第 A9 章

経済・財政評価

第A9章　経済・財務評価

A9.1　1995年価格に基づく変電設備工事費　(9.2.2節　変電所参照)

132kV と 33kV の変電設備の工事費は、1993 年 2 月に CEB と業者が調印した「Transmission System Augmentation and Development Project（TSADP）」の契約金額をベースに積算した。

CEB の実績コストが適切に整理されていないこともあり、220kV 設備の工事費は、他国におけ契約例や 220/132 kV の器材のコスト比較を参考に積算した。

スリランカには、GIS（ガス絶縁開閉装置）機器に関する資料が限られているため他国の例を参照してこの機器の積算を行った。

なお、上記スリランカのプロジェクト(TSADP)のコストは最近の入札例に比しやや低めであるため 10% ないし 15% 増しの単価を積算に使用した。

A.9.1.1　220/132　kV 変電所

(1-1)　一般屋外変電所

(a)　変電所共通施設

共通施設としては、用地整地、変電所建屋、変電所周囲の外柵、開閉所の接地、所内変圧器と低圧開閉機器、直流電源装置、これらの付属設備などである。積算額は下記の通りである。

(単位：　1,000 US$)

施設項目	単位	外貨分	現地貨分
1.　変電所建屋	1　式	88	182
2.　土木共通費	1　式	870	555
3.　所内変圧器	1　式	100	4
4.　低圧開閉機器・直流電源	1　式	206	20
5.　付属機器	1　式	77	4
6.　接地施設	1　式	360	18
7.　遠方監視制御装置	1　式	50	2
合　計		1,751	785

註1：変電所用地として既設ビヤガマ変電所より狭い約30,000m²を想定した。用地面積に大幅な変更が生じた場合には積算額の修正が必要である。

註2：33 kV開閉器は屋外設置とした。キュービクル型開閉器を採用した場合には、用地は狭くてよいが建屋に広いスペースを必要とする。ただし、両者の工事費の差は少ない。

(b) 変圧器

変圧器の機器費、基礎工事および据付費は下記の通りである。

(単位： 1,000 US$)

施設項目	単位	250 MVA変圧器 外貨分	250 MVA変圧器 現地貨分	150 MVA変圧器 外貨分	150 MVA変圧器 現地貨分
1. 主要変圧器	1台	3,000	125	1,950	85
2. 中性点接地器	1式	5	0	5	0
3. 土木工事	1式	0	60	0	40
合　計		3,005	185	1,955	125

(c) 送電線回路機器

本項目には、開閉機器、保護・制御盤、鉄構・電線・碍子などの材料、機器の基礎、ケーブル・トレンチなどが積算されている。

(単位： 1,000 US$)

施設項目	単位	外貨分	現地貨分
1. 遮断器	1 組	110	6
2. 断路器（アース付）	1 組	25	1.2
3. 断路器	2 組	38	2
4. 計器用変圧器 (ｺﾝﾃﾞﾝｻ型)	3 台	32	1.6
5. 変流器	3 台	60	2.5
6. 避雷器	3 台	25	2.5
7. 制御盤	1 組	15	1.5
8. 保護装置盤	1 組	70	7
9. その他諸資材	1 式	110	9
10. 機器用基礎	1 式	13	27
合　計		498	60

註： 上記は二重母線方式を想定して積算してある。単母線方式の場合には断路器が1組省略できる上諸材料および基礎工事量の減少から約10%の工事費低減が可能である。

(d) 変圧器一次側回路機器

施設項目は、送電線回路と同様である。

(単位： 1,000 US$)

施設項目	単位	外貨分	現地貨分
1. 遮断器	1 組	110	6
2. 断路器	2 組	38	2
3. 計器用変圧器	3 台	60	2.5

4.	避雷器	3 台	25	2.5
5.	制御盤	1 組	24	1.2
6.	保護装置盤	1 組	30	1.2
7.	その他諸資材	1 式	110	9
8.	機器用基礎	1 式	13	27
	合　計		410	51

註：　上記は二重母線方式を想定して積算してある。　単母線方式の場合には断路器が1組省略できる上諸材料および基礎工事量の減少から約10%の工事費低減が可能である。

(e)　母線回路機器

施設項目は、送電線回路と同様である。

(単位：　1,000 US$)

	施設項目	単位	外貨分	現地貨分
1.	遮断器	1 組	110	6
2.	断路器	2 組	38	2
3.	計器用変圧器 (ｺﾝﾃﾞﾝｻ型)	6 台	64	3.2
4.	変流器	3 台	60	2.5
5.	制御盤	1 組	24	1.2
6.	保護装置盤	1 組	30	1.2
7.	その他諸資材	1 式	110	9
8.	機器用基礎	1 式	13	27
	合　計		449	52

註：　上記は二重母線方式を想定して積算してある。

(1-2)　ガス絶縁開閉装置変電所

ガス絶縁開閉装置を屋内に、主変圧器を屋外に配置した変電所を想定した。

(a)　変電所共通施設

(単位：　1,000 US$)

	施設項目	単位	外貨分	現地貨分
1.	変電所建屋	1 式	320	800
2.	所内変圧器	1 式	100	4
3.	低圧開閉機器・直流電源	1 式	206	20
4.	付属機器	1 式	110	6
5.	接地施設	1 式	120	6
6.	遠方監視制御装置・その他	1 式	50	2
	合　計		796	838

(b) 変圧器

変圧器の冷却方式に特殊設計を採用したため屋外変電所用変圧器のコストの10%増しを仮定した。

(c) 送電線および変圧器回路用施設

ガス絶縁開閉器を採用した二重母線方式を想定して下記のように積算した。

(単位： 1,000 US$)

施設項目	単位	外貨分	現地貨分
1. ガス絶縁開閉装置	1 組	770	30
2. 制御盤	1 組	15	1.5
3. 保護装置盤	1 組	70	7
4. ケーブル、その他	1 式	12	1
5. 土木工事	1 式	0	7
合 計		867	46.5

註： ガス絶縁開閉装置を使用した単母線方式に変更した場合、上記の外貨分費用からUS$ 150,000低減可能である。

A.9.1.2 132 kV 変電所および 132 kV 回路

(2.1) 一般屋外変電所

通常の敷地約5,000m²の配電用変電所の設計を想定した。

(a) 変電所共通施設

共通施設としては、用地整地、変電所建屋、変電所周囲の外柵、開閉所の接地、所内変圧器と低圧開閉器、直流電源装置、これらの付属設備などである。積算額は下記の通りである。

(単位： 1,000 US$)

施設項目	単位	外貨分	現地貨分
1. 変電所建屋	1 式	68	140
2. 土木共通費	1 式	290	185
3. 所内変圧器	1 式	74	3
4. 低圧開閉器・直流電源	1 式	103	10
5. 付属機器	1 式	55	3
6. 接地施設	1 式	120	6
7. 遠方監視制御装置	1 式	17	1
合 計		727	348

註　1：二重母線方式を採用した場合、用地が広くなり上記の2、6項が高くなる。

註　2：33 kV開閉器は屋外設置とした。キュービクル型開閉器を採用した場合には、用地は狭くてよいが建屋に広いスペースを必要とする。所要コストは同じと仮定する。

(b)　変圧器

変圧器の機器費、基礎工事および据付費は下記の通りである。

（単位：　1,000 US$）

施設項目	単位	31.5 MVA変圧器 外貨分	31.5 MVA変圧器 現地貨分	63 MVA変圧器 外貨分	63 MVA変圧器 現地貨分
1. 主要変圧器	1台	550	25	1,050	45
2. 中性点接地器	1式	5	0	5	0
3. 土木工事	1式	0	13	0	20
合　計		555	38	1,055	65

(c)　送電線回路機器

本項目には、開閉機器、保護・制御盤、鉄構・電線・碍子などの材料、機器の基礎、ケーブル・トレンチなどが含まれている。

（単位：　1,000 US$）

施設項目	単位	外貨分	現地貨分
1. 遮断器	1　組	80	4
2. 断路器（アース付）	1　組	10	0.5
3. 断路器	1　組	9	0.4
4. 計器用変圧器（ｺﾝﾃﾞﾝｻ型）	3　台	24	1.2
5. 変流器	3　台	27	1.6
6. 避雷器	3　台	14	1.5
7. 制御盤	1　組	12	1
8. 保護装置盤	1　組	45	4
9. その他諸資材	1　式	65	5
10. 機器用基礎	1　式	8	17
合　計		294	36

