE OPERATING
OFF - CIRCUIT TAP SWITCH**

MADE IN INDIA

3 PHASE TRANSFORMER SL. No. _____

STANDARD IS:2026 FREQUENCY Hz. 50

KVA 100 TYPE OF COOLING ONAN

VOLTS AT { H.V 33000 VECTOR GROUP Dyn11
L.V 400

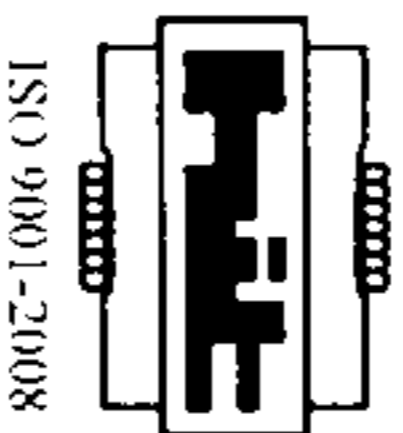
NO LOAD MASS OF OIL Kg. 255

AMPERES { H.V 1.75 TOTAL MASS Kg. 950
L.V 144.3 VALUME OF OIL L 300

IMPED. VOLT % MONTH & YEAR OF MFD. _____

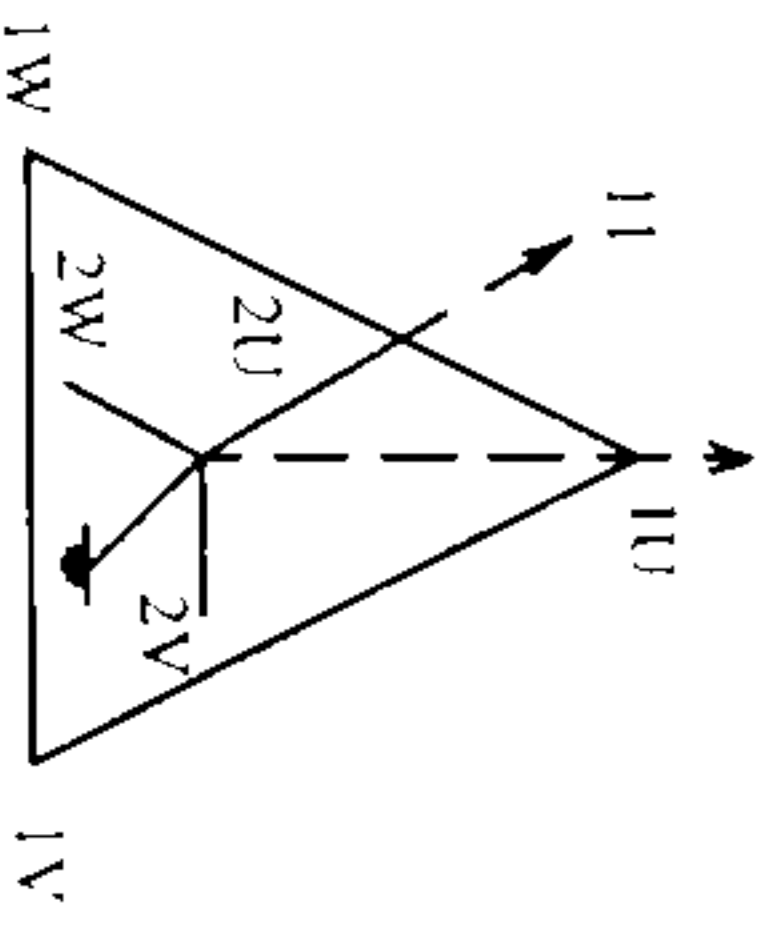
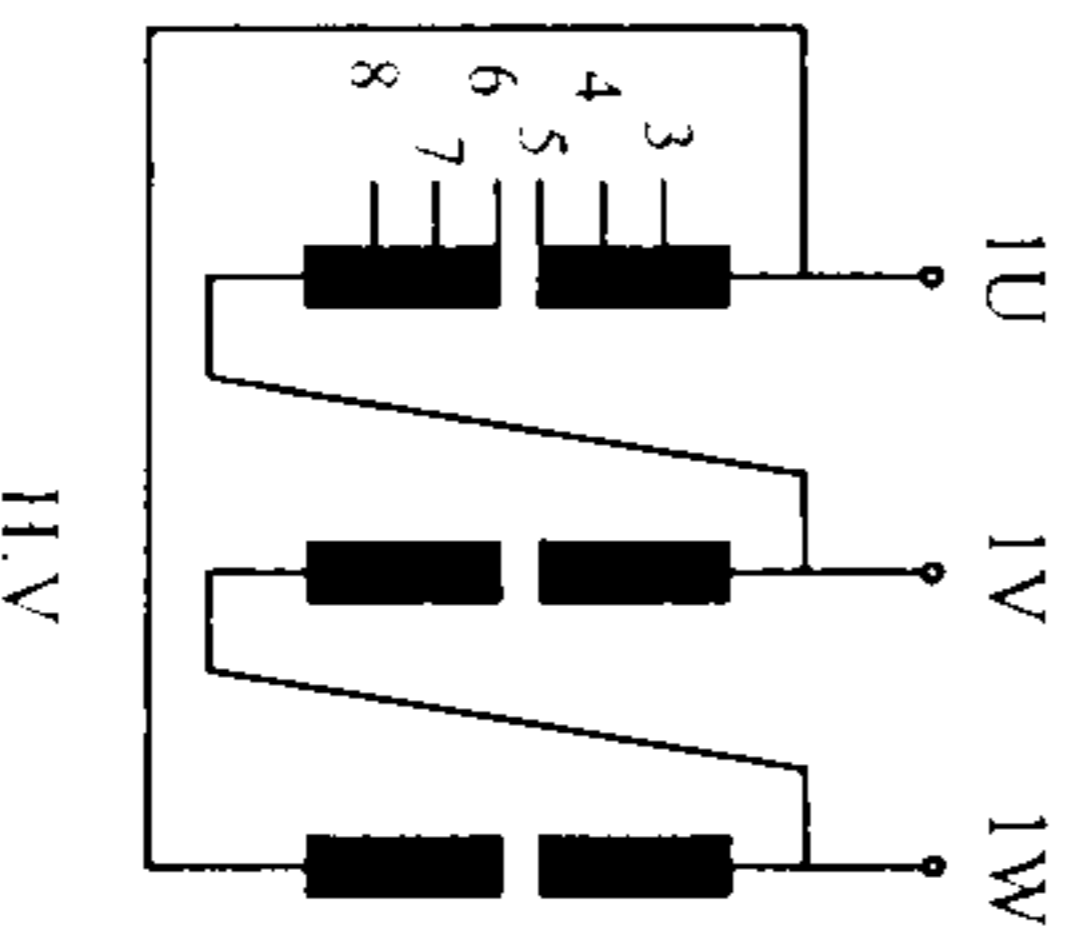
CUSTOMER _____

ORDER NUMBER _____



HYDERABAD INSTRUMENT TRANSFORMERS PVT. LTD.
C-62, INDUSTRIAL ESTATE, SANTHINAGAR,
HYDERABAD - 500018, A.P. INDIA.

SWITCH POSITION	CONNECTION	NO LOAD VOLTS	
		H.V	L.V
1	5-6	34650	400
2	6-4	33825	400
3	4-7	33000	400
4	7-3	32175	400
5	3-8	31350	400



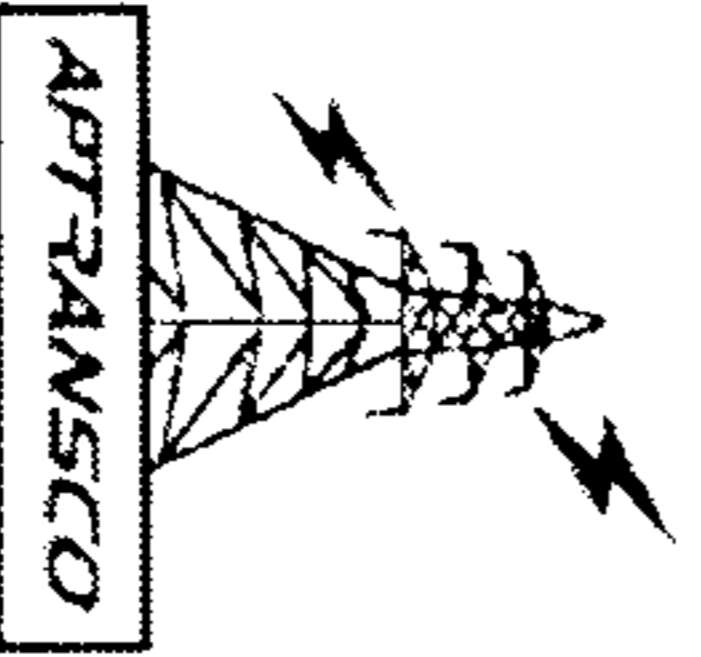
100

IMPEDANCE VALUE WILL BE PUNCHED
AFTER TESTING
1. MATERIAL : 18 G ALUMINIUM SHEET.

APPROVED FOR TURNKEY PROJECTS

[Signature]
CHIEF ENGINEER / CONSTRUCTION
APTRANSCO, VIDYUTHA SOUDH, HYDR.

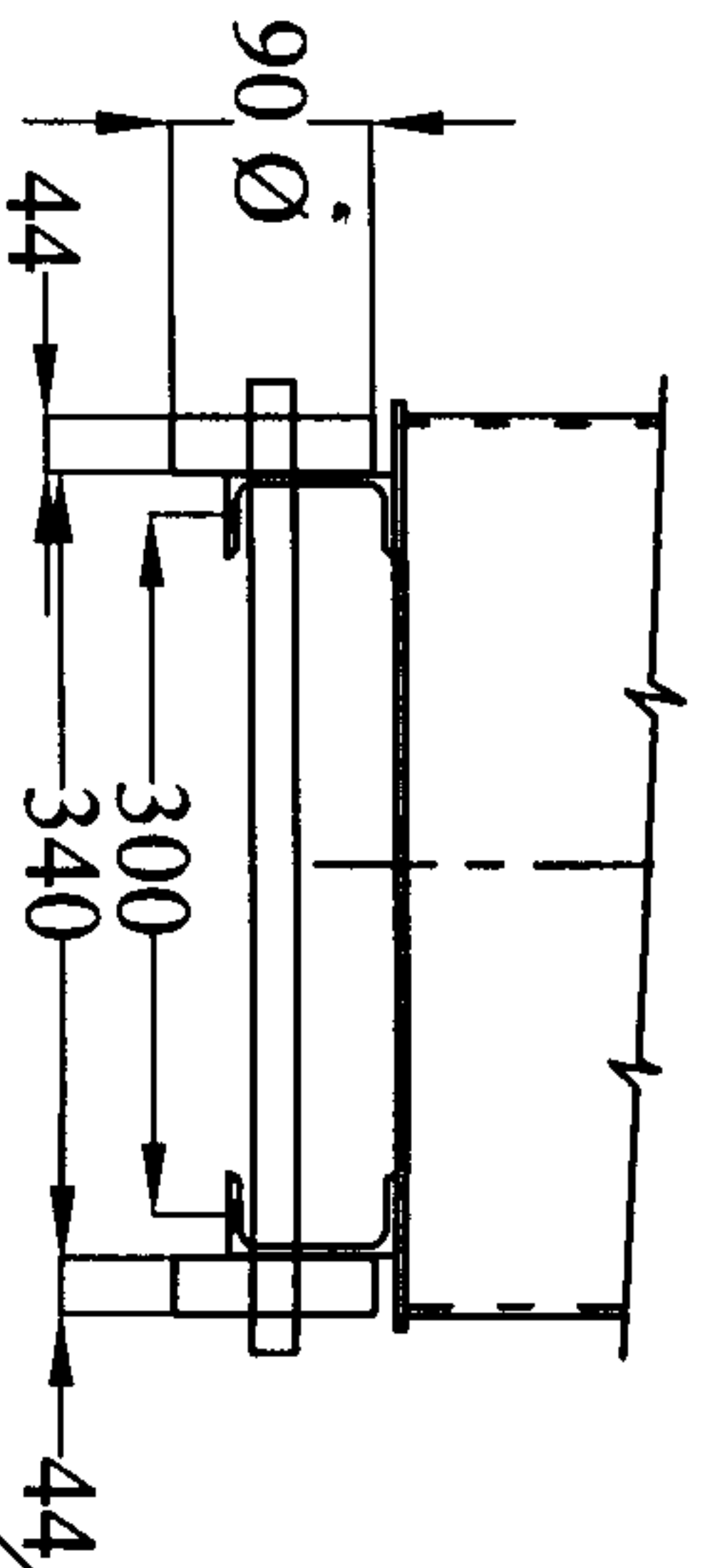
**Standard Drawings for 100 KVA, 33KV/400V
Station Transformer Rating and Diagram plate
STD/GTP-DWG/Approval No.233-2-3(8)/
Revision No.0
Prepared and Approved during November -2013**



CUSTOMER : M/S. AP TRANSCO.

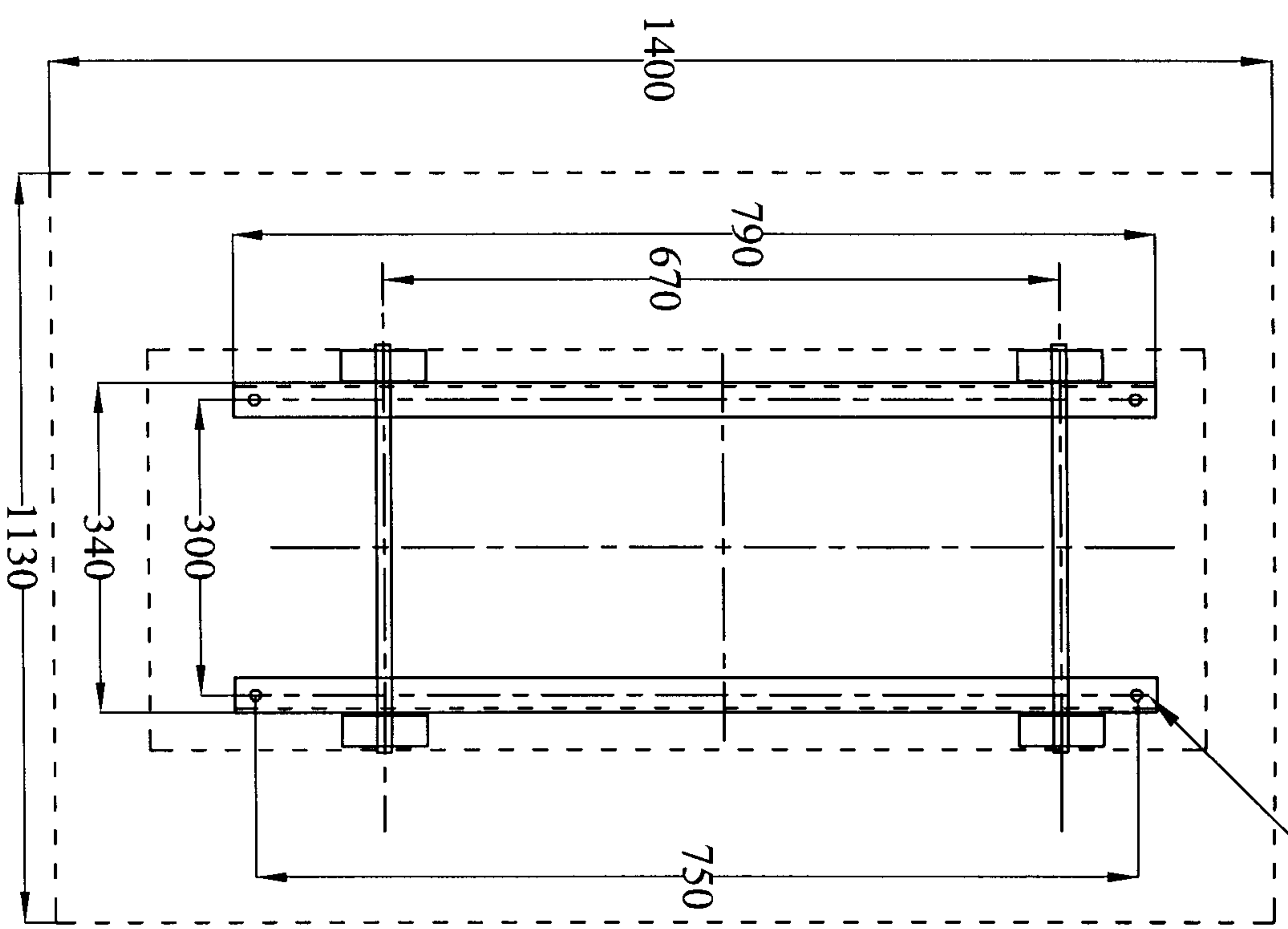
W.O.	SL.NO.	SCALE	PROJEC	DATE	TITLE	DRG.NO.	REV.
		NTS		01.05.13	RATING & DIAGRAM PLATE OF 100 KVA 33 KV / 400 V STATION TRANSFORMER	HIT - APTRANSCO -100KVA - B3	0
REV.	CHANGE RECORD	SD/D	APPROVED	CHECKED			