註 1：遮断器および関連施設を初期計画から削除した場合には、上記工事費は35% になる。残額は第二期工事に割り当てられることになる。

註 2：二重母線方式にした場合、断路器1台、関連材料およびそれらの基礎が必要となりこれらの追加工事費は上記総額の10%と仮定する。

(d) 変圧器一次側回路機器

施設項目は、送電線回路と同様である。

(単位： 1,000 US$)

施設項目	単位	外貨分	現地貨分
1. 遮断器	1 組	80	4
2. 断路器	1 組	9	0.4
3. 計器用変流器	3 台	27	1.2
4. 避雷器	3 台	14	1.5
5. 制御盤	1 組	28	1.2
6. 保護装置盤	1 組	22	1.2
7. その他諸資材	1 式	65	5
8. 機器用基礎	1 式	8	17
合 計		253	32

註： 2重母線方式の場合には上記総額の10%を追加する必要がある。

(e) 母線回路機器

施設項目は、送電線回路と類似である。

(単位： 1,000 US$)

施設項目	単位	外貨分	現地貨分
1. 遮断器	1 組	80	4
2. 断路器	2 組	18	0.8
3. 計器用変圧器（ｺﾝﾃﾞﾝｻ型）	6 台	48	2.4
4. 変流器	3 台	27	1.2
5. 制御盤	1 組	28	1.2
6. 保護装置盤	1 組	22	1.2
7. その他諸資材	1 式	65	5
8. 機器用基礎	1 式	8	17
合 計		296	33

註： この国でしばしば採用されている断路器１台だけの場合には、工事費は上記金額の25%と想定される。

(2.2) GIS 開閉装置変電所

この国の 132kV GIS 開閉装置の最新の見積り価格は、フォート及びコルビテヤ変電所の GIS 1セットの追加施設に対するものだけである。

屋内および屋外用ガス絶縁開閉装置が考えられるが、CEB の現在の方式に従って屋内型装置の変電所として下記工事費を積算した。

(a) 変電所共通施設

(単位： 1,000 US$)

施設項目	単位	外貨分	現地貨分
1. 変電所建屋	1 式	160	400
2. 所内変圧器	1 式	74	3
3. 低圧開閉器・直流電源	1 式	103	10
4. 付属機器	1 式	55	3
5. 接地施設	1 式	80	4
6. 遠方監視制御装置・その他	1 式	50	2
合 計		522	422

(b) 変圧器

変圧器の冷却方式に特殊設計が必要になるため屋外変電所用変圧器のコストの10%増しを仮定した。

(c) 送電線および変圧器回路用施設

ガス絶縁開閉器を採用した二重母線方式を想定して下記のように積算した。

(単位： 1,000 US$)

施設項目	単位	外貨分	現地貨分
1. GIS 開閉装置	1 組	520	20
2. 制御盤	1 組	12	1
3. 保護装置盤	1 組	45	4
4. その他諸設備	1 式	10	1
5. 土木工事	1 式	0	5
合 計		587	31

註： GIS 開閉装置を単母線方式に変更した場合、上記の外貨分費用からUS$ 100,000低減可能である。

A.9.1.3 33 kV 施設

(a) 33 kV開閉装置

金額は変圧器2次側、線路用及び母線連絡用共皆同じと仮定する。算定項目は 132kV

のものと同様である。

(単位： 1,000 US$)

施設項目	単位	外貨分	現地貨分
1. 遮断器	1 組	32	1.5
2. 断路器（接地装置付）	1 組	6	0.3
3. 断路器	1 組	6	0.3
4. 変流器	3 台	5	0.3
5. 避雷器	3 台	5	0.3
6. 計器用変圧器	1 式	2	0.1
7. 制御盤	1 式	12	0.5
8. 保護装置盤	1 式	12	0.6
9. その他諸資材	1 式	22	1.7
10. 機器用基礎	1 式	2	6.5
合　計		104	12

註： キュービクルに内蔵されているガス絶縁の33 kV開閉装置のコストは屋外用開閉装置と総額が同額と仮定する。

(b) 静止型キャパシタ

静止型キャパシタの単位容量は5MVAから 20MVAであり、下記コンデンサの工事費は、kVAあたりの単価で機器・開閉装置・制御・保護・付属資材・基礎を含んだ金額である。

(単位： US$)

	外貨分	現地貨分
大容量 (33 kV, 20 MVAクラス)	10 / kVA	1 / kVA
小容量 (33 kV, 5 MVAクラス)	12 / kVA	1.2 / kVA

A.9.1.4 一般経費

(1) 設計監理費は全て外貨分として総建設費の 8%を見込むことにする。

(2) CEBの一般経費は現地貨として下記の費用を見込んである。

(a) 通関費用 ：C. I. Fの40%

(b) その他経費 ：2から3程度の送変電プロジェクトの例では次の金額が必要になる。

銀行手数料	Rs 75×10^6
CEB担当者の給料	Rs 15×10^6
車両および維持費	Rs 10×10^6
土地	Rs 20×10^6
合計	Rs 120×10^6

予算作成には、純建設費のうち現地貨分に総額の 10%を計上する。

第 A11 章

データベース

A11.1 架空送電線に関するデータベース

Ref.	Section	Voltage (kV)
2L1.	Biyagama - Kotugoda	220
2L2.	Biyagama - Kotmale	220
2L3.	Kotmale - Victoria	220
2L4.	Victoria - Randenigala	220
2L5.	Randenigala - Rantembe	220
2L6.	Kotmale New Anuradhapura	220
1L1.	Biyagama - Pannipitiya	132
1L2.	Biyagama - Kelanitissa	132
1L3.	Biyagama - Sapugaskanda PS	132
1L4.	Kolonnawa - Kelanitissa	132
1L5.	Kolonnawa - Pannipitiya	132
1L6.	Kolonnawa -Sapugaskanda(T)	132
1L7.	Sapugaskanda (T) - Kotugoda	132
1L8.A,B	Sapugaskanda (T) - SS	132
1L9.	Kotugoda - Bolawatta	132
1L10.	Bolawatta - Chilaw (T)	132
1L11.	Chilaw (T) - Puttalam	132
1L12.	Chilaw (T) - SS	132
1L13.	Kolonnawa - Oruwala (T)	132
1L14.	Oruwala (T) - SS	132
1L15.	Oruwala (T) - Thulhiriya (T)	132
1L16.	Thulhiriya (T) - SS	132
1L17.	Thulhiriya (T) - Polpitiya	132
1L18.	Kolonnawa - Avissawella (T)	132
1L19.	Avissawella (T) - SS	132
1L20.	Avissawella (T) - Polpitiya	132
1L21.	Pannipitiya - Ratmalana	132
1L22.	Pannipitiya - Panadura (T)	132
1L23.	Panadura (T) - Matugama	132
1L24.	Panadura (T) - SS	132
1L25.	Polpitiya - Laxapana	132
1L26.	Laxapana - Wimalasurendra	132
1L27.	Laxapana - New Laxapana	132
1L28.	New Laxapana - Polpitiya	132
1L29.	New Laxapana - Canyon	132
1L30.	Polpitiya - Kotmale	132
1L31.	Kotmale - Kiribatkumbura	132
1L32.A,B	Kiribatkumbura - Anuradhapura	132
1L33.	Polpitiya - Ukuwela	132
1L34.	Ukuwela - Habarana	132
1L35.	Habarana - Anuradhapura	132
1L36.	Ukuwela - Bowatenna	132
1L37.	Kiribathkumbra - Kurunegala	132
1L38.	Habarana - Valaichchenai	132
1L39.	Anuradhapura - Trincomalee	132
1L40.	New Laxapana - Balangoda	132
1L41.	Balangoda - Samanalawewa	132
1L42.	Samanalawewa - Embilipitiya	132
1L43.	Balangoda - Deniyaya (T)	132
1L44.	Deniyaya (T) - Galle	132
1L45.	Rantembe - Badulla	132
1L46.	Badulla - Inginiyagala	132
1L47.	Anuradhapura - Kilinochchi(T)	132
1L48.	Kilinochchi (T) - Chunnakam	132
1L49.	Laxapana - Nuwara Eliya	132
1L50.	Nuwara Eliya - Badulla	132
1L51.	Puttalam - Anuradhapura	132
1L52.	Embilipitiya - Matara	132
1L53.	Ukuwela Spur	132
1L54.	Kotugoda - Bolawatta	132
1L55.	Kotmale Spure - SS	132
1L56.	Kilibathkumbura Spur - SS	132
1L57.	Rantembe - Badulla	132

Database Information for Overhead Lines

Reference No. 2L1 Title : BIYAGAMA - KOTUGODA

No.	Item	Unit	Data
1	Voltage	kV	220
2	Line Length	km	19.6
3	No. of Circuits		2
4	Conductor Type / Name		ACSR "ZEBRA"
5	Conductor Size	mm^2	428.9
6	No. of Subconductors / Phase		1
7	Subconductor Spacing	mm	—
8	Earthwire Type / Name		GS 7/3.25
9	Earthwire Size	mm^2	58.07
10	No. of Earthwires		2
11	Basic Span	m	335
12	Max Operating Temperature	deg C	75
13	Basic Span Sag at max Temp.	m	9.56
14	Earthwire Sag at EDT	m	6.41
15	Minimum Ground Clearance	m	7.31
16	Tower Configuration		1
17	Insulator Type		CAP & PIN
18	Insulator Material		GLASS
19	Insulator Design		STANDARD
20	Creepage / Disc	mm	292 suspension / tension 370
21	Disc Spacing	mm	146 178
22	No. of Discs - Suspension		17
23	No. of Discs - Tension		13
24	Suspension Insulator Set Length	m	2.880
25	Mechanical Rating - Suspension	kN	120
26	Mechanical Rating - Tension	kN	160
27	Specific Creepage of Set	mm / kV	20
28	Insulator Manufacturer		ITALISOLATORI, ITALY
29	Tower Manufacturer		KAMANI, INDIA
30	Conductor Manufacturer		ECHEVARRIA, SPAIN
31	Main Contractor		KAMANI, INDIA
32	Date of Completion		1985

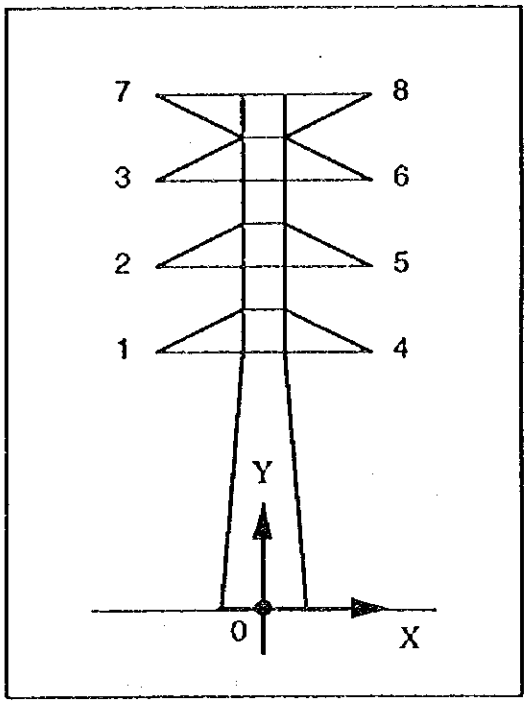
TOWER CONFIGURATION 1

Ref No.	2L1
Title	BIYAGAMA - KOTUGODA
Voltage	220 kV

Double Circuit, Vertical Formation, 2 Earthwires

TOWER TYPE 1DL (1 x Zebra)

Phase(R-Y-B)	
3	R
2	Y
1	B



Phase(R-Y-B)	
6	B
5	Y
4	R

Insulator length + 2/3 sag 9.25

Suspension Tower Dimensions (m)		X	Y	Y_{AV}
Centre Point of Tower Base		0	0	0
Conductor Attachment Point	1	- 5.57	19.95	10.70
	2	- 4.95	25.65	16.40
	3	- 4.75	31.23	21.98
	4	5.57	19.95	10.70
	5	4.95	25.65	16.40
	6	4.75	31.23	21.98
Earthwire Attachment Point	7	- 4.75	34.18	29.91
	8	4.75	34.18	29.91

2/3 E/W sag 4.27

Database Information for Overhead Lines

Reference No. 2L2 Title : BIYAGAMA - KOTMALE

No.	Item	Unit	Data
1	Voltage	kV	220
2	Line Length	km	70.5
3	No. of Circuits		2
4	Conductor Type / Name		ACSR "ZEBRA"
5	Conductor Size	mm²	428.9
6	No. of Subconductors / Phase		2
7	Subconductor Spacing	mm	400
8	Earthwire Type / Name		GS 7/3.25
9	Earthwire Size	mm²	58.07
10	No. of Earthwires		2
11	Basic Span	m	335
12	Max Operating Temperature	deg C	75
13	Basic Span Sag at max Temp.	m	9.56
14	Earthwire Sag at EDT	m	6.41
15	Minimum Ground Clearance	m	7.31
16	Tower Configuration		1
17	Insulator Type		CAP & PIN
18	Insulator Material		GLASS
19	Insulator Design		STANDARD
20	Creepage / Disc	mm	292 suspension / tension 370
21	Disc Spacing	mm	146 178
22	No. of Discs - Suspension		17
23	No. of Discs - Tension		13×2
24	Suspension Insulator Set Length	m	3.034
25	Mechanical Rating - Suspension	kN	120
26	Mechanical Rating - Tension	kN	160×2
27	Specific Creepage of Set	mm / kV	20
28	Insulator Manufacturer		ITALISOLATORI, ITALY
29	Tower Manufacturer		KAMANI, INDIA
30	Conductor Manufacturer		ECHEVARRIA, SPAIN
31	Main Contractor		KAMANI, INDIA
32	Date of Completion		1985

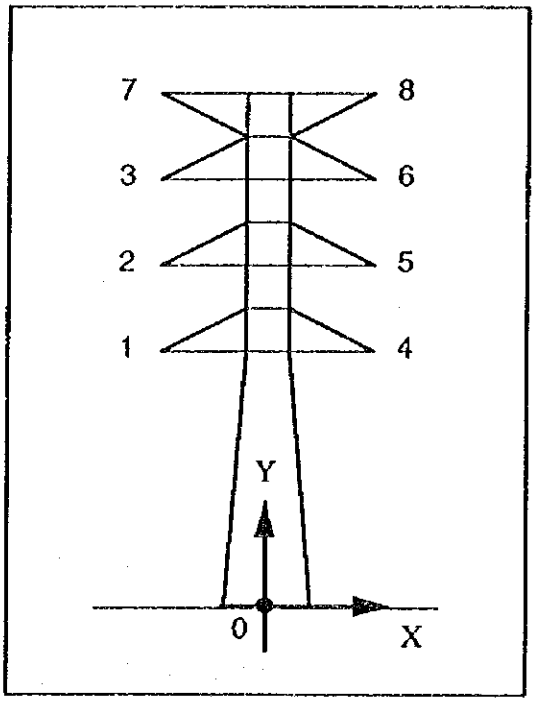
TOWER CONFIGURATION 1

Ref No.	2L2
Title	BIYAGAMA - KOTMALE
Voltage	220 kV

Double Circuit, Vertical Formation, 2 Earthwires

Tower Type 1DL (2 x Zebra)

Phase(R-Y-B)	
3	R
2	Y
1	B



Phase(R-Y-B)	
6	B
5	Y
4	R

Insulator length + 2/3 sag 9.34

Suspension Tower Dimensions (m)		X	Y	Y_{AV}
Centre Point of Tower Base		0	0	0
Conductor Attachment Point	1	- 6.23	20.30	10.96
	2	- 5.70	26.56	17.22
	3	- 5.43	32.74	23.40
	4	6.23	20.30	10.96
	5	5.70	26.56	17.22
	6	5.43	32.74	23.40
Earthwire Attachment Point	7	- 5.43	35.74	31.47
	8	5.43	35.74	31.47