NOTE : ALL DIMENSIONS ARE IN MM



4-FIXING HOLES Ø16

NOTE:
APPROXIMATE PLINTH
DIMENSIONS 1400 X 1130

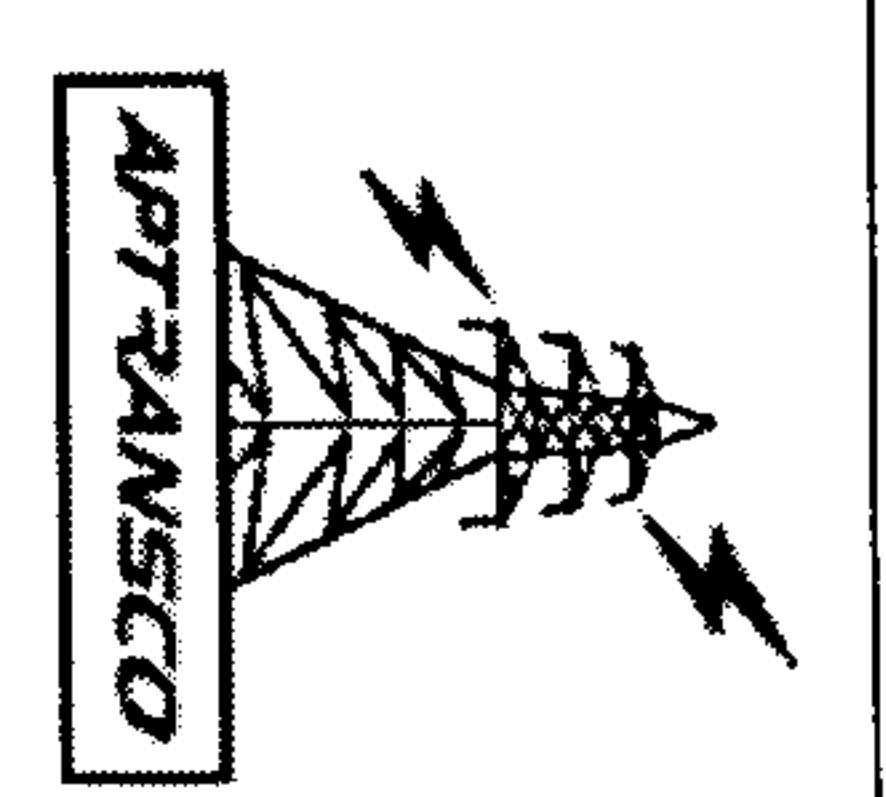


NOTE : ALL DIMENSIONS ARE IN MM

APPROVED FOR TURNKEY PROJECTS

CHIEF ENGINEER / CONSTRUCTION - 1
APTRANSCO/VIDYUTH SUDHA/HYD

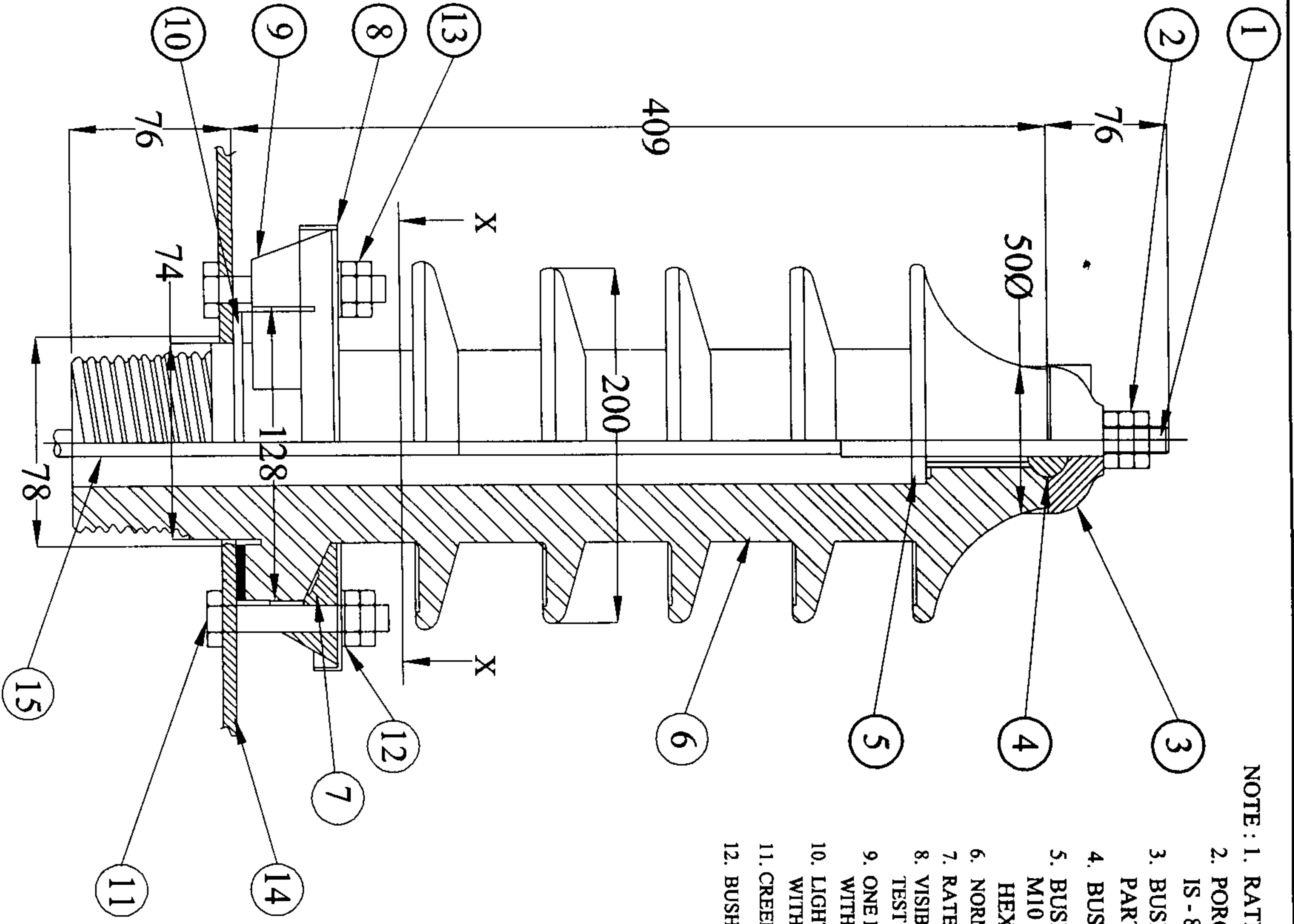
Signature



**Standard Drawings for 100 KVA, 33KV/400V
Station Transformer Foundation details**
STD/GTP-DWG/Approval No.233-2-4(8)/
Revision No.0
Prepared and Approved during November -2013

CUSTOMER : M/S. AP TRANSCO.

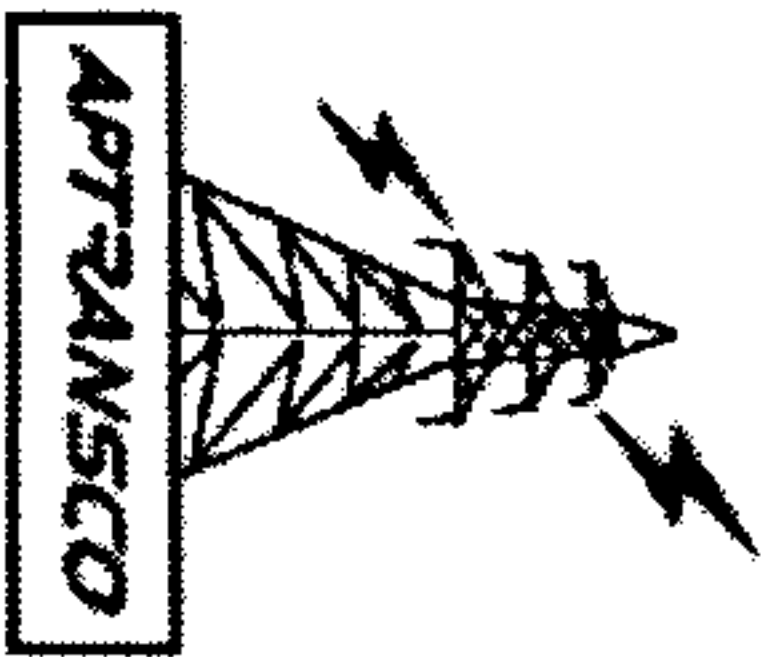
W.O.	SL.NO.	SCALE	PROJEC	DATE	01.05.13	TITLE	HYDERABAD INSTRUMENT TRANSFORMERS PVT. LTD. C-62, INDUSTRIAL ESTATE, SANTHINAGAR, HYDERABAD - 500018, A.P. INDIA.
		NTS					
REV.	CHANGE RECORD	SD/D	APPROVED	CHECKED		DRG.NO.	HIT - APTRANSCO - 100KVA - B4
						REV.	0



- NOTE : 1. RATING 36K. V. 250 AMPS. BARE BUSHING.
 2. PORCELAIN BUSHING PARTS REFER IS - 8603 (PART-III)-1977
 3. BUSHING METAL PARTS AS PER IS-3347 PART - V / SEC 2 - 1979
 4. BUSHING MOUNTING HOLE DIA - 78 Ø mm.
 5. BUSHING MOUNTING STUDS 4 NOS OF M10 X 70 mm LONG FULL THREADED HEXAGONAL SCREWS
 6. NORMAL SYSTEM VOLTAGE : 33KV.
 7. RATED VOLTAGE : 36KV.
 8. VISIBLE DISCHARGE TEST VOLTAGE : 27KV.
 9. ONE MINUT WET-DRY WITHSTAND VOLTAGE : 70KV.
 10. LIGHTNING IMPULS WITHSTAND TEST VOLTAGE : 170KV.
 11. CREEPAGE DISTANCE (Min.) : 900mm.
 12. BUSHING ROD : 12Ø mm

WT. KG.	QTY.	PT. NO.	DESCRIPTION AND DIMENSIONS	MATERIAL OR DRG. REF.	REMARKS
	1	1	TERMINAL STEM	BRASS	
	3	2	HEXAGONAL NUTS	BRASS	
	1	3	CAP	BRASS	
	1	4	SEALING WASHER	NITRIL RUBBER	
	1	5	SEPARATOR	S.R.C.	
	1	6	BUSHING	PROCELAIN	
	1	7	WASHER	S.R.C.	
	1	8	BUSHING CLAMP	M.S.	GALVANISED
	4	9	CLAMPING MEMBER	ALUMINIUM	
	2	10	WASHER	S.R.C.	
	4	11	STUDS M10X70 LG.	M.S.	
	4	12	SPRING WASHER	M.S.	GALVANISED
	8	13	LOCK NUTS M10	M.S.	
	1	14	MOUNTING PLATE	M.S.	
	1	15	JUMPER	COPPER	

Standard Drawings for 100 KVA, 33KV/400V Station Transformer Bushing Assembly (36 KV, 250 Amps, Bare)
 STD/GTP-DWG/Approval No.233-2-5(8)/
 Revision No.0
 Prepared and Approved during November -2013



CUSTOMER : M/S. AP TRANSCO.

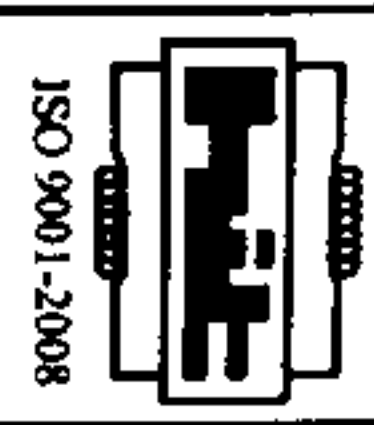
APPROVED FOR TURNKEY PROJECTS

[Signature]

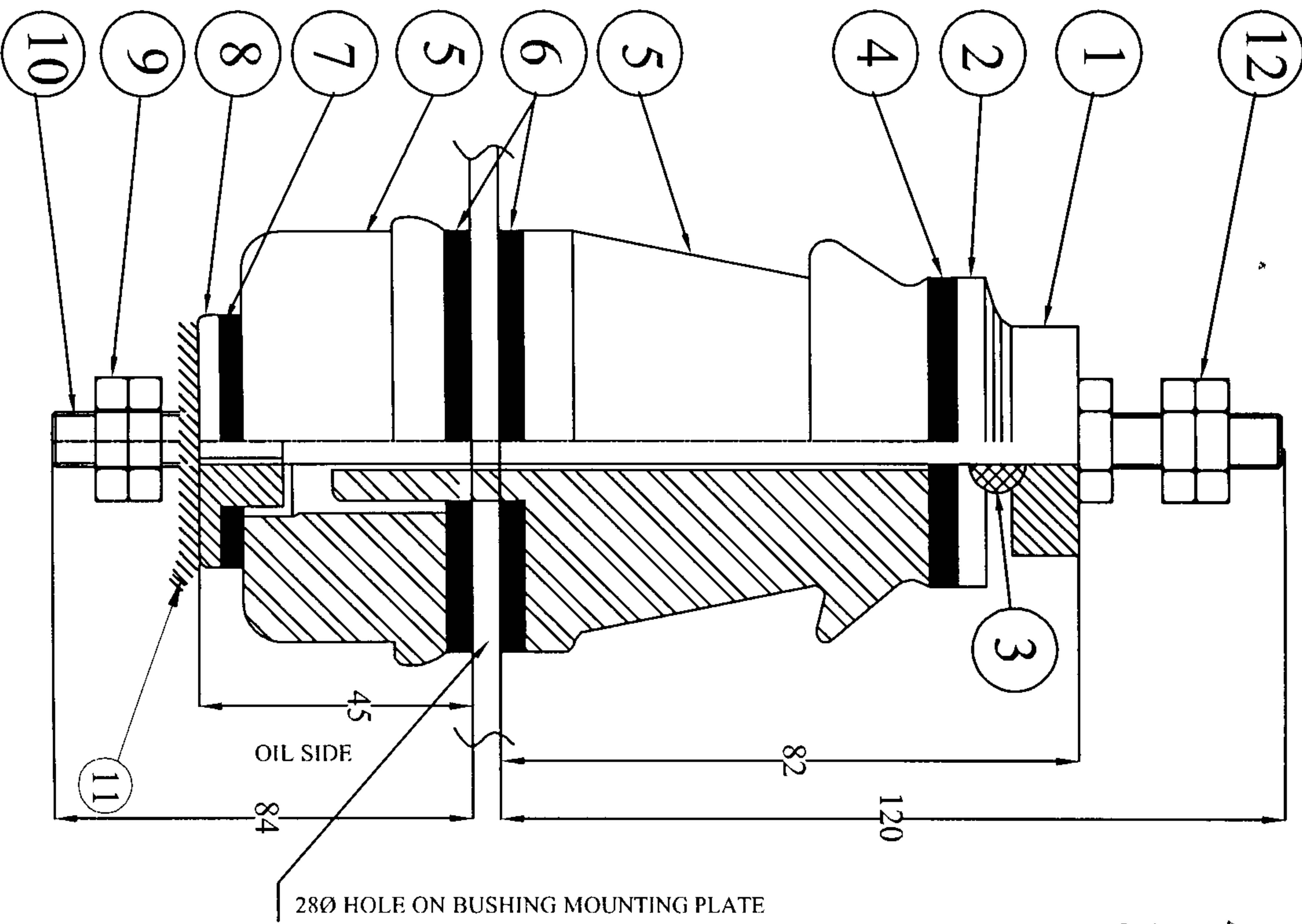
CHIEF ENGINEER / CONSTRUCTION
 APTRANSCO / VIDYUTHI SOUDH A/HYD

NOTE : ALL DIMENSIONS ARE IN mm.

W.O. NO.	SL.NO.	SCALE	PROJEC	DATE	TITLE
		NTS		01.05.13	BUSHING ASSEMBLY(36KV,250Amps,Bare) OF 100KVA 33 KV / 400 V STATION TRANSFORMER
REV.	CHANGE RECORD	SD/D	APPROVED	CHECKED	DRG.NO.
					HIT - APTRANSCO - 100KVA - B5
					REV 0



HYDERABAD INSTRUMENT TRANSFORMERS PVT. LTD.
 C-62, INDUSTRIAL ESTATE, SANTHINAGAR,
 HYDERABAD - 500018, A.P. INDIA.



NOTE : 1. RATING 1.1K.V. 250 AMPS. BARE BUSHING.