2/3 E/W sag 4.27

Database Information for Overhead Lines

Reference No. 2L3 Title : KOTMALE - VICTORIA

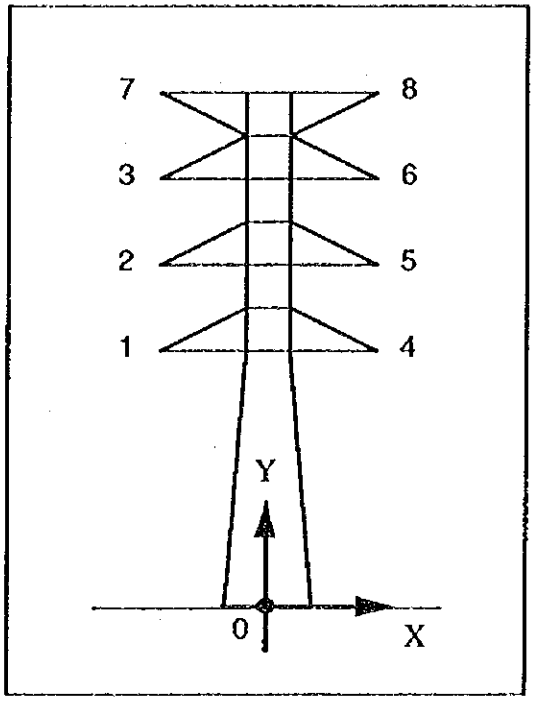
No.	Item	Unit	Data
1	Voltage	kV	220
2	Line Length	km	30.1
3	No. of Circuits		2
4	Conductor Type / Name		ACSR "ZEBRA"
5	Conductor Size	mm²	428.9
6	No. of Subconductors / Phase		2
7	Subconductor Spacing	mm	400
8	Earthwire Type / Name		GS 7/3.25
9	Earthwire Size	mm²	58.07
10	No. of Earthwires		2
11	Basic Span	m	335
12	Max Operating Temperature	deg C	75
13	Basic Span Sag at max Temp.	m	9.56
14	Earthwire Sag at EDT	m	6.41
15	Minimum Ground Clearance	m	7.31
16	Tower Configuration		1
17	Insulator Type		CAP & PIN
18	Insulator Material		GLASS
19	Insulator Design		STANDARD
20	Creepage / Disc	mm	292 suspension / tension 370
21	Disc Spacing	mm	146 178
22	No. of Discs - Suspension		17
23	No. of Discs - Tension		14×2
24	Suspension Insulator Set Length	m	3.06
25	Mechanical Rating - Suspension	kN	120
26	Mechanical Rating - Tension	kN	160×2
27	Specific Creepage of Set	mm / kV	20
28	Insulator Manufacturer		DOULTON INSULATORS, UK
29	Tower Manufacturer		
30	Conductor Manufacturer		
31	Main Contractor		EVE CONSTRUCTION, UK
32	Date of Completion		1984

TOWER CONFIGURATION 1

Ref No.	2L3
Title	KOTMALE - VICTORIA
Voltage	220 kV

Double Circuit, Vertical Formation, 2 Earthwires

Phase(R-Y-B)	
3	B
2	Y
1	R



Phase(R-Y-B)	
6	R
5	Y
4	B

Insulator length + 2/3 sag 9.43

Suspension Tower Dimensions (m)		X	Y	Y_{AV}
Centre Point of Tower Base		0	0	0
Conductor Attachment Point	1	- 6.00	21.72	12.29
	2	- 5.70	28.27	18.84
	3	- 5.60	34.82	25.39
	4	6.00	21.72	12.29
	5	5.70	28.27	18.84
	6	5.60	34.82	25.39
Earthwire Attachment Point	7	- 5.60	37.20	32.93
	8	5.60	37.20	32.93

2/3 E/W sag 4.27

Database Information for Overhead Lines

Reference No. 2L4 Title : VICTORIA - RANDENIGALA

No.	Item	Unit	Data
1	Voltage	kV	220
2	Line Length	km	16.4
3	No. of Circuits		1
4	Conductor Type / Name		ACSR "ZEBRA"
5	Conductor Size	mm²	428.9
6	No. of Subconductors / Phase		2
7	Subconductor Spacing	mm	400
8	Earthwire Type / Name		AS 7/4.62 7/5 AWG alumaweld
9	Earthwire Size	mm²	117.4
10	No. of Earthwires		2
11	Basic Span	m	305
12	Max Operating Temperature	deg C	75
13	Basic Span Sag at max Temp.	m	8.06
14	Earthwire Sag at EDT	m	4.98
15	Minimum Ground Clearance	m	7.31
16	Tower Configuration		5
17	Insulator Type		CAP & PIN
18	Insulator Material		GLASS
19	Insulator Design		STANDARD
20	Creepage / Disc	mm	370
21	Disc Spacing	mm	170
22	No. of Discs - Suspension		15
23	No. of Discs - Tension		16×2
24	Suspension Insulator Set Length	m	3.41
25	Mechanical Rating - Suspension	kN	210
26	Mechanical Rating - Tension	kN	210×2
27	Specific Creepage of Set	mm / kV	22.6
28	Insulator Manufacturer		ESA
29	Tower Manufacturer		BROWN BOVERI , GERMANY
30	Conductor Manufacturer		
31	Main Contractor		BROWN BOVERI , GERMANY
32	Date of Completion		1985

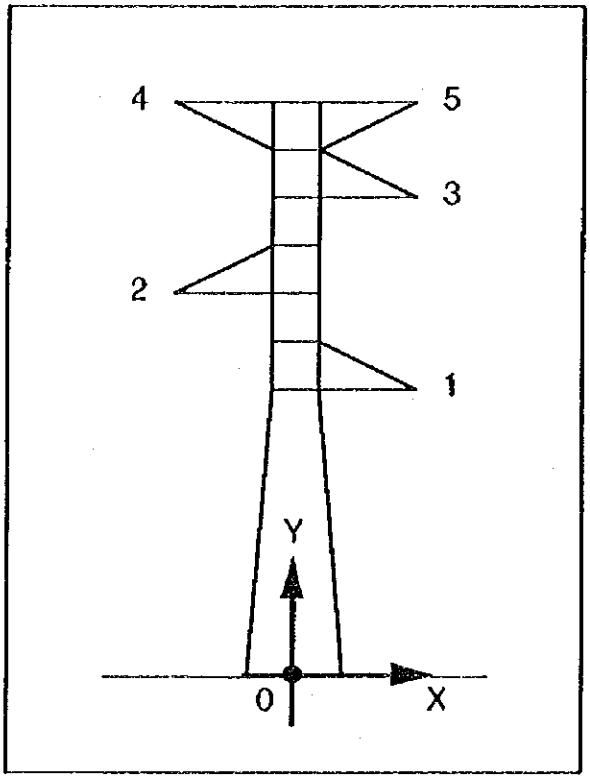
TOWER CONFIGURATION 1

Ref No.	2L4
Title	VICTORIA - RANDENIGALA
Voltage	220 kV

Single Circuit, Semi Delta Formation, 2 Earthwires

TOWER TYPE S1M6

Phase(R-Y-B)	
3	Y
2	R
1	B



Insulator length + 2/3 sag 8.78

Suspension Tower Dimensions (m)		X	Y	Y_{AV}
Centre Point of Tower Base		0	0	0
Conductor Attachment Point	1	5.40	18.65	9.87
	2	- 5.10	22.70	13.92
	3	5.00	26.75	17.97
	4	- 6.40	29.15	25.83
Earthwire Attachment Point	5	6.40	29.15	25.83

2/3 E/W sag 3.32

Database Information for Overhead Lines

Reference No. 2L5 Title : RANDENIGALA - RANTEMBE

No.	Item	Unit	Data
1	Voltage	kV	220
2	Line Length	km	3.1
3	No. of Circuits		1
4	Conductor Type / Name		ACSR "ZEBRA"
5	Conductor Size	mm^2	428.9
6	No. of Subconductors / Phase		2
7	Subconductor Spacing	mm	400
8	Earthwire Type / Name		AS 7/4.62
9	Earthwire Size	mm^2	117.4
10	No. of Earthwires		2
11	Basic Span	m	305
12	Max Operating Temperature	deg C	75
13	Basic Span Sag at max Temp.	m	8.06
14	Earthwire Sag at EDT	m	4.98
15	Minimum Ground Clearance	m	7.31
16	Tower Configuration		5
17	Insulator Type		CAP & PIN
18	Insulator Material		GLASS
19	Insulator Design		STANDARD
20	Creepage / Disc	mm	370
21	Disc Spacing	mm	170
22	No. of Discs - Suspension		15
23	No. of Discs - Tension		16×2
24	Suspension Insulator Set Length	m	3.410
25	Mechanical Rating - Suspension	kN	210
26	Mechanical Rating - Tension	kN	210×2
27	Specific Creepage of Set	mm / kV	22.6
28	Insulator Manufacturer		ESA
29	Tower Manufacturer		BROWN BOVERI , GERMANY
30	Conductor Manufacturer		
31	Main Contractor		BROWN BOVERI , GERMANY
32	Date of Completion		1985

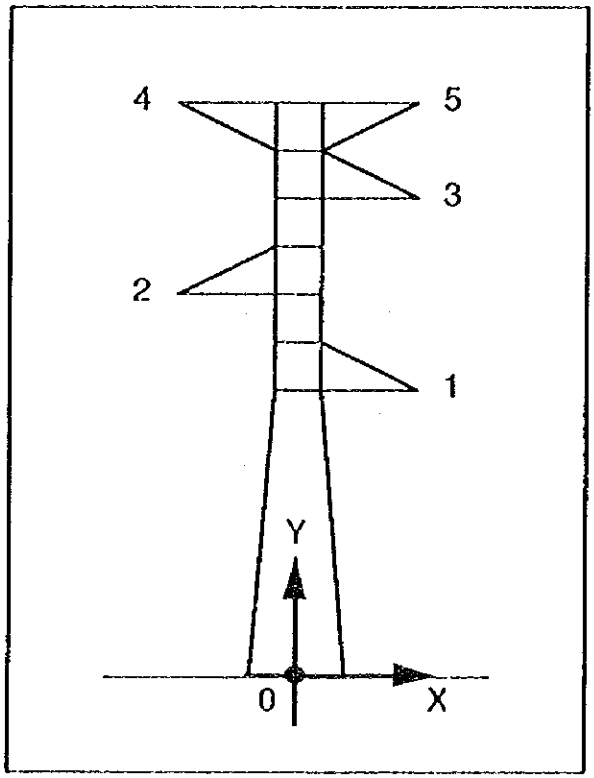
TOWER CONFIGURATION 5

Ref No.	2L5	(same as 2L4)
Title	RANDENIGALA - RANTEMBE	
Voltage	220 kV	

Single Circuit, Semi Delta Formation, 2 Earthwires

TOWER TYPE S1M6

Phase(R-Y-B)	
3	Y
2	R
1	B



Insulator length + 2/3 sag 8.78

Suspension Tower Dimensions (m)		X	Y	Y_{AV}
Centre Point of Tower Base		0	0	0
Conductor Attachment Point	1	5.40	18.65	9.87
	2	- 5.10	22.70	13.92
	3	5.00	26.75	17.97
	4	- 6.40	29.15	25.83
Earthwire Attachment Point	5	6.40	29.15	25.83

2/3 E/W sag 3.32

Database Information for Overhead Lines

Reference No. 2L6 Title : KOTMALE - NEW ANURADHAPURA

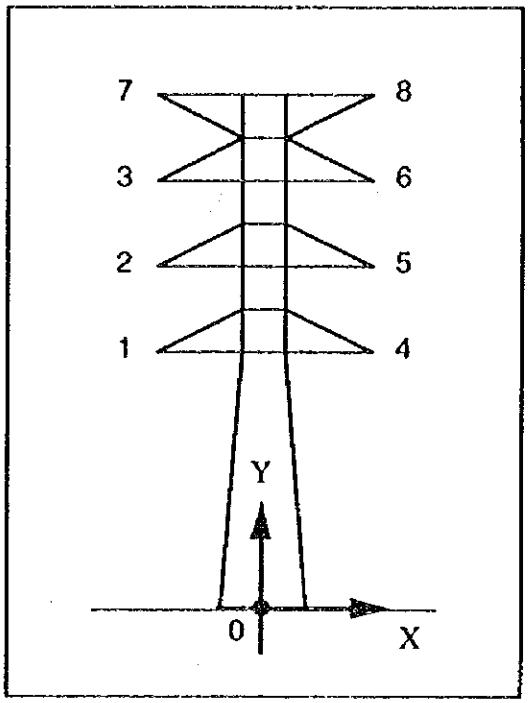
No.	Item	Unit	Data
1	Voltage	kV	220
2	Line Length	km	163 *
3	No. of Circuits		1 (Double circuit tower)
4	Conductor Type / Name		ACSR "ZEBRA"
5	Conductor Size	mm^2	428.9
6	No. of Subconductors / Phase		1
7	Subconductor Spacing	mm	-
8	Earthwire Type / Name		GS 7/3.25
9	Earthwire Size	mm^2	58.07
10	No. of Earthwires		2
11	Basic Span	m	350
12	Max Operating Temperature	deg C	75
13	Basic Span Sag at max Temp.	m	
14	Earthwire Sag at EDT	m	
15	Minimum Ground Clearance	m	7.31
16	Tower Configuration		1
17	Insulator Type		CAP & PIN
18	Insulator Material		
19	Insulator Design		
20	Creepage / Disc	mm	
21	Disc Spacing	mm	
22	No. of Discs - Suspension		
23	No. of Discs - Tension		
24	Suspension Insulator Set Length	m	2.9 *
25	Mechanical Rating - Suspension	kN	
26	Mechanical Rating - Tension	kN	
27	Specific Creepage of Set	mm / kV	20
28	Insulator Manufacturer		
29	Tower Manufacturer		
30	Conductor Manufacturer		
31	Main Contractor		KEC, India
32	Date of Completion		anticipated 1998

TOWER CONFIGURATION 1

Ref No.	2L6
Title	KOTMALE - NEW ANURADHAPURA
Voltage	220 kV

Double Circuit, Vertical Formation, 2 Earthwires

Phase(R-Y-B)	
3	
2	
1	



Phase(R-Y-B)	
6	
5	
4	

Insulator length + 2/3 sag

Suspension Tower Dimensions (m)		X	Y	Y_{AV}
Centre Point of Tower Base		0	0	0
Conductor Attachment Point	1			
	2			
	3			
	4			
	5			
	6			
Earthwire Attachment Point	7			
	8			

2/3 E/W sag

Database Information for Overhead Lines

Reference No. 1L1 Title : BIYAGAMA - PANNIPITIYA

No.	Item	Unit	Data
1	Voltage	kV	132
2	Line Length	km	15.5
3	No. of Circuits		2
4	Conductor Type / Name		ACSR "ZEBRA"
5	Conductor Size	mm^2	428.9
6	No. of Subconductors / Phase		1
7	Subconductor Spacing	mm	—
8	Earthwire Type / Name		GS 7/3.25
9	Earthwire Size	mm^2	58.07
10	No. of Earthwires		2
11	Basic Span	m	335
12	Max Operating Temperature	deg C	75
13	Basic Span Sag at max Temp.	m	9.56
14	Earthwire Sag at EDT	m	6.41
15	Minimum Ground Clearance	m	7.31
16	Tower Configuration		1
17	Insulator Type		CAP & PIN
18	Insulator Material		GLASS
19	Insulator Design		STANDARD
20	Creepage / Disc	mm	292 suspension / tension 370
21	Disc Spacing	mm	146 178
22	No. of Discs - Suspension		17
23	No. of Discs - Tension		13
24	Suspension Insulator Set Length	m	2.880
25	Mechanical Rating - Suspension	kN	120
26	Mechanical Rating - Tension	kN	160
27	Specific Creepage of Set	mm / kV	22
28	Insulator Manufacturer		ITALISOLATORI, ITALY
29	Tower Manufacturer		KAMANI, INDIA
30	Conductor Manufacturer		ECHEVARRIA, SPAIN
31	Main Contractor		KAMANI, INDIA
32	Date of Completion		1986

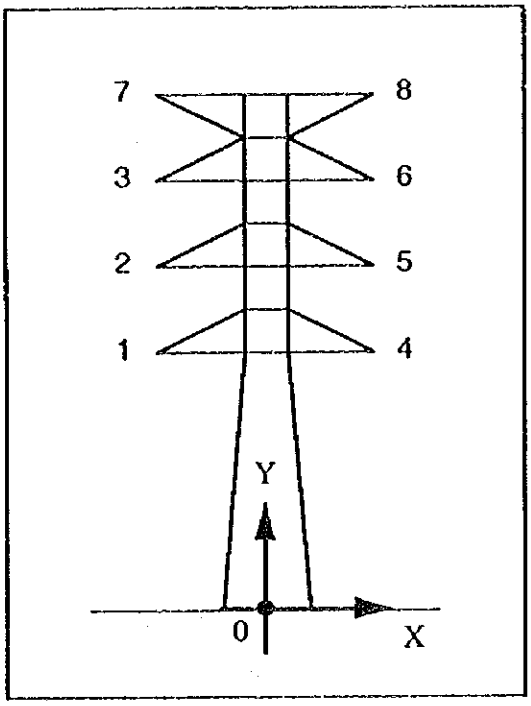
TOWER CONFIGURATION 1

Ref No.	1L1	(same as 2L1)
Title	BIYAGAMA - PANNIPITIYA	
Voltage	132 kV	

Double Circuit, Vertical Formation, 2 Earthwires

TOWER TYPE 1DL (1 x Zebra)