2. PORCELAIN BUSHING PARTS AS PER IS - 3347 (PART-I/ SEC 1)-1979
3. BUSHING METAL PARTS AS PER IS-3347 PART -I/ SEC 2 - 1979
4. MAKE OF PORCELAIN : ASSOCIATED PORCELAIN / ANY REPUTED CO.
5. ALL DIMENSIONS ARE IN mm
6. ONE MINUTE WET & DRY POWER FREQUENCY WITHSTAND VOLTAGE 10 KV mms
7. 1.2/50 Micro sec. IMPULSE VOLTAGE WITHSTAND : NA
8. TERMINAL STEM TO BE SWEATED TO COLLAR TO COLLAR (PART - 8)
9. MAKE BHUSHING : BENGAL PORCELAIN

QTY.	PT. NO.	DESCRIPTION AND DIMENSIONS	MATERIAL OR DRG. REF.
1	1	COLLAR 28Ø X 20 LG.	BRASS ROD
1	2	WASHER 32 Ø X 4 LG.	BRASS ROD
1	3	SEALING WASHER	SYNTHETIC RUBBER
1	4	WASHERS 5 X 12 I.D. X 32 O.D.	S.R.C.
1	5	BUSHING, 14 I.D.	PORCELAIN
2	6	WASHER 5 X 27 I.D. X 50 O.D.	S.R.C.
1	7	WASHER, 5 X 45 O.D.	S.R.C.
1	8	COLLAR 45Ø X 15 LG.	BRASS ROD
3	9	LOCK NUTS M12	BRASS
1	10	TERMINAL STEM M12X 210 LG.	COPPER OR BRASS
1	11	JUMPER	TCS
2	12	FULL NUTS M12	BRASS

APPROVED FOR TURNKEY PROJECTS

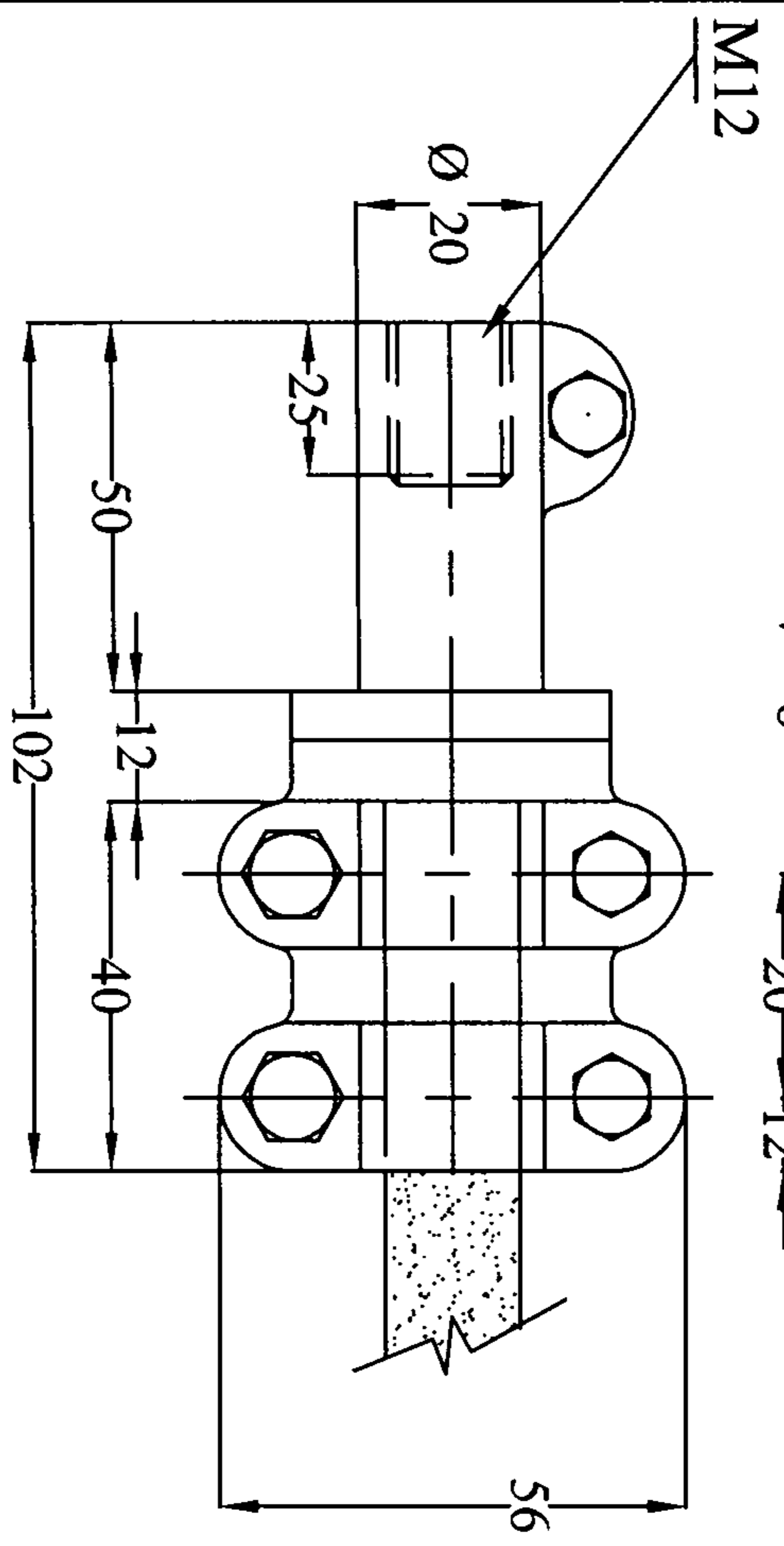
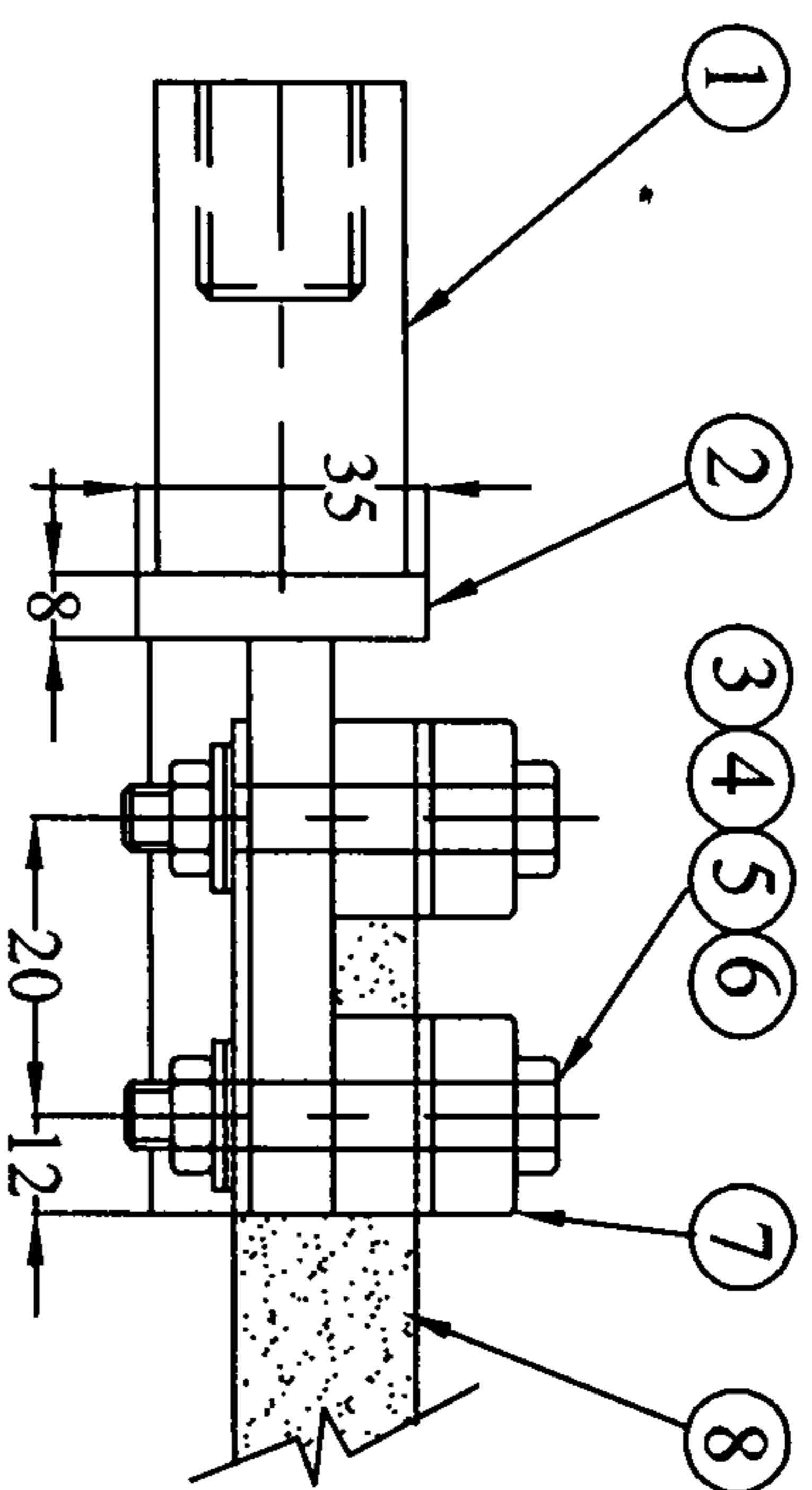
CHIEF ENGINEER / CONSTRUCTION
 APTRANSCO/VIDYUTH SOUDHARANYA

Standard Drawings for 100 KVA, 33KV/400V Station Transformer Bushing Assembly (1.1 KV, 630 Amps, Bare)
 STD/GTP-DWG/Approval No.233-2-6(8)/
 Revision No.0

Prepared and Approved during November -2013

CUSTOMER : M/S. AP TRANSCO.		HYDERABAD INSTRUMENT TRANSFORMERS PVT. LTD. G-62, INDUSTRIAL ESTATE, SANTHINAGAR, HYDERABAD - 500018, A.P. INDIA.	
W.O.	SL.NO.	SCALE	PROJEC
		NTS	NTS
REV.	CHANGE RECORD	SD/D	APPROVED
	DATE	TITLE	
	01.05.13	BUSHING ASSEMBLY(1.1 KV,250Amps. Bare) FOR 100 KVA STATION TRANSFORMER	
	DRAWN	CHECKED	DRG.NO.
			HIT - APTRANSCO - 100KVVA - B6
			REV. 0

ALL DIMENSIONS ARE IN mm.



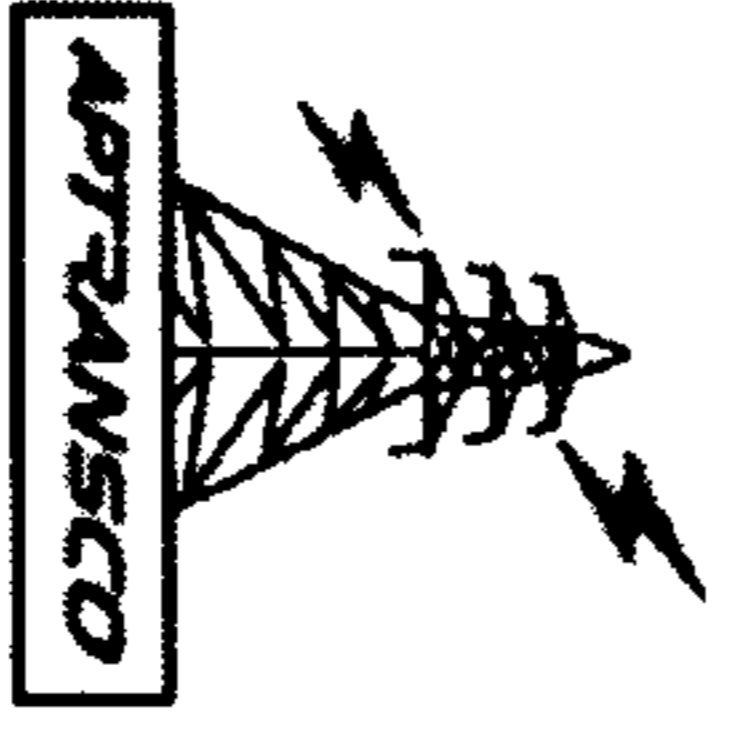
- 1. ALL SHARP EDGES WILL BE ROUNDED OFF
- 2. RATED CURRENT: 250 AMPS.
- 3. RATED VOLTAGE: 36 K.V.
- 4. ALL M.S. PARTS HOT DIPPED GALVANIZED

ALL DIMENSIONS ARE IN mm.

PT. NO.	DESCRIPTION	MATERIAL
1	STEM	BRASS
2	CONNECTOR BASE	AL.ALLOY
3	HEX. BOLT M8	M.S
4	HEX. NUT M8	M.S
5	PLAIN WASHER	M.S
6	SPRING WASHER	M.S
7	GRIPPER	AL.ALLOY
8	CONDUCTOR	MOOSE

APPROVED FOR TURNKEY PROJECTS

CHIEF ENGINEER / CONSTRUCTION
APTRANSCO/VIDYUTH SOOCH AAYOG





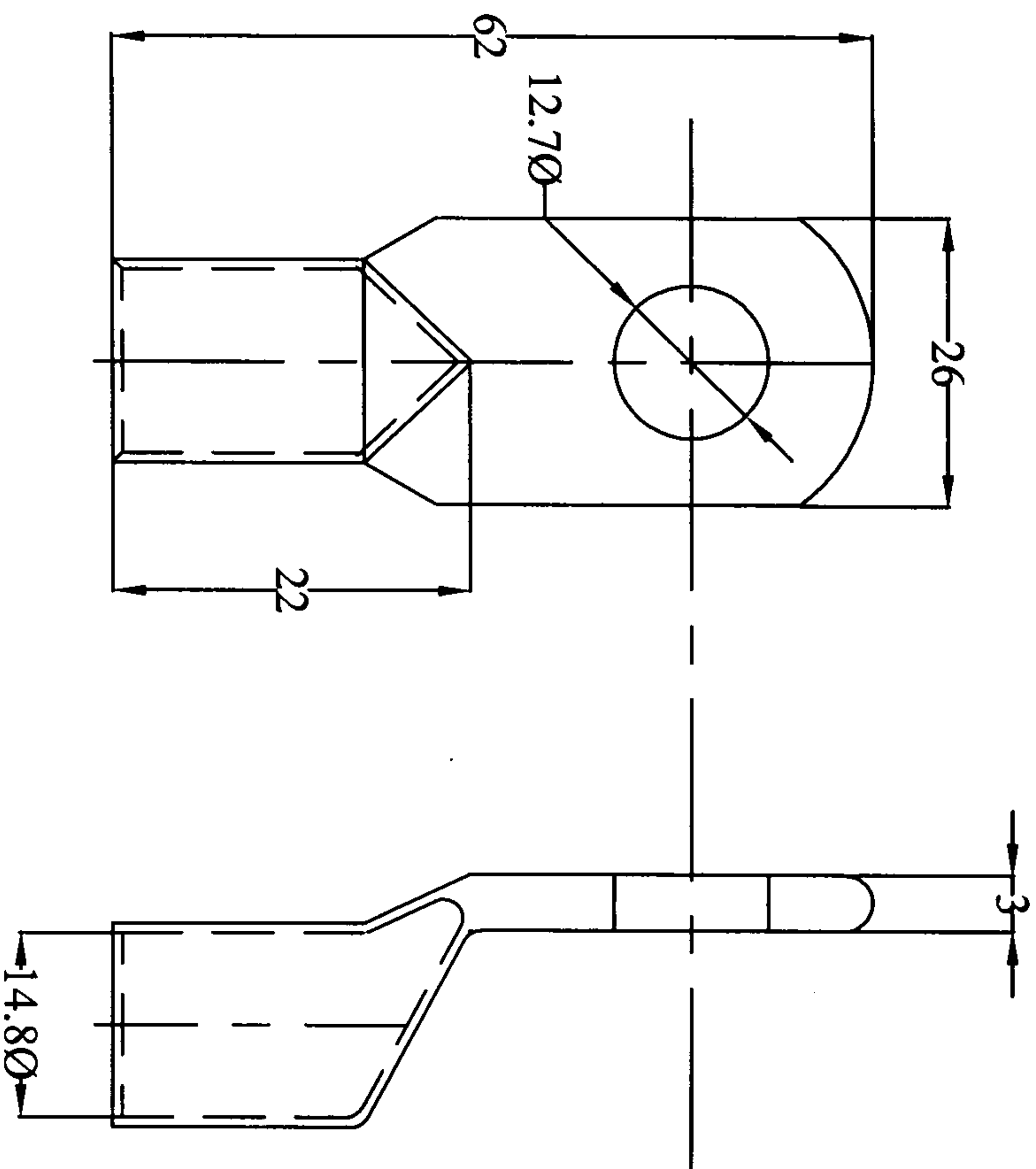
Standard Drawings for 100 KVA, 33KV/400V Station Transformer H.V Terminal Connector

STD/GTP-DWG/Approval No.233-2-7(8)/ Revision No.0

Prepared and Approved during November -2013

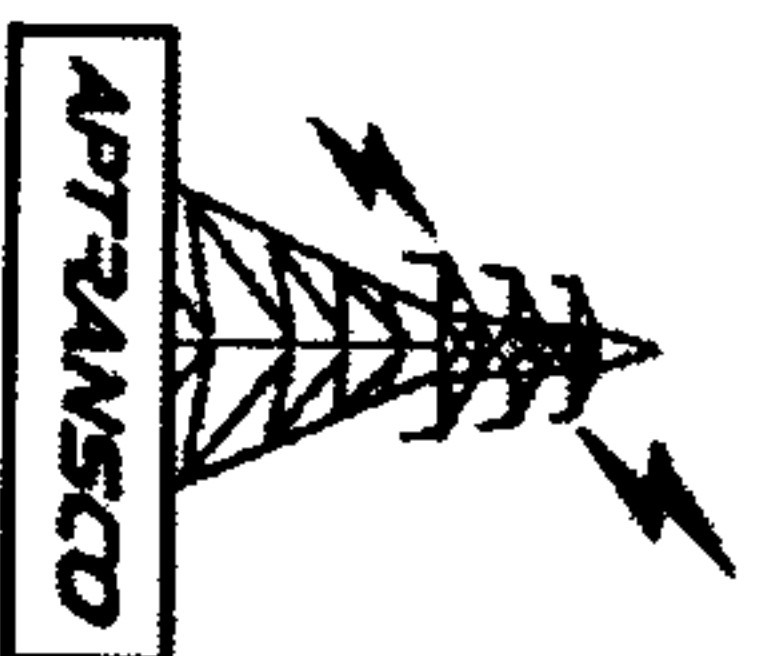
CUSTOMER : M/S. AP TRANSCO.