Phase(R-Y-B)	
3	R
2	Y
1	B



Phase(R-Y-B)	
6	B
5	Y
4	R

220kV Tower operating at 132kV

Insulator length + 2/3 sag 9.25

Suspension Tower Dimensions (m)		X	Y	Y_{AV}
Centre Point of Tower Base		0	0	0
Conductor Attachment Point	1	- 5.57	19.95	10.70
	2	- 4.95	25.65	16.40
	3	- 4.75	31.23	21.98
	4	5.57	19.95	10.70
	5	4.95	25.65	16.40
	6	4.75	31.23	21.98
Earthwire Attachment Point	7	- 4.75	34.18	29.91
	8	4.75	31.18	29.91

2/3 E/W sag 4.27

Database Information for Overhead Lines

Reference No. 1L2 Title : BIYAGAMA - KELANITISSA

No.	Item	Unit	Data
1	Voltage	kV	132
2	Line Length	km	12.5
3	No. of Circuits		2
4	Conductor Type / Name		ACSR "GOAT"
5	Conductor Size	mm^2	324.3
6	No. of Subconductors / Phase		2
7	Subconductor Spacing	mm	400
8	Earthwire Type / Name		GS 7/3.25
9	Earthwire Size	mm^2	58.07
10	No. of Earthwires		2
11	Basic Span	m	335
12	Max Operating Temperature	deg C	75
13	Basic Span Sag at max Temp.	m	8.35
14	Earthwire Sag at EDT	m	5.22
15	Minimum Ground Clearance	m	7.31
16	Tower Configuration		1
17	Insulator Type		CAP & PIN
18	Insulator Material		GLASS
19	Insulator Design		STANDARD
20	Creepage / Disc	mm	292 suspension / tension 370
21	Disc Spacing	mm	146 178
22	No. of Discs - Suspension		11
23	No. of Discs - Tension		13×2
24	Suspension Insulator Set Length	m	2.158
25	Mechanical Rating - Suspension	kN	120
26	Mechanical Rating - Tension	kN	160×2
27	Specific Creepage of Set	mm / kV	22
28	Insulator Manufacturer		ITALISOLATORI, ITALY
29	Tower Manufacturer		KAMANI, INDIA
30	Conductor Manufacturer		ECHEVARRIA, SPAIN
31	Main Contractor		KAMANI, INDIA
32	Date of Completion		1985

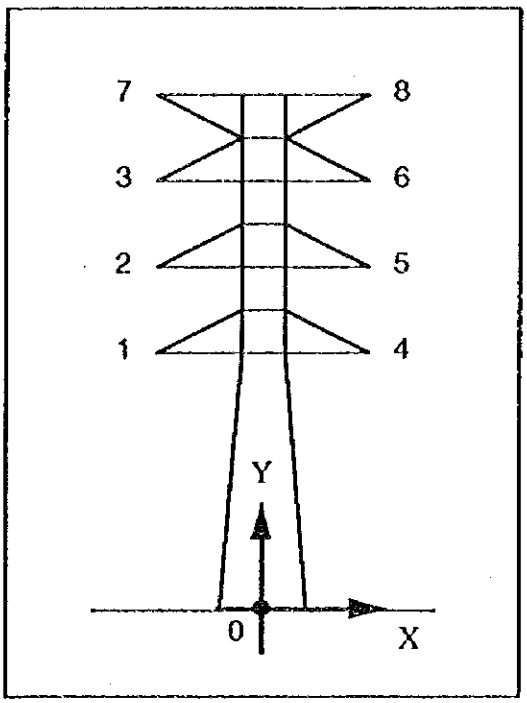
TOWER CONFIGURATION 1

Ref No.	1L2 (same as 2L2)
Title	BIYAGAMA - KELANITISSA
Voltage	132 kV

Double Circuit, Vertical Formation, 2 Earthwires

TOWER TYPE 1DL (2 x Goat)

Phase(R-Y-B)	
3	B
2	Y
1	R



Phase(R-Y-B)	
6	R
5	Y
4	B

220kV Tower operating at 132kV

Insulator length + 2/3 sag 7.73

Suspension Tower Dimensions (m)		X	Y	Y_{AV}
Centre Point of Tower Base		0	0	0
Conductor Attachment Point	1	- 6.23	20.30	12.57
	2	- 5.70	26.56	18.83
	3	- 5.43	32.74	25.01
	4	6.23	20.30	12.57
	5	5.70	26.56	18.83
	6	5.43	32.74	25.01
Earthwire Attachment Point	7	- 5.43	35.74	32.26
	8	5.43	35.74	32.26

2/3 E/W sag 3.48

Database Information for Overhead Lines

Reference No. 1L3 Title : BIYAGAMA - SAPUGASKANDA P/S

No.	Item	Unit	Data
1	Voltage	kV	132
2	Line Length	km	2.1
3	No. of Circuits		2
4	Conductor Type / Name		ACSR "LYNX" (Note)
5	Conductor Size	mm²	183.4
6	No. of Subconductors / Phase		1
7	Subconductor Spacing	mm	—
8	Earthwire Type / Name		GS 19/2.36
9	Earthwire Size	mm²	83.1
10	No. of Earthwires		2
11	Basic Span	m	305
12	Max Operating Temperature	deg C	54
13	Basic Span Sag at max Temp.	m	6.30
14	Earthwire Sag at EDT	m	3.99
15	Minimum Ground Clearance	m	6.71
16	Tower Configuration		1
17	Insulator Type		CAP & PIN
18	Insulator Material		PORCELAIN
19	Insulator Design		STANDARD
20	Creepage / Disc	mm	292
21	Disc Spacing	mm	140
22	No. of Discs - Suspension		12
23	No. of Discs - Tension		13
24	Suspension Insulator Set Length	m	2.2 *
25	Mechanical Rating - Suspension	kN	
26	Mechanical Rating - Tension	kN	
27	Specific Creepage of Set	mm / kV	24
28	Insulator Manufacturer		
29	Tower Manufacturer		
30	Conductor Manufacturer		
31	Main Contractor		
32	Date of Completion		1985

Note : Conductor change to "Zebra" 1997, 75°C, reduced spans.

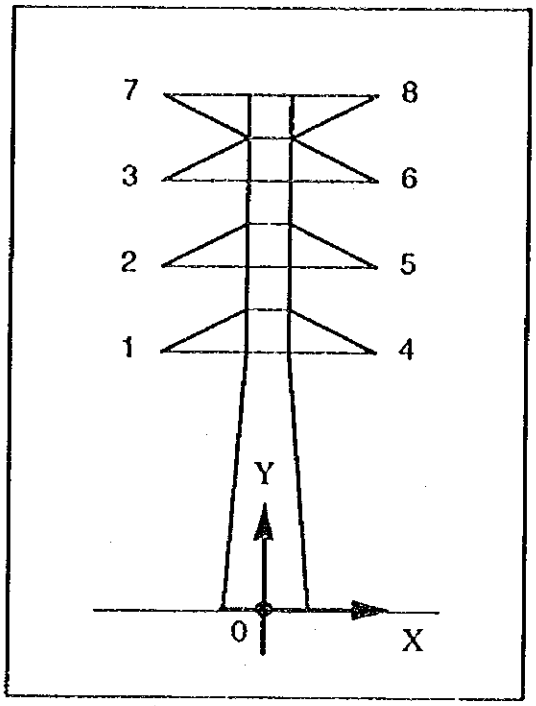
TOWER CONFIGURATION 1

Ref No.	1L3
Title	BIYAGAMA - SAPUGASKANDA P/S
Voltage	132 kV

Double Circuit, Vertical Formation, 2 Earthwires

TOWER TYPE NNDAL

Phase(R-Y-B)	
3	B
2	R
1	Y



Phase(R-Y-B)	
6	B
5	Y
4	R

Insulator length + 2/3 sag

Suspension Tower Dimensions (m)		X	Y	Y_{AV}
Centre Point of Tower Base		0	0	0
Conductor Attachment Point	1			
	2			
	3			
	4			
	5			
	6			
Earthwire Attachment Point	7			
	8			