W.O.	SL.NO.	SCALE	PROJEC	 HYDERABAD INSTRUMENT TRANSFORMERS PVT. LTD. C-62, INDUSTRIAL ESTATE, SANTHINAGAR, HYDERABAD - 500018, A.P. INDIA.
		NTS		
REV.	CHANGE RECORD	SD/D	APPROVED	
	DATE	01.05.13	TITLE	
	DRAWN	Suresh	H.V. TERMINAL CONNECTOR FOR 100 KVA STATION TRANSFORMER	
	CHECKED		DRG.NO.	
			HIT - APTRANSCO - 100KVA - B7	REV. 0



NOTE : 1. THIS TERMINAL LUG SHALL BE OF COPPER TINNED

ALL DIMENSIONS ARE IN mm.



Standard Drawings for 100 KVA, 33KV/400V Station Transformer L.V Terminal Connector
STD/GTP-DWG/Approval No.233-2-8(8)/
Revision No.0
Prepared and Approved during November -2013

APPROVED FOR TURNKEY PROJECTS
[Signature]
CHIEF ENGINEER / CONSTRUCTION-1
APTRANSCO/WIDYUTH SOUDHAKHARY

CUSTOMER : M/S. AP TRANSCO.

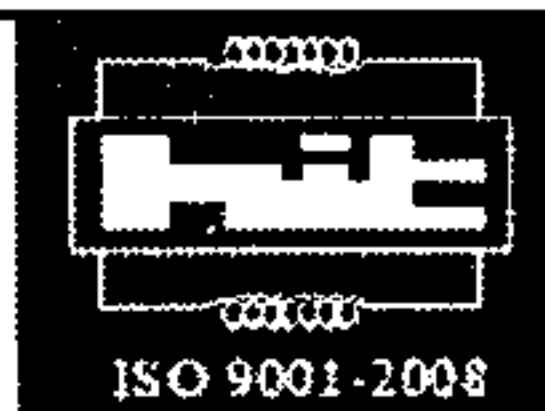
W.O.	SL.NO.	SCALE	PROJEC	HYDERABAD INSTRUMENT TRANSFORMERS PVT. LTD. C-62, INDUSTRIAL ESTATE, SANTHANAGAR, HYDERABAD - 500018, A.P. INDIA.
		NTS	⊕	
			DATE	01.05.13
			DRAWN	<i>[Signature]</i>
			CHECKED	
REV.	CHANGE RECORD	SD/D	APPROVED	
			DRG.NO.	HIT - APTRANSCO - 100KVA - B8
			REV.	0

GUARANTEED TECHNICAL & OTHER PARTICULARS

s.No	Particulars	Description
1	Make	M/S. Hyderabad Instrument Transformers private Limited. C- 62, Industrial Estate, Sanathnagar, Hyderabad - 500018.
2	Normal Full Load Output (kVA)	250 kVA
3	i) Type of transformer	Core type, 3 phase, oil Immersed.
	ii) Winding Type(HV & LV)	Double Wound
	iii) Material	Copper
4	Type of cooling	ONAN
5	Indoor OR outdoor	Outdoor
6	Rated high voltage (V)	33000
7	Rated Low voltage (V)	400
8	Connection and vector Group	Delta / Star, Dyn 11
9	Maximum Temperature rise of	
	i) Winding by resistance Deg. C	55
	ii) Oil by temperature Deg.C	50
	iii) Maximum Ambient air Temperature Deg.C	50
10	Core loss at normal Voltage and Frequency (kW)	0.675 (Subject to IS Tolerance)
11	Copper loss at normal Voltage and current (kW)	3.600 (Subject to IS Tolerance)
12	Impedance	5% (Subject to IS Tolerance)
13	Tap Changer	
	i) Make	Paragon / Temp System / Aswini
	ii) Type	OFF - CIRCUIT
	iii) Indicator Arrangement	Provided
	iv) Packing Arrangement	Pad Lock arrangement provided
	v) Other Details	+5% to -5% insteps of 2.5%
14	Tapping on HV side for LV variation	Tapping on HV side
15	Impulse strength of HV winding	170 kVP
16	Impulse strength of LV winding	Not Appilcable
17	Overall dimensions of transformer in mm L x B x H	1450 x 1325 x 1900

APPROVED FOR TURNKEY PROJECTS

[Signature]
8/11/13
CHIEF ENGINEER / CONSTRUCTION-1
APTRANSCO/VIDYUTH SOUDHA/HYD.



HYDERABAD INSTRUMENT TRANSFORMERS PVT LTD.
C-62, INDUSTRIAL ESTATE, SANATHNAGAR,
HYDERABAD - 500018, A.P. INDIA



**Standard Guaranteed Technical Particulars for
250 KVA, 33KV/400V Station Transformer**

STD/GTP-DWG/Approval No.229-1-1(3)/ Revision No.0

Prepared and Approved during November -2013

18	Approximate weight of	
	i) Core cum windings (Kg) untanking Mass	645
	ii) Oil (Kg)	420
	iii) Complete transformer with all fittings and including oil (Kg)	1415
19	Type of Tank	conventional Type.
20	Make and type of breather fitted to the transformer	Suvida / Any reputable make of convectional oil seal clear view.
21	Particulars of bushings	
	i) country of origin	India
	ii) Rating	HV: 36kV 250 Amps/ LV : 1.1 kV 630 Amps
	iii) Types	
	HV bushings	Porcelain
	LV bushings	Porcelain
	iv) Impuse and flashover voltages	HV : 170kVP/LV: N.A, HV: 70kVrms/ LV PF : 3kVrms
22	Efficiency at u.p.f and 0.8 p.f	98.32 / 97.91
23	Regulation at full load u.p.f and 0.8 p.f	1.55 / 4.06
24	Terminal arrangements of bushings (HV & LV)	outdoor, Bare bushings/ outdoor, Bare bushings
25	Mounting arrangements for the transformer	Plinth

APPROVED FOR TURNKEY PROJECTS

[Signature]
CHIEF ENGINEER / CONSTRUCTION - I
APTRANSCO/VIDYUTH SOUDHA/HYD



HYDERABAD INSTRUMENT TRANSFORMERS PVT LTD.
C-62, INDUSTRIAL ESTATE, SANATHNAGAR,
HYDERABAD - 500018, A.P. INDIA



**Standard Guaranteed Technical Particulars for
250 KVA, 33KV/400V Station Transformer**

STD/GTP-DWG/Approval No.229-1-2(3)/ Revision No.0

Prepared and Approved during November -2013

LIST OF FITTINGS AND ACCESSORIES PROVIDED

S.No	Description	Quantity
1	Rating and terminal marking plate	1 No
2	Earthing Terminals	2 Nos
3	Lifting Lugs	2 Nos
4	Main oil level gauge	1 No
5	Drain valve with blanking plate (20mm Dia)	1 No
6	Thermometer Pocket	1 No
7	Air release plug	1 No
8	Conservator with drain plug & oil filling hole with cap	1 No
9	Pressure Relief Vent	1 No
10	Silica Gel Breather	1 No
11	Filter valve with blanking plate (32mm)	1 No
12	Mounting channel and plain rollers	4 Nos
13	OFF Circuit Tap Switch with locking provision	1 No
14	HV outdoor Bushings	3 Nos
15	LV outdoor Bushings	4 Nos
16	Oil level indicator	1 No

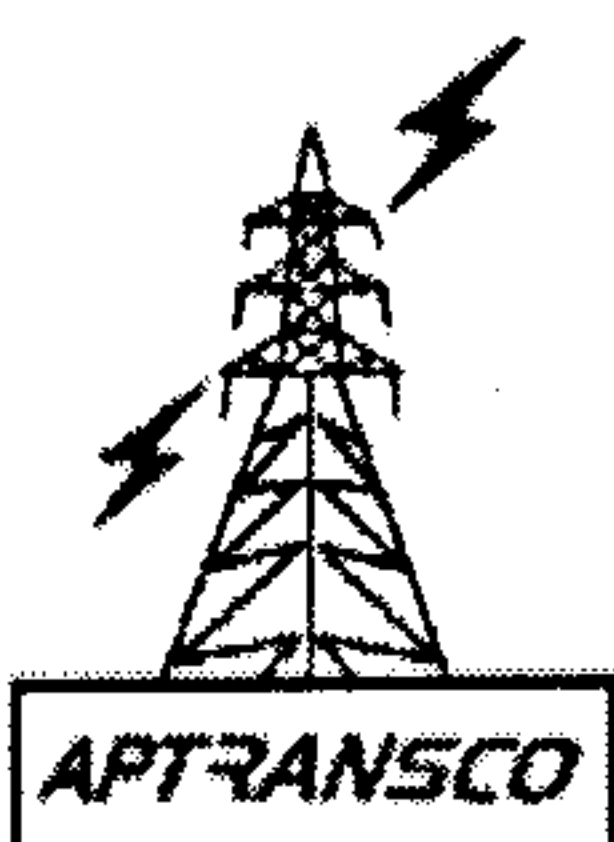
APPROVED FOR TURNKEY PROJECTS

[Handwritten Signature]

**CHIEF ENGINEER / CONSTRUCTION -1
APTRANSCO/VIDYUTH SOUDHA/HYD**



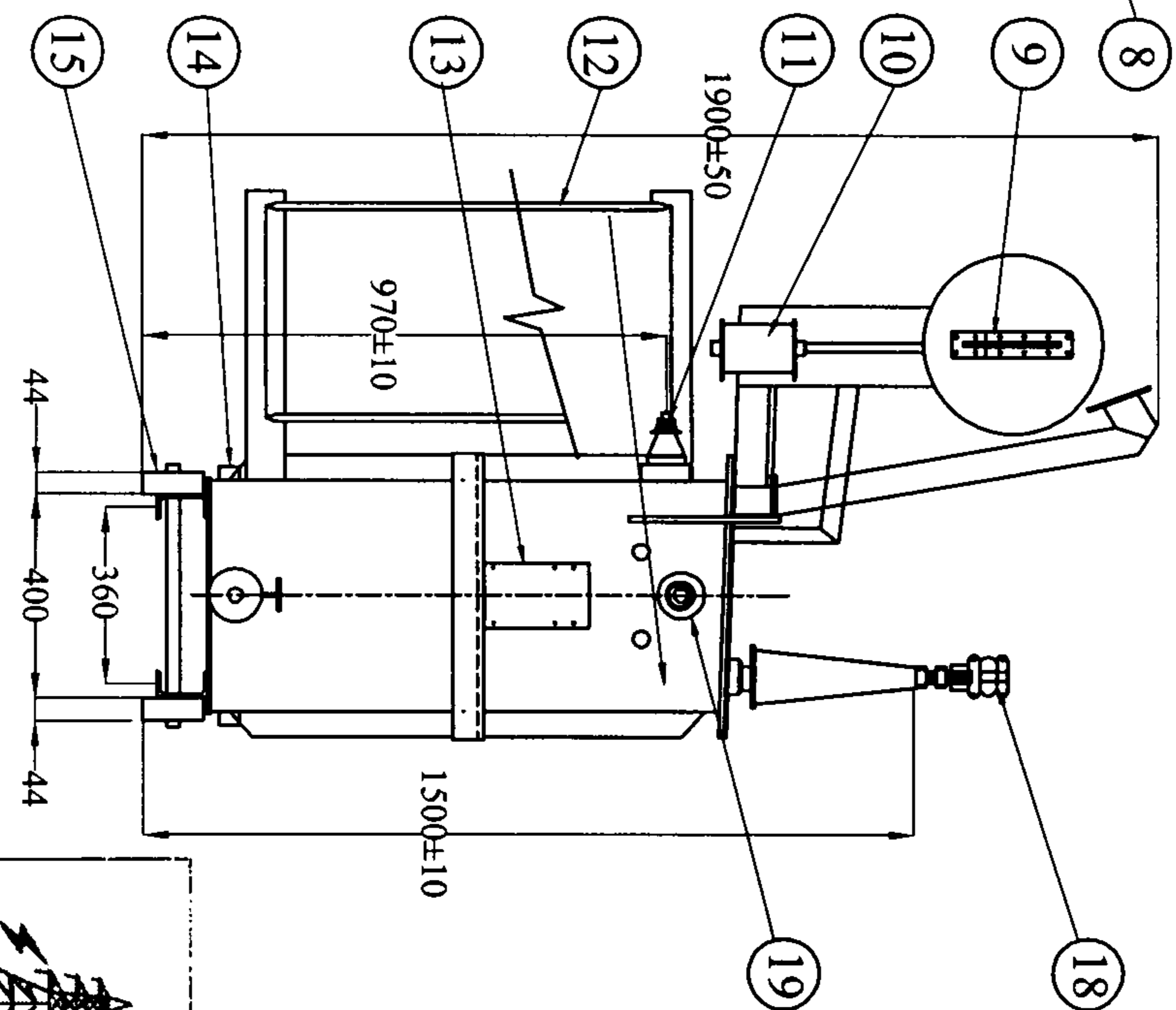
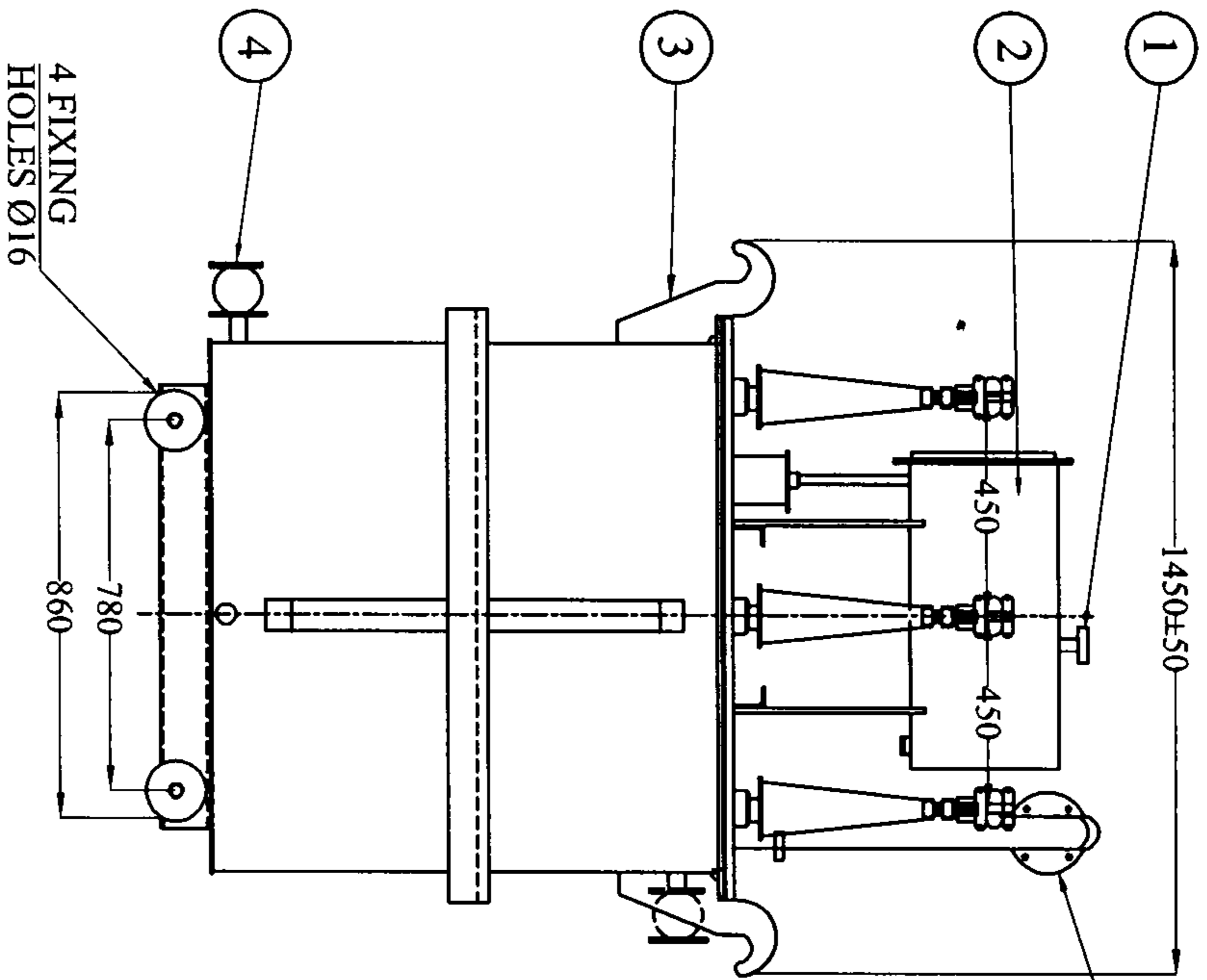
HYDERABAD INSTRUMENT TRANSFORMERS PVT LTD.
C-62, INDUSTRIAL ESTATE, SANATHNAGAR,
HYDERABAD - 500018, A.P. INDIA