2/3 E/W sag

Database Information for Overhead Lines

Reference No. 1L4 Title : KOLONNAWA - KELANITISSA

No.	Item	Unit	Data
1	Voltage	kV	132
2	Line Length	km	2.2 *
3	No. of Circuits		2
4	Conductor Type / Name		ACSR "ZEBRA"
5	Conductor Size	mm²	428.9
6	No. of Subconductors / Phase		1
7	Subconductor Spacing	mm	—
8	Earthwire Type / Name		GS 19/2.36
9	Earthwire Size	mm²	83.11
10	No. of Earthwires		2
11	Basic Span	m	305
12	Max Operating Temperature	deg C	54
13	Basic Span Sag at max Temp.	m	7.3
14	Earthwire Sag at EDT	m	4.98
15	Minimum Ground Clearance	m	6.71
16	Tower Configuration		1
17	Insulator Type		CAP & PIN
18	Insulator Material		GLASS
19	Insulator Design		STANDARD
20	Creepage / Disc	mm	286
21	Disc Spacing	mm	140
22	No. of Discs - Suspension		12
23	No. of Discs - Tension		11
24	Suspension Insulator Set Length	m	2.49
25	Mechanical Rating - Suspension	kN	80
26	Mechanical Rating - Tension	kN	160
27	Specific Creepage of Set	mm / kV	23.7
28	Insulator Manufacturer		SEDIVER, FRANCE
29	Tower Manufacturer		SAE, ITALY
30	Conductor Manufacturer		LAMITREF, BELGIUM
31	Main Contractor		SAE, ITALY
32	Date of Completion		1963

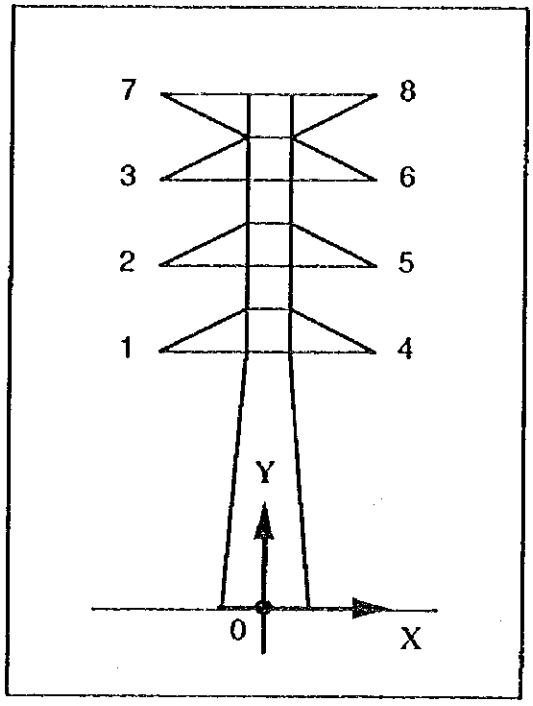
TOWER CONFIGURATION 1

Ref No.	1L4
Title	KOLONNAWA - KELANITISSA
Voltage	132 kV

Double Circuit, Vertical Formation, 2 Earthwires

TOWER TYPE GGAL

Phase(R-Y-B)	
3	B
2	Y
1	R



Phase(R-Y-B)	
6	R
5	Y
4	B

Insulator length + 2/3 sag 7.36

Suspension Tower Dimensions (m)		X	Y	Y_{AV}
Centre Point of Tower Base		0	0	0
Conductor Attachment Point	1	-3.96	16.93	9.57
	2	-3.20	21.05	13.69
	3	-3.20	25.16	17.80
	4	3.96	16.93	9.57
	5	3.20	21.05	13.69
	6	3.20	25.16	17.80
Earthwire Attachment Point	7	-3.20	27.85	24.53
	8	3.20	27.85	24.53

2/3 E/W sag 3.32

Database Information for Overhead Lines

Reference No. 1L5 Title : KOLONNAWA - PANNIPITIYA

No.	Item	Unit	Data
1	Voltage	kV	132
2	Line Length	km	12.9
3	No. of Circuits		2
4	Conductor Type / Name		ACSR "LYNX"
5	Conductor Size	mm^2	183.4
6	No. of Subconductors / Phase		1
7	Subconductor Spacing	mm	—
8	Earthwire Type / Name		GS 19/2.36
9	Earthwire Size	mm^2	83.1
10	No. of Earthwires		2
11	Basic Span	m	305
12	Max Operating Temperature	deg C	54
13	Basic Span Sag at max Temp.	m	6.30
14	Earthwire Sag at EDT	m	3.99
15	Minimum Ground Clearance	m	6.71
16	Tower Configuration		1
17	Insulator Type		CAP & PIN
18	Insulator Material		PORCELAIN
19	Insulator Design		STANDARD
20	Creepage / Disc	mm	292
21	Disc Spacing	mm	140
22	No. of Discs - Suspension		12
23	No. of Discs - Tension		13
24	Suspension Insulator Set Length	m	2.086
25	Mechanical Rating - Suspension	kN	67
26	Mechanical Rating - Tension	kN	125
27	Specific Creepage of Set	mm / kV	24
28	Insulator Manufacturer		NGK, JAPAN
29	Tower Manufacturer		SUMITOMO, JAPAN
30	Conductor Manufacturer		SUMITOMO, JAPAN
31	Main Contractor		SUMITOMO, JAPAN
32	Date of Completion		1971

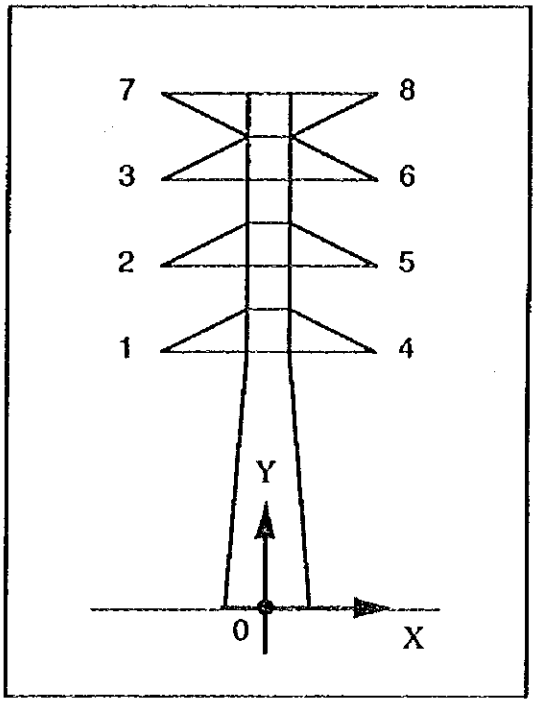
TOWER CONFIGURATION 1

Ref No.	1L5
Title	KOLONNAWA - PANNIPITIYA
Voltage	132 kV

Double Circuit, Vertical Formation, 2 Earthwires

TOWER TYPE XXAL

Phase(R-Y-B)	
3	R
2	Y
1	B



Phase(R-Y-B)	
6	R
5	Y
4	B

Insulator length + 2/3 sag 6.29

Suspension Tower Dimensions (m)		X	Y	Y_{AV}
Centre Point of Tower Base		0	0	0
Conductor Attachment Point	1	- 3.66	15.65	9.36
	2	- 3.66	19.49	13.20
	3	- 3.66	23.32	17.03
	4	3.66	15.65	9.36
	5	3.66	19.49	13.20
	6	3.66	23.32	17.03
Earthwire Attachment Point	7	- 3.66	26.37	23.71
	8	3.66	26.37	23.71

2/3 E/W sag 2.66

Database Information for Overhead Lines

Reference No. 1L6 Title : KOLONNAWA - SAPUGASKANDA(T)