**Standard Guaranteed Technical Particulars for
250 KVA, 33KV/400V Station Transformer**

STD/GTP-DWG/Approval No.229-1-3(3)/ Revision No.0

Prepared and Approved during November -2013

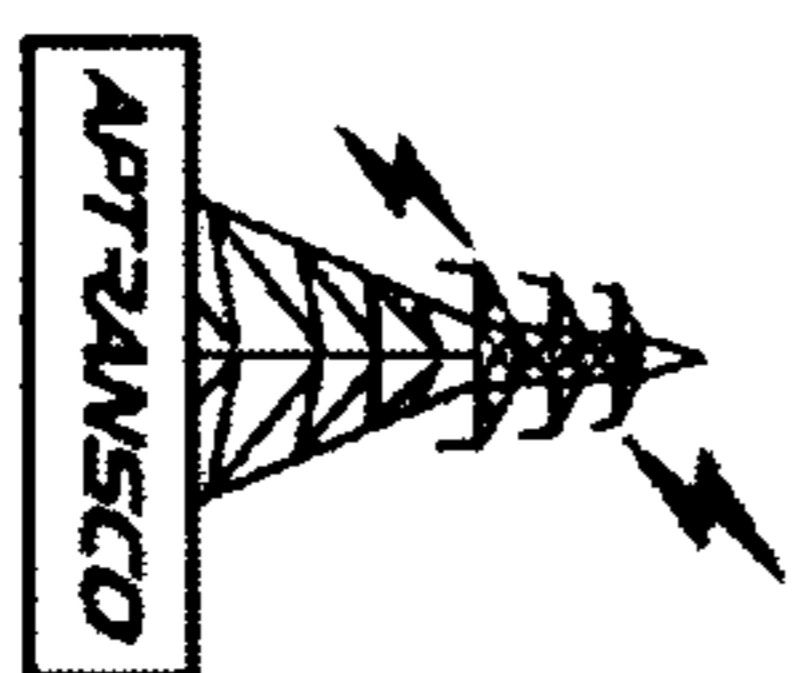


APPROXIMATE WEIGHTS & DIMENSIONS

- 1. LENGTH = 1450, WIDTH = 1325, HEIGHT = 1900
 - 2. UNTANKING MASS : 645 Kg.
 - 3. TANK AND FITTINGS : 350 Kg.
 - 4. OIL WEIGHT : 420 Kg.
 - 5. TOTAL WEIGHT : 1415 Kg.
 - 6. OIL QUANTITY : 495 Ltrs.
- PAINT :- ENAMEL DARK GREY, SHADE NO.632, OF IS:5

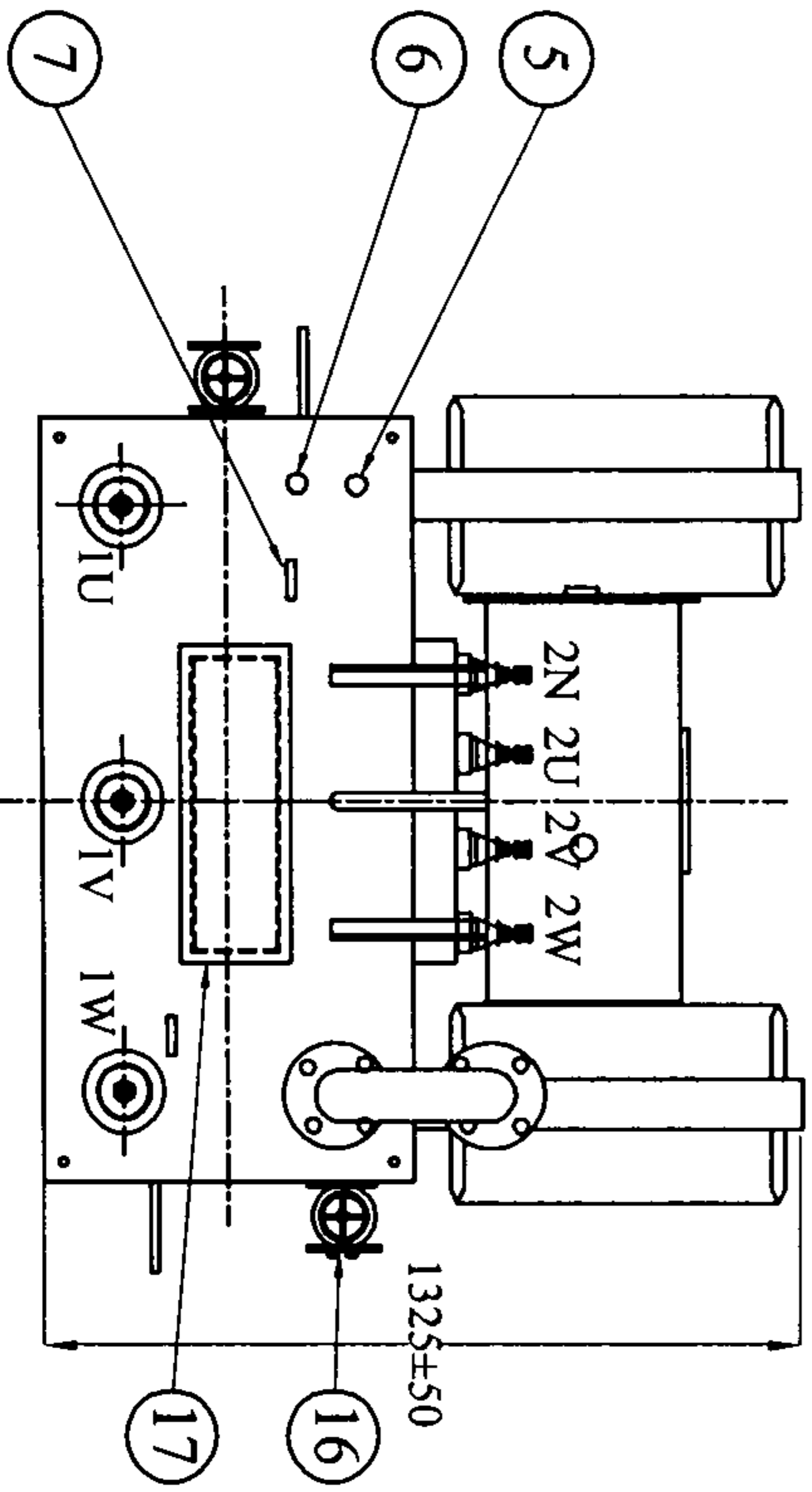
APPROVED FOR TURNKEY PROJECTS

CHIEF ENGINEER / CONSTRUCTION -1
 APTRANSCO/VIDYUTH SODHA/HYDR



**Standard Drawings for 250 KVA,
 33KV/400V Station Transformer
 General Arrangement.
 STD/GTP-DWG/Approval No.229-2-1(8)/
 Revision No.0
 Prepared and Approved during
 November -2013**

CUSTOMER : M/S. AP TRANSCO.



Ph - Ph	350	320	250	3	50 Hz	VECTOR GROUP	COOLING	VOLTAGE (V)	CURRENT (A)
Ph- Earth	40	40	250	3	50 Hz	Dyn 11	ONAN	H. V. 33000	L. V. 400
								H. V. 400	L. V. 4.37
									L. V. 361

NOTE: ALL DIMENSIONS ARE IN mm.

REV.	CHANGE RECORD	SD/D	APPROVED	DATE	01.05.13	TITLE	G.A DRAWING FOR 250 KVA, 33KV/400V STATION TRANSFORMER
				DRAWN	<i>Suresh</i>		
				CHECKED			
				DRG.NO.			
							HIT - APTRANSCO - 250KVA - A1
							REV 0

HYDERABAD INSTRUMENT TRANSFORMERS PVT. LTD.
 C-62, INDUSTRIAL ESTATE, SANTHANAGAR,
 HYDERABAD - 500018, A.P. INDIA.

QTY.	PT. NO.	DESCRIPTION
1	1	OIL FILLING HOLE WITH CAP
1	2	CONSERVATOR WITH DRAIN PLUG
2	3	LIFTING LUGS
1	4	DRAIN CUM FILTER VALVE WITH BLANKING PLATE (20mm Ø)
1	5	AIR RELEASE DEVICE
1	6	THERMOMETER POCKET
2	7	COVER LIFTS
1	8	PRESSURE RELIEF VENT
1	9	OIL LEVEL INDICATOR
1	10	DEHYDRATING SILICAGEL BREATHER
4	11	L.V. BARE BUSHINGS WITH CONNECTORS
2	12	RADIATORS
1	13	RATING AND TERMINAL MARKING PLATE
2	14	EARTHING TERMINALS
4	15	UNI - DIRECTIONAL FLAT ROLLERS
1	16	FILTER VALVE WITH BLANKING PLATE (32mm Ø)
1	17	INSPECTION COVER
3	18	H.V. BARE BUSHINGS WITH CONNECTORS
1	19	OFF CIRCUIT TAP CHANGING SWITCH WITH LOCKING ARRANGEMENT

NOTE : 1. BASE DIMENSIONS OF TRANSFORMERS

LENGTH = 900, WIDTH = 490

2. MINIMUM DIMENSIONS OF THE PLINTH

LENGTH = 1500, WIDTH = 1090


ALL DIMENSIONS ARE IN MM

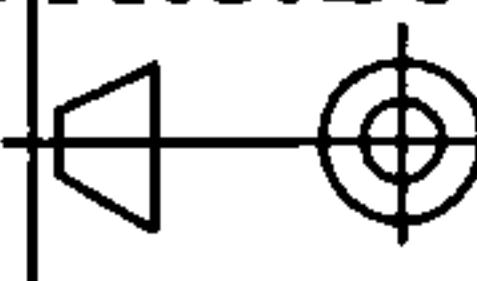
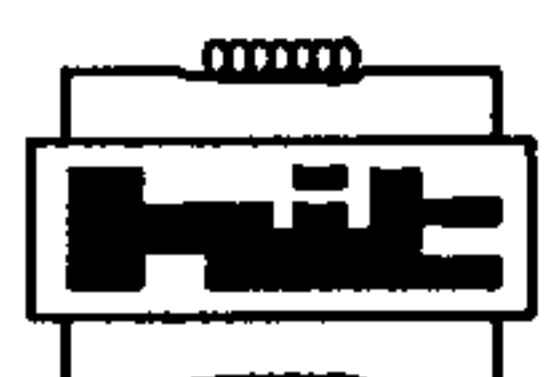
APPROVED FOR TURNKEY PROJECTS

am
8/11/13

CHIEF ENGINEER / CONSTRUCTION-1
APTRANSCO/VIDYUTH SQUADRA/HYD

CUSTOMER : M/S. AP TRAN

	Standard Drawings for 250 KVA, 33KV/400V Station Transformer Accessories.
	STD/GTP-DWG/Approval No.229-2-2(8)/ Revision No.0
	Prepared and Approved during November -2013

W.O.	SL.NO.	SCALE NTS	PROJEC 	 ISO 9001-2008	HYDERABAD INSTRUMENT TRANSFORMERS PVT. LTD. C-62, INDUSTRIAL ESTATE, SANTHNAGAR, HYDERABAD - 500018, A.P. INDIA.		
					DATE	01.05.13	TITLE
				DRAWN	<i>Sureh</i>	DRG.NO.	
				CHECKED		REV.	0
REV.	CHANGE RECORD	SD/D	APPROVED			HIT - APTRANSCO - 250KVA - A2	

**DISCONNECT SUPPLY BEFORE OPERATING
OFF - CIRCUIT TAP SWITCH**

MADE IN INDIA

3 PHASE TRANSFORMER SL. No. _____

STANDARD IS:2026 FREQUENCY Hz. 50

KVA 250 TYPE OF COOLING ONAN

VOLTS AT H.V 33000 VECTOR GROUP Dyn11

NO LOAD L.V 400 MASS OF OIL Kg. 420

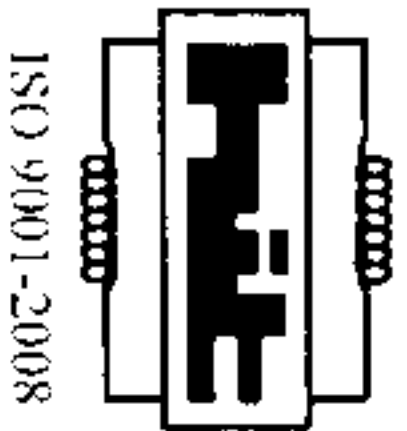
AMPERES H.V 4.37 TOTAL MASS Kg. 1415

L.V 361 VALUME OF OIL L 495

IMPED. VOLT % MONTH & YEAR OF MFD.

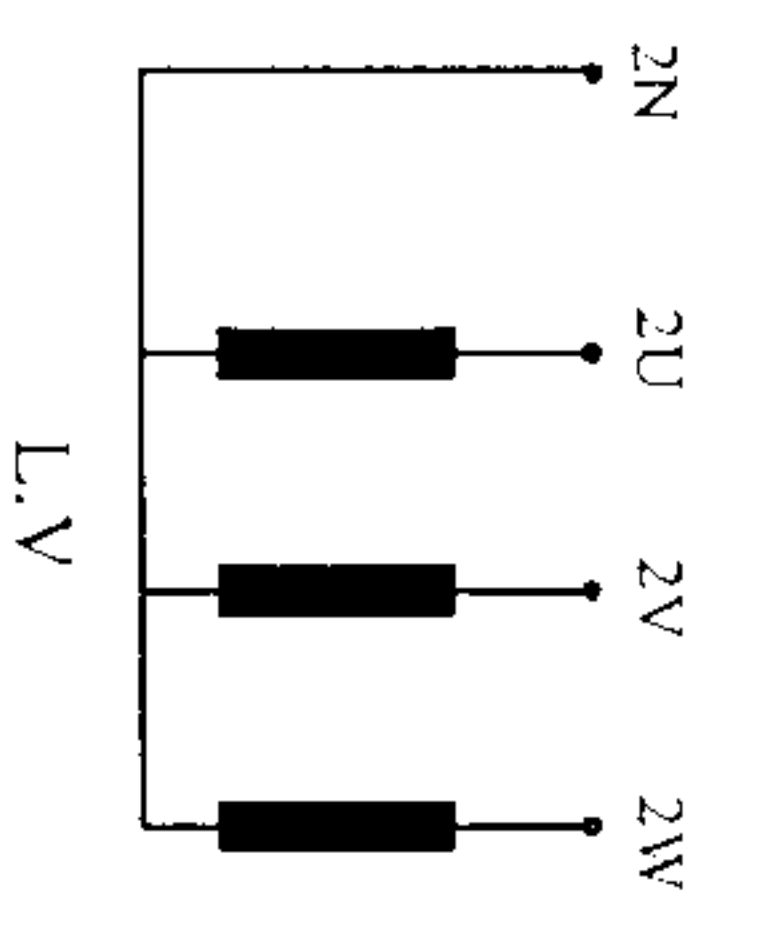
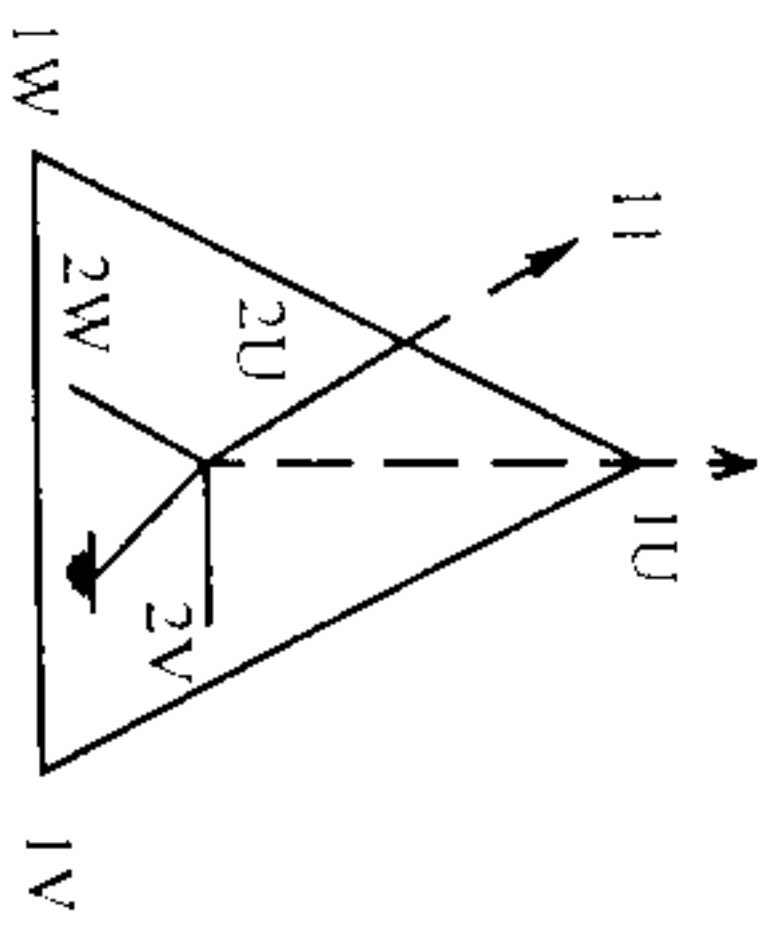
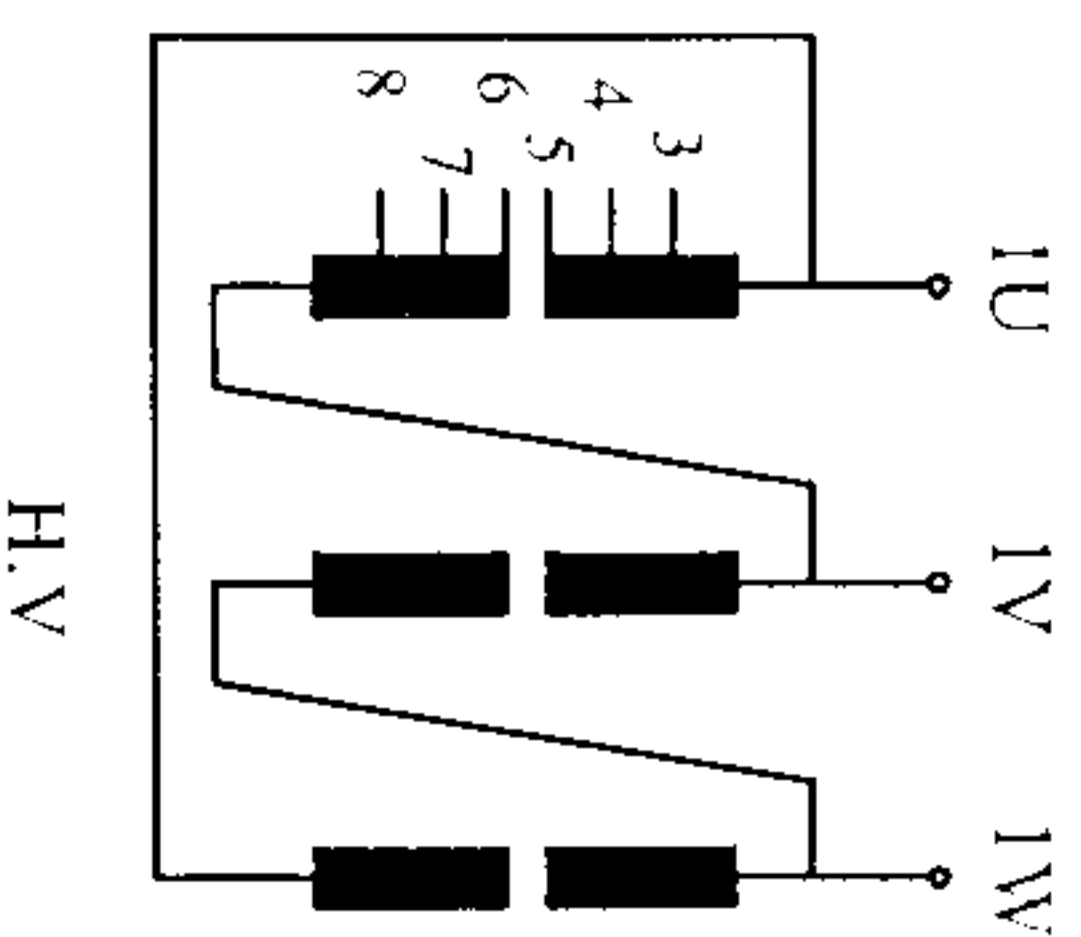
CUSTOMER _____

ORDER NUMBER _____



HYDERABAD INSTRUMENT TRANSFORMERS PVT. LTD.
C-62, INDUSTRIAL ESTATE, SANTHINAGAR,
HYDERABAD - 500018, A.P. INDIA

SWITCH POSITION	CONNECTION	NO LOAD VOLTS	
		H. V	L. V
1	5 - 6	34650	400
2	6 - 4	33825	400
3	4 - 7	33000	400
4	7 - 3	32175	400
5	3 - 8	31350	400

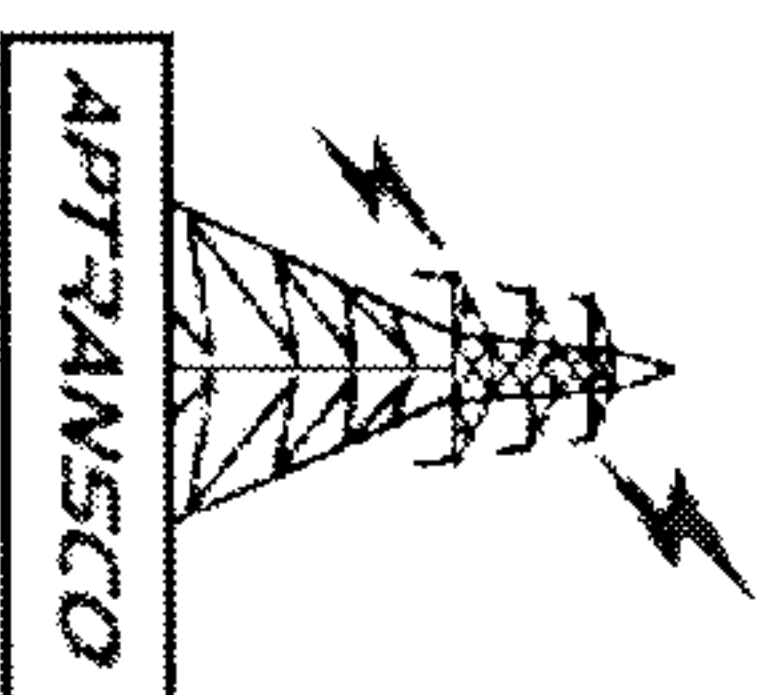


100

IMPEDANCE VALUE WILL BE PUNCHED
AFTER TESTING
MATERIAL : 18 G ALUMINIUM SHEET.

APPROVED FOR TURNKEY / PROJECTS

CHIEF ENGINEER / CONSTRUCTION
APTTRANSOCO DIVISION SOUDHAPALLY

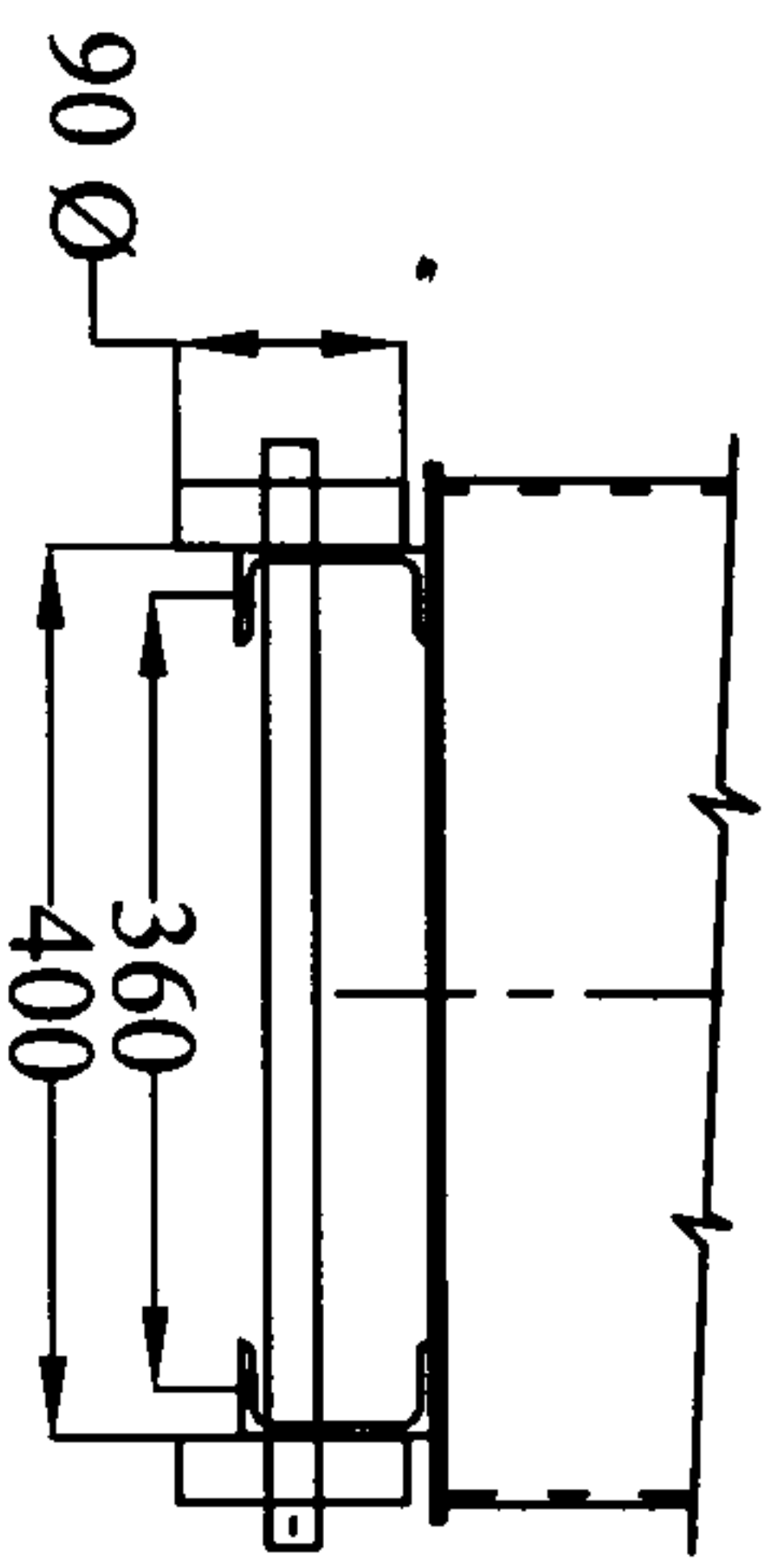


**Standard Drawings for 250 KVA, 33KV/400V
Station Transformer Rating and Diagram plate
STD/GTP-DWG/Approval No.229-2-3(8)/
Revision No.0
Prepared and Approved during November -2013**

CUSTOMER : M/S. AP TRANSOCO.

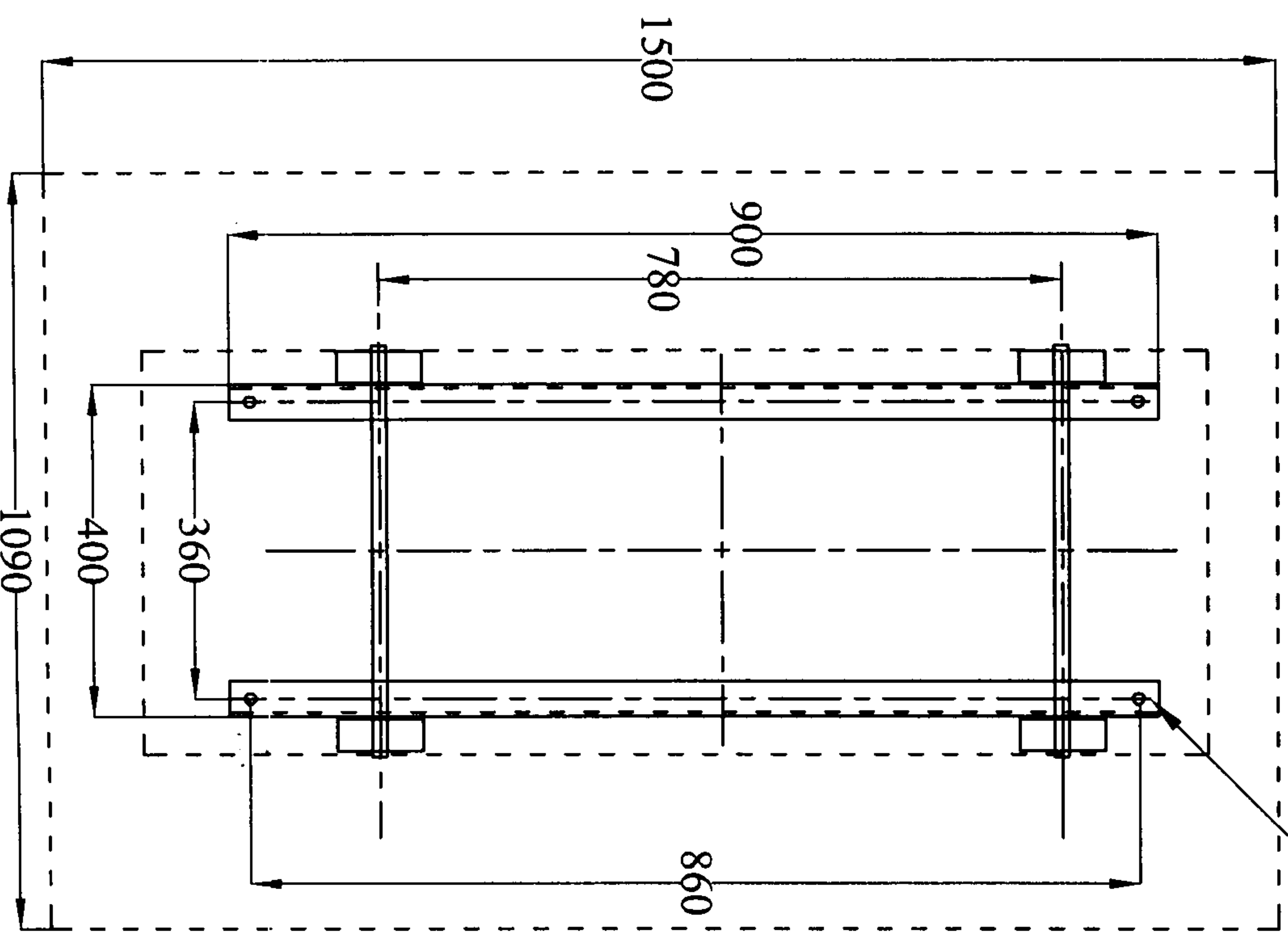
W.O.	SL.NO.	SCALE	PROJEC		HYDERABAD INSTRUMENT TRANSFORMERS PVT. LTD. C-62, INDUSTRIAL ESTATE, SANTHINAGAR, HYDERABAD - 500018, A.P. INDIA.	
		NTS			DATE	01.05.13
				DRAWN	Yarech	RATING & DIAGRAM PLATE OF 250 KVA 33 KV / 400 V STATION TRANSFORMER
				CHECKED		DRG.NO.
REV	CHANGE RECORD	SD/D	APPROVED			HIT - APTTRANSOCO - 250KVA - A3
						REV
						0

NOTE: ALL DIMENSIONS ARE IN mm.



4-FIXING HOLES Ø16

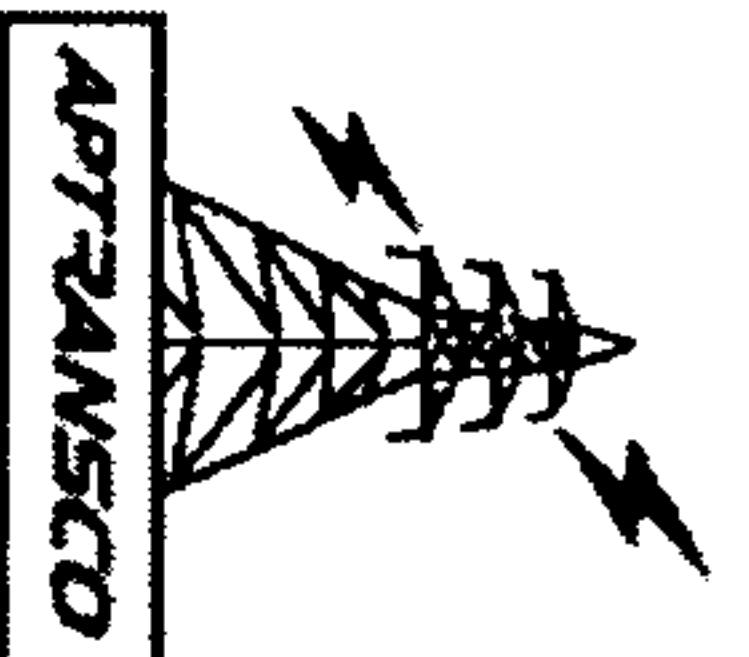
NOTE:
APPROXIMATE PLINTH
DIMENSIONS 1500 X 1090



NOTE : ALL DIMENSIONS ARE IN mm

APPROVED FOR TURNKEY PROJECTS



CHIEF ENGINEER
APTRANSCO/VIDYUTH SOUDHA/RYYB

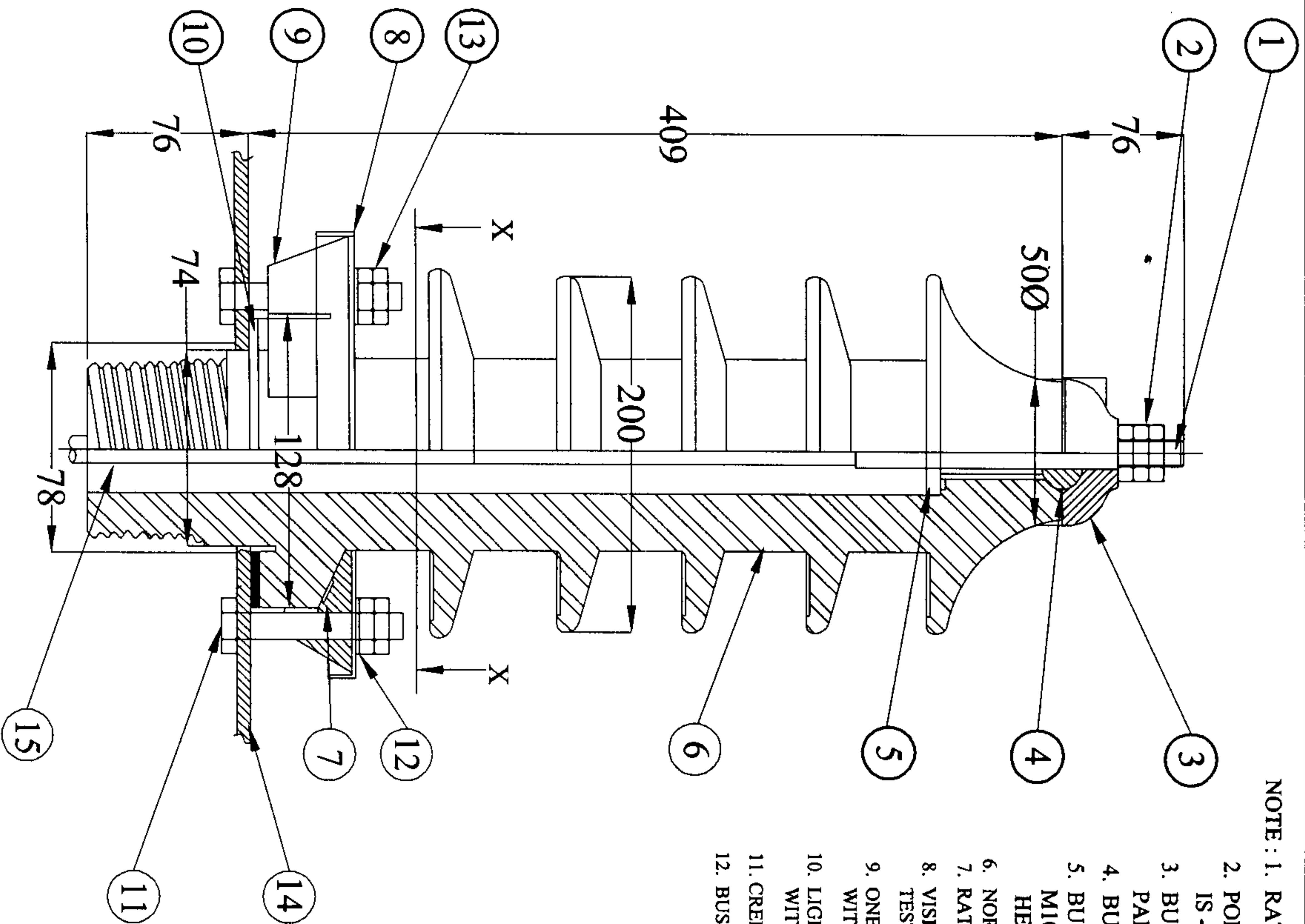


**Standard Drawings for 250 KVA, 33KV/400V
Station Transformer Foundation details**

**STD/GTP-DWG/Approval No.229-2-4(8)/
Revision No.0**

Prepared and Approved during November -2013

CUSTOMER : M/S. AP TRANSCO.			
W.O.	SL.NO.	SCALE	PROJEC
		NTS	
			
		DATE	TITLE
		DRAWN	FOUNDATION DETAILS OF 250 KVA 33 KV / 400 V STATION TRANSFORMER
		CHECKED	DRG.NO.
		SD/D APPROVED	HIT - APTRANSCO - 250KVA - A4
REV	CHANGE RECORD		REV
			0

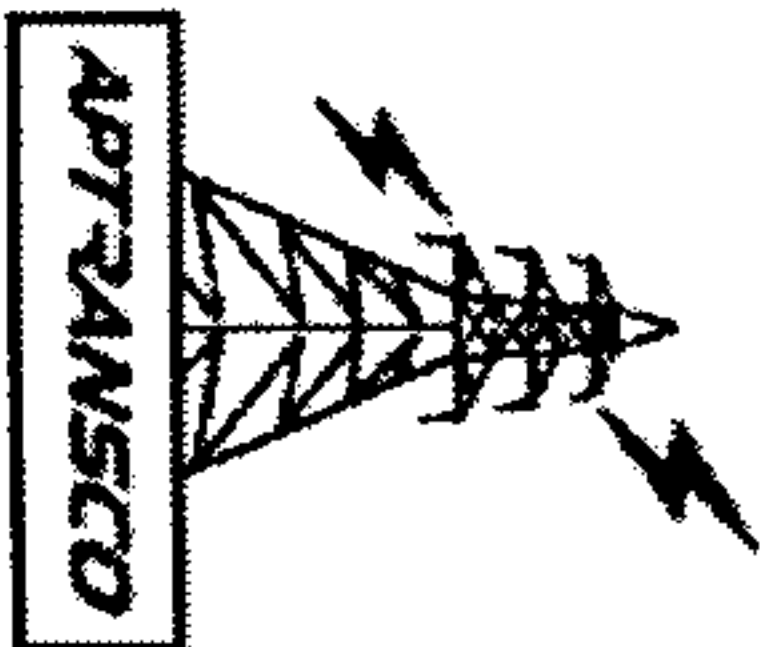


- NOTE : 1. RATING 36K. V. 250 AMPS. BARE BUSHING.
 2. PORCELAIN BUSHING PARTS REFER IS - 8603 (PART-III)-1977
 3. BUSHING METAL PARTS AS PER IS-3347 PART - V / SEC 2 - 1979
 4. BUSHING MOUNTING HOLE DIA - 78 Ø mm.
 5. BUSHING MOUNTING STUDS 4 NOS OF M10 X 70 mm LONG FULL THREADED HEXAGONAL SCREWS
 6. NORMAL SYSTEM VOLTAGE : 33KV.
 7. RATED VOLTAGE : 36KV.
 8. VISIBLE DISCHARGE TEST VOLTAGE : 27KV.
 9. ONE MINUT WET-DRY WITHSTAND VOLTAGE : 70KV.
 10. LIGHTNING IMPULS WITHSTAND TEST VOLTAGE : 170KV.
 11. CREEPAGE DISTANCE (Min) : 900mm.
 12. BUSHING ROD : 120 mm

WT. KG.	QTY.	PT. NO.	DESCRIPTION AND DIMENSIONS	MATERIAL OR DRG. REF.	REMARKS
	1	1	TERMINAL STEM	BRASS	
	3	2	HEXAGONAL NUTS	BRASS	
	1	3	CAP	BRASS	
	1	4	SEALING WASHER	NITRIL RUBBER	
	1	5	SEPARATOR	S.R.C.	
	1	6	BUSHING	PROCELAIN	
	1	7	WASHER	S.R.C.	
	1	8	BUSHING CLAMP	M.S.	GALVANISED
	4	9	CLAMPING MEMBER	ALUMINIUM	
	2	10	WASHER	S.R.C.	
	4	11	STUDS M10X70 LG.	M.S.	
	4	12	SPRING WASHER	M.S.	GALVANISED
	8	13	LOCK NUTS M10	M.S.	
	1	14	MOUNTING PLATE	M.S.	
	1	15	JUMPER	COPPER	

APPROVED FOR TURNKEY / PROJECTS

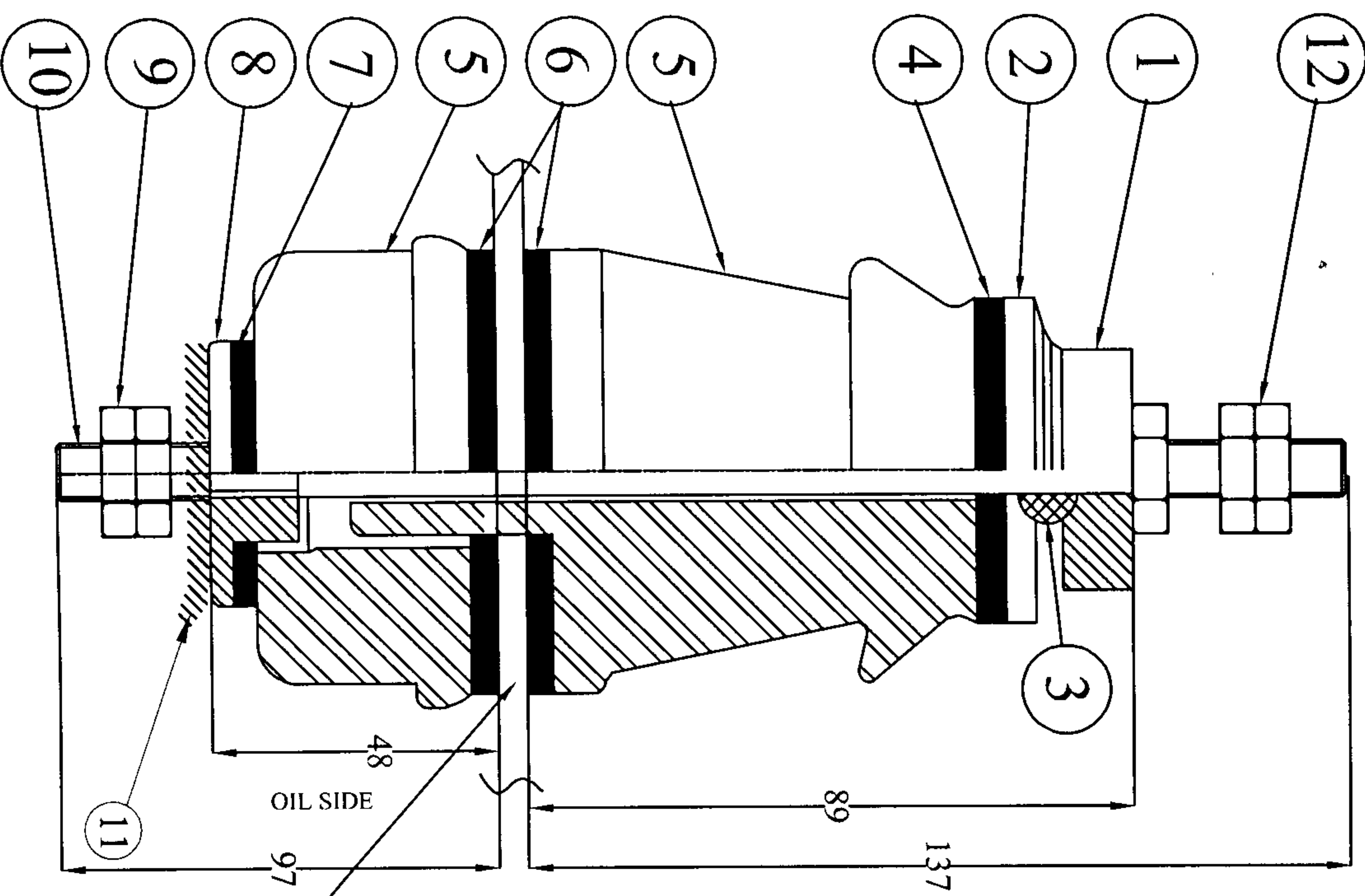
CHIEF ENGINEER / CONSTRUCTION - I
 APTRANSCO / VIDYUTH SOUDHA / HY3.



Standard Drawings for 250 KVA, 33KV/400V Station Transformer Bushing Assembly (36 KV, 250 Amps, Bare)
 STD/GTP-DWG/Approval No.229-2-5(8)/ Revision No.0
 Prepared and Approved during November -2013

N.I.S.		HYDERABAD INSTRUMENT TRANSFORMERS PVT. LTD.	
ISO 9001-2008		C-62, INDUSTRIAL ESTATE, SANTHANAGAR, HYDERABAD - 500018, A.P. INDIA.	
DATE	01.05.13	TITLE	BUSHING ASSEMBLY (36KV, 250Amps, Bare) OF 250KVA / 33 KV / 400 V STATION TRANSFORMER
DRAWN	Jayash	DRG.NO.	HIT - APTRANSCO - 250KVA - A5
CHECKED		REV.	0
SD/D APPROVED		CHANGE RECORD	

NOTE : ALL DIMENSIONS ARE IN mm



46Ø HOLE ON BUSHING MOUNTING PLATE

- NOTE : 1. RATING 1.1K.V. 630 AMPS. BARE BUSHING.
2. PORCELAIN BUSHING PARTS AS PER IS - 3347 (PART-I/ SECTION I)-1979
 3. BUSHING METAL PARTS AS PER IS-3347 PART -I / SEC 2 - 1979
 4. BUSHING MOUNTING HOLE DIA - 46 Ø mm.
 5. MAKE OF PORCELAIN : ASSOCIATED PORCELAIN / ANY REPUTED CO.
 6. ALL DIMENSIONS ARE IN mm
 7. ONE MINUTE WET & DRY POWER FREQUENCY WITHSTAND VOLTAGE 10 KV rms

QTY	PT. NO.	DESCRIPTION AND DIMENSIONS	MATERIAL OR DRG. REF.
1	1	COLLAR	BRASS
1	2	WASHER	BRASS
1	3	SEALING WASHER	SYNTHETIC RUBBER
1	4	WASHERS 5 X 20 I.D. X 47 O.D.	S.R.C.
1	5	BUSHING, 22 I.D.	PORCELAIN
2	6	WASHER 5 X 43 I.D. X 70 O.D.	S.R.C.
1	7	WASHER, 5 X 63 O.D.	S.R.C.
1	8	COLLAR	CAST BRASS
3	9	LOCK NUTS M20	BRASS
1	10	TERMINAL STEM M20 X 240 L.G.	COPPER OR BRASS
1	11	JUMPER	TCS
2	12	FULL NUTS M20	BRASS

APPROVED FOR TURNKEY PROJECTS

[Signature]

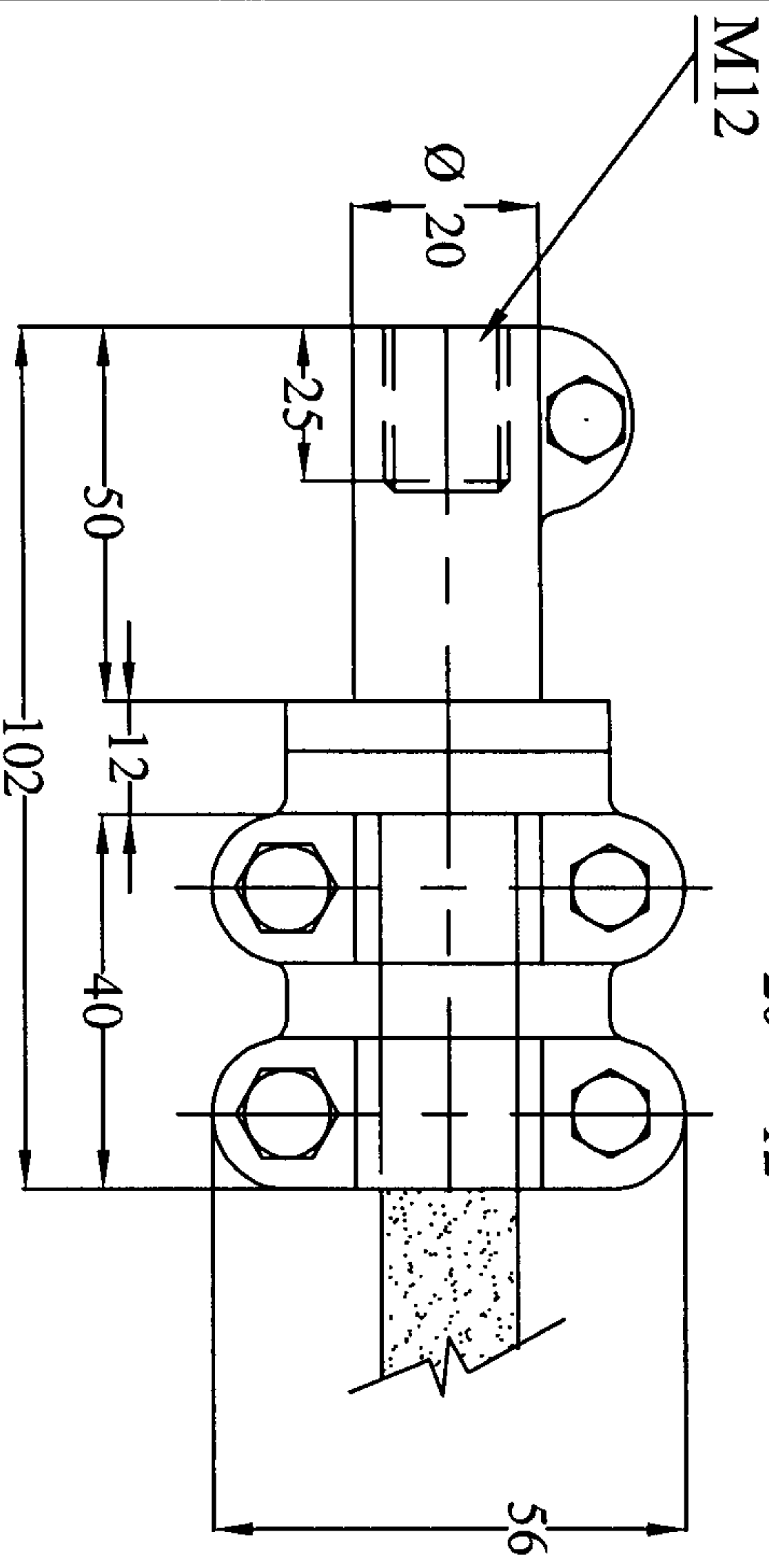
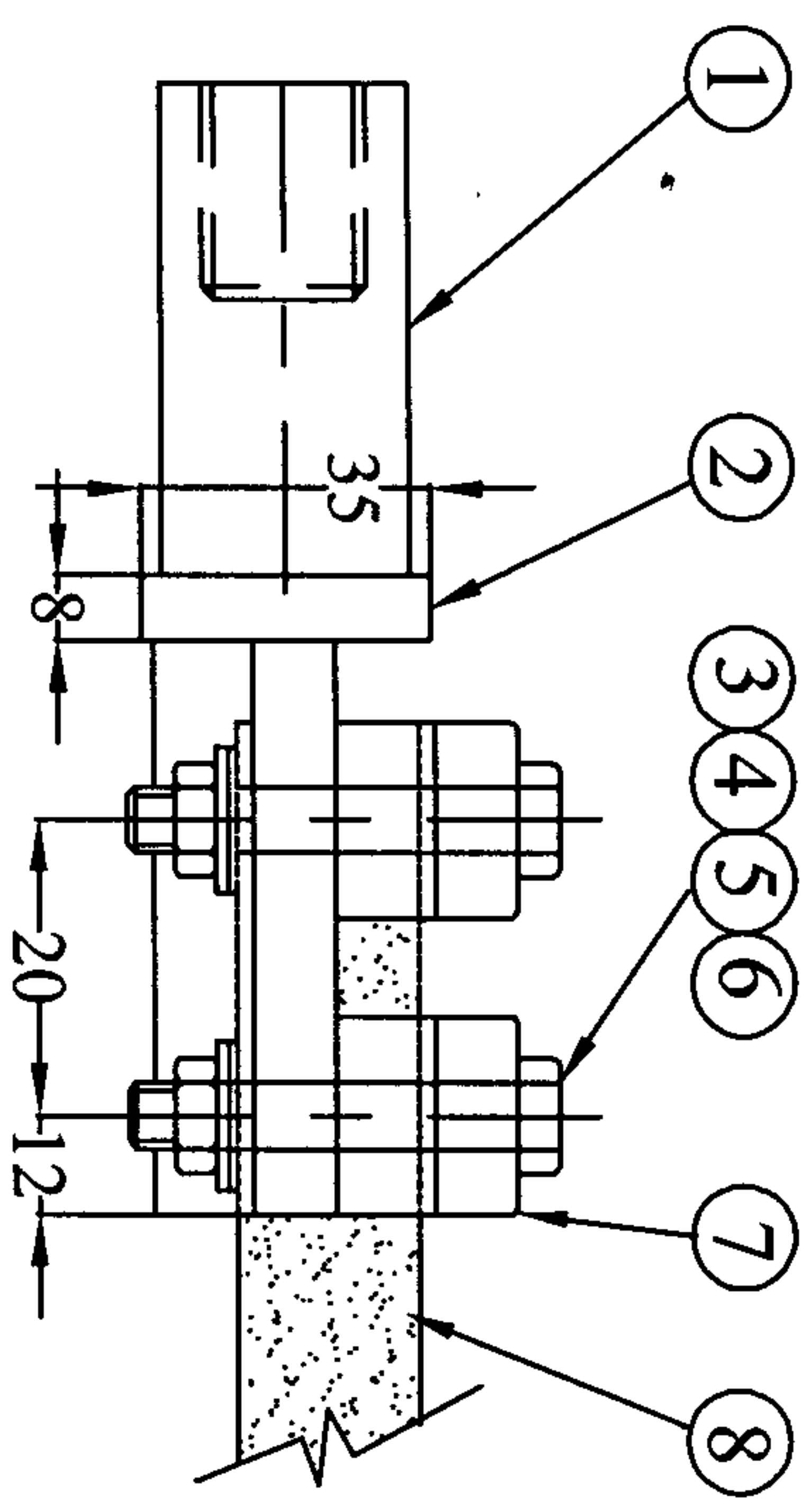
CHIEF ENGINEER / CONSTRUCTION
APT-RANSOCO/MIDYOUTH SOUDHAIPIVA

Standard Drawings for 250 KVA, 33KV/400V Station Transformer Bushing Assembly(1.1 KV, 630 Amps, Bare)

STD/GTP-DWG/Approval No.229-2-6(8)/ Revision No.0

Prepared and Approved during November -2013

W.O.	SL.NO.	SCALE	PROJECT	
		NTS		
				 HYDERABAD INSTRUMENT TRANSFORMERS PVT. LTD. C-62, INDUSTRIAL ESTATE, SANTINAGAR, HYDERABAD - 500018, A.P. INDIA.
			DATE	TITLE
			01.05.13	BUSHING ASSEMBLY(1.1 KV 630Amps. Bare)
			DRAWN	FOR 250 KVA STATION TRANSFORMER
			CHECKED	DRG.NO.
			SD/D	HIT - APT-RANSOCO - 250KVA - A6
REV.	CHANGE RECORD	SD/D	APPROVED	REV.
				0



- 1. ALL SHARP EDGES WILL BE ROUNDED OFF
- 2. RATED CURRENT: 250 AMPS.
- 3. RATED VOLTAGE: 36 K.V.
- 4. ALL M.S. PARTS HOT DIPPED GALVANIZED

ALL DIMENSIONS ARE IN mm.

PT. NO.	DESCRIPTION	MATERIAL
1	STEM	BRASS
2	CONNECTOR BASE	AL.ALLOY
3	HEX. BOLT M8	M.S
4	HEX. NUT M8	M.S
5	PLAIN WASHER	M.S
6	SPRING WASHER	M.S
7	GRIPPER	AL.ALLOY
8	CONDUCTOR	MOOSE

APTRANSCO

Standard Drawings for 250 KVA, 33KV/400V Station Transformer H.V Terminal Connector

STD/GTP-DWG/Approval No.229-2-7(8)/ Revision No.0

Prepared and Approved during November -2013

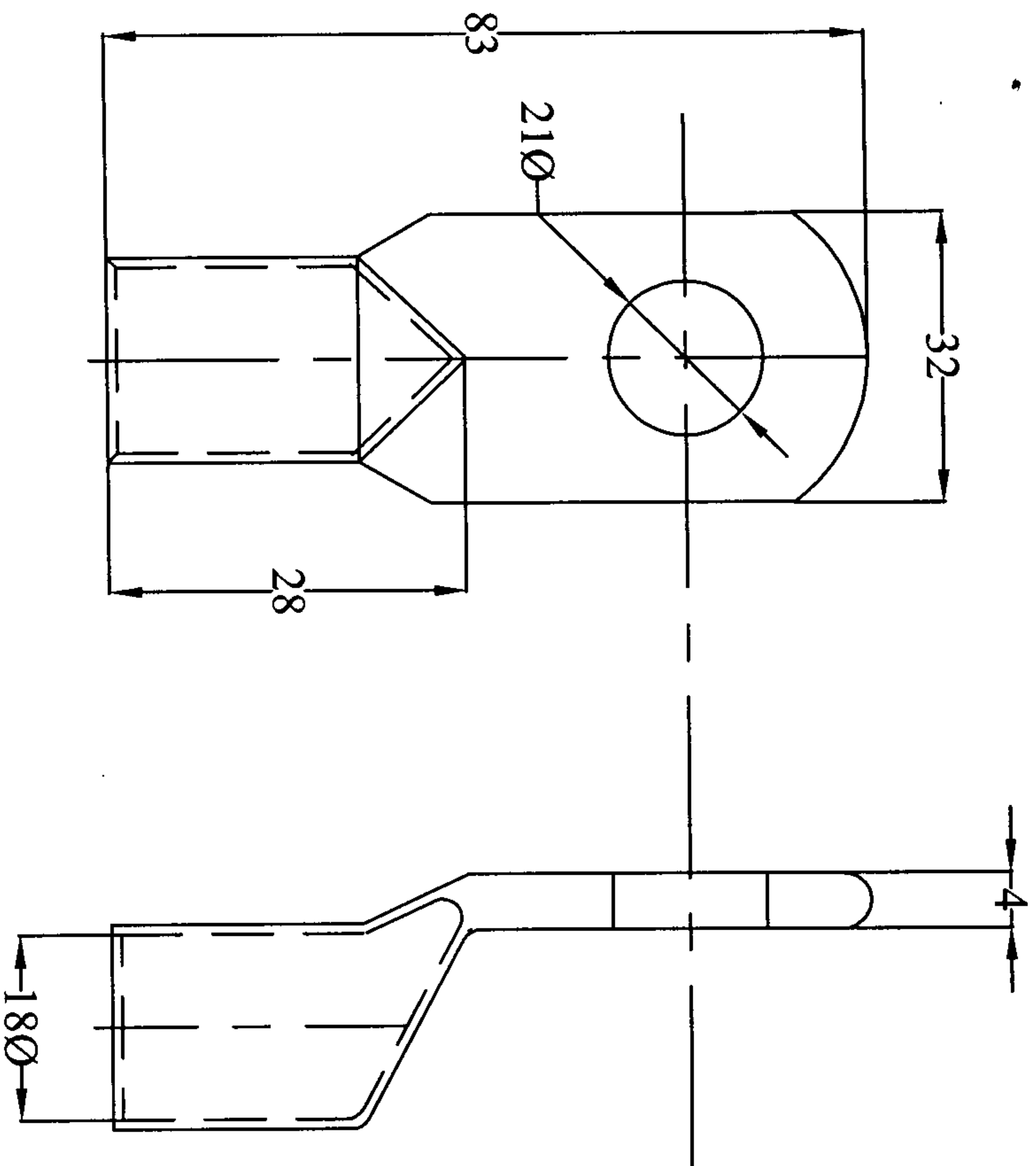
APPROVED FOR TURNKEY PROJECTS

[Signature]
CHIEF ENGINEER / CONSTRUCTION
 APTRANSCO/MIDYUTH SODHAGANNA

CUSTOMER : M/S. AP TRANSCO.

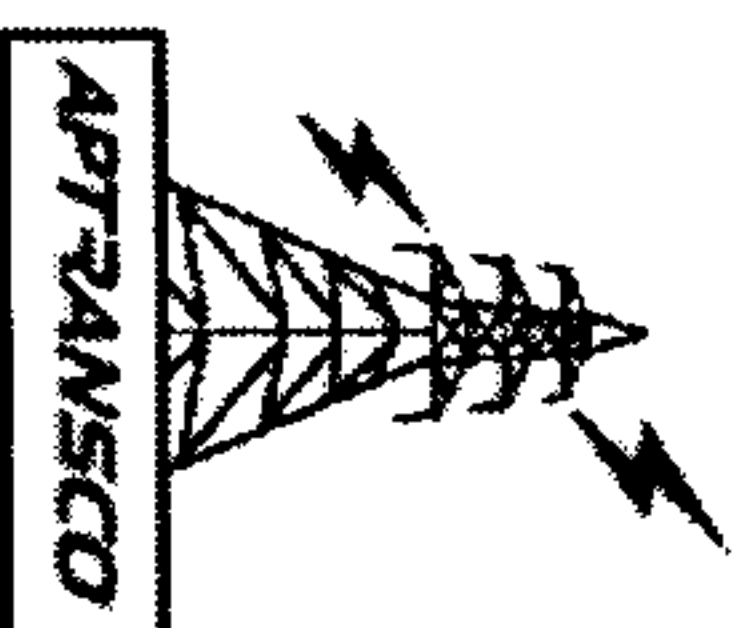
W.O.	SL.NO.	SCALE	PROJEC	
		NTS		
REV.	CHANGE RECORD	SD/D	APPROVED	
		DATE	01.05.13	TITLE
		DRAWN	<i>[Signature]</i>	H.V. TERMINAL CONNECTOR
		CHECKED		FOR 250 KVA STATION TRANSFORMER
		DRG.NO.		HIT - APTRANSCO - 250KVA - A7
		REV.	0	

HYDERABAD INSTRUMENT TRANSFORMERS PVT. LTD.
 C-62, INDUSTRIAL ESTATE, SANTHINAGAR,
 HYDERABAD - 500018, A.P. INDIA.



NOTE : 1. THIS TERMINAL LUG SHALL BE OF COPPER TINNED

ALL DIMENSIONS ARE IN mm.



CUSTOMER : M/S. AP TRANSCO.

APPROVED FOR TURNKEY PROJECTS

Colla
8/11/13
 CHIEF ENGINEER / CONSTRUCTION -1
 APTRANSCO/WIDYUTH SUDHA/HYD.

**Standard Drawings for 250 KVA, 33KV/400V
 Station Transformer L.V Terminal Connector
 STD/GTP-DWG/Approval No.229-2-8(8)/
 Revision No.0
 Prepared and Approved during November -2013**

W.O.	SL.NO.	SCALE	PROJEC	HYDERABAD INSTRUMENT TRANSFORMERS PVT. LTD. C-62, INDUSTRIAL ESTATE, SANTHANAGAR, HYDERABAD - 500018, A.P. INDIA.
		NTS	⊕	
REV.	CHANGE RECORD	DATE	01.05.13	TITLE L.V. TERMINAL CONNECTOR FOR 250 KVA STATION TRANSFORMER
		DRAWN	Jyotsna	
		CHECKED		DRG.NO.
		SD/D	APPROVED	HIT - APTRANSCO - 250KVA - A8
				REV.
				0