No.	Item	Unit	Data
1	Voltage	kV	132
2	Line Length	km	6.6 *
3	No. of Circuits		2
4	Conductor Type / Name		ACSR "COYOTE"
5	Conductor Size	mm^2	132.1
6	No. of Subconductors / Phase		1
7	Subconductor Spacing	mm	—
8	Earthwire Type / Name		GS 19/2.36
9	Earthwire Size	mm^2	83.11
10	No. of Earthwires		1
11	Basic Span	m	305
12	Max Operating Temperature	deg C	54
13	Basic Span Sag at max Temp.	m	8.91
14	Earthwire Sag at EDT	m	6.66
15	Minimum Ground Clearance	m	6.71
16	Tower Configuration		2
17	Insulator Type		CAP & PIN
18	Insulator Material		PORCELAIN
19	Insulator Design		STANDARD
20	Creepage / Disc	mm	292
21	Disc Spacing	mm	146
22	No. of Discs - Suspension		12
23	No. of Discs - Tension		13
24	Suspension Insulator Set Length	m	2.2 *
25	Mechanical Rating - Suspension	kN	
26	Mechanical Rating - Tension	kN	
27	Specific Creepage of Set	mm / kV	24
28	Insulator Manufacturer		
29	Tower Manufacturer		SAE, ITALY
30	Conductor Manufacturer		
31	Main Contractor		SAE, ITALY
32	Date of Completion		1960

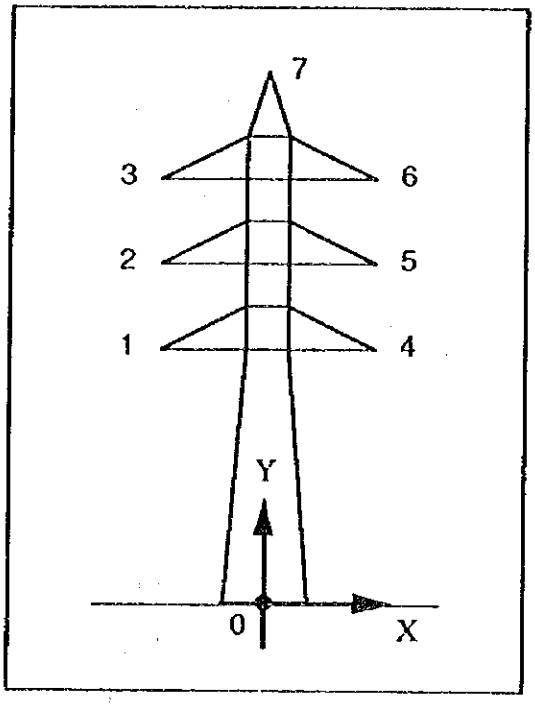
TOWER CONFIGURATION 2

Ref No.	1L6
Title	KOLONNAWA - SAPUGASKANDA(T)
Voltage	132 kV

Double Circuit, Vertical Formation, 1 Earthwire

Phase(R-Y-B)	
3	B
2	R
1	Y

Phase Transposition Occurs



Phase(R-Y-B)	
6	B
5	Y
4	R

Insulator length + 2/3 sag 8.14

Suspension Tower Dimensions (m)		X	Y	Y_{AV}
Centre Point of Tower Base		0	0	0
Conductor Attachment Point	1	- 3.95	17.24	9.10
	2	- 3.95	21.39	13.25
	3	- 3.95	25.54	17.40
	4	3.95	17.24	9.10
	5	3.95	21.39	13.25
	6	3.95	25.54	17.40
Earthwire Attachment Point	7	0	29.02	24.58

2/3 E/W sag 4.44

Database Information for Overhead Lines

Reference No. 1L7 Title : SAPUGASKANDA(T) - KOTUGODA

No.	Item	Unit	Data
1	Voltage	kV	132
2	Line Length	km	16.7 *
3	No. of Circuits		2
4	Conductor Type / Name		ACSR "COYOTE"
5	Conductor Size	mm²	132.1
6	No. of Subconductors / Phase		1
7	Subconductor Spacing	mm	—
8	Earthwire Type / Name		GS 19/2.36
9	Earthwire Size	mm²	83.11
10	No. of Earthwires		1
11	Basic Span	m	305
12	Max Operating Temperature	deg C	54
13	Basic Span Sag at max Temp.	m	8.91
14	Earthiwre Sag at EDT	m	6.66
15	Minimum Ground Clearance	m	6.71
16	Tower Configuration		2
17	Insulator Type		CAP & PIN
18	Insulator Material		PORCELAIN
19	Insulator Design		STANDARD
20	Creepage / Disc	mm	292
21	Disc Spacing	mm	146
22	No. of Discs - Suspension		12
23	No. of Discs - Tension		13
24	Suspension Insulator Set Length	m	2.2 *
25	Mechanical Rating - Suspension	kN	
26	Mechanical Rating - Tension	kN	
27	Specific Creepage of Set	mm / kV	24
28	Insulator Manufacturer		
29	Tower Manufacturer		SAE, ITALY
30	Conductor Manufacturer		
31	Main Contractor		SAE, ITALY
32	Date of Completion		1960

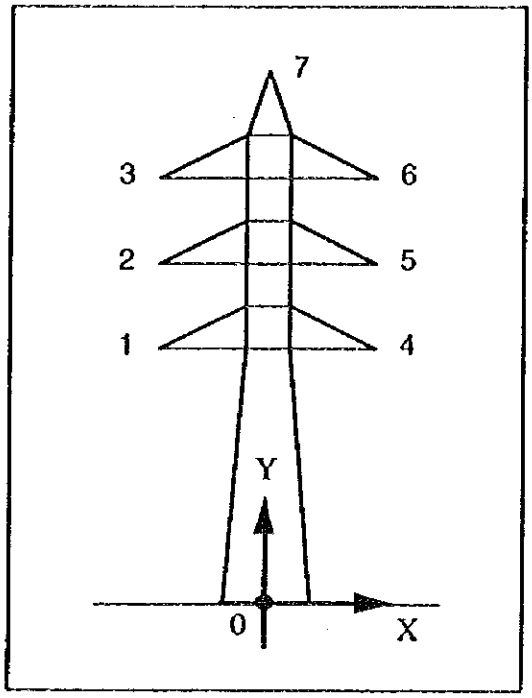
TOWER CONFIGURATION 2

Ref No.	1L7 (same as 1L6)
Title	SAPUGASKANDA(T) - KOTUGODA
Voltage	132 kV

Double Circuit, Vertical Formation, 1 Earthwire

Phase(R-Y-B)	
3	R
2	Y
1	B

Phase Transposition Occurs



Phase(R-Y-B)	
6	B
5	Y
4	R

Insulator length + 2/3 sag 8.14

Suspension Tower Dimensions (m)		X	Y	Y_{AV}
Centre Point of Tower Base		0	0	0
Conductor Attachment Point	1	- 3.95	17.24	9.10
	2	- 3.95	21.39	13.25
	3	- 3.95	25.54	17.40
	4	3.95	17.24	9.10
	5	3.95	21.39	13.25
	6	3.95	25.54	17.40
Earthwire Attachment Point	7	0	29.02	24.58

2/3 E/W sag 4.44

Database Information for Overhead Lines

Reference No. 1L8A Title : SAPUGASKANDA(T) - SS

No.	Item	Unit	Data
1	Voltage	kV	132
2	Line Length	km	2.3 (TOTAL 4.6)
3	No. of Circuits		2
4	Conductor Type / Name		ACSR "LYNX"
5	Conductor Size	mm²	183.4
6	No. of Subconductors / Phase		1
7	Subconductor Spacing	mm	—
8	Earthwire Type / Name		GS 19/2.36
9	Earthwire Size	mm²	83.1
10	No. of Earthwires		1
11	Basic Span	m	305
12	Max Operating Temperature	deg C	54
13	Basic Span Sag at max Temp.	m	6.30
14	Earthwire Sag at EDT	m	3.99
15	Minimum Ground Clearance	m	6.71
16	Tower Configuration		2
17	Insulator Type		CAP & PIN
18	Insulator Material		PORCELAIN
19	Insulator Design		STANDARD
20	Creepage / Disc	mm	292
21	Disc Spacing	mm	140
22	No. of Discs - Suspension		12
23	No. of Discs - Tension		13
24	Suspension Insulator Set Length	m	2.086
25	Mechanical Rating - Suspension	kN	67
26	Mechanical Rating - Tension	kN	125
27	Specific Creepage of Set	mm / kV	24
28	Insulator Manufacturer		NGK, JAPAN
29	Tower Manufacturer		SUMITOMO, JAPAN
30	Conductor Manufacturer		SUMITOMO, JAPAN
31	Main Contractor		SUMITOMO, JAPAN
32	Date of Completion		1971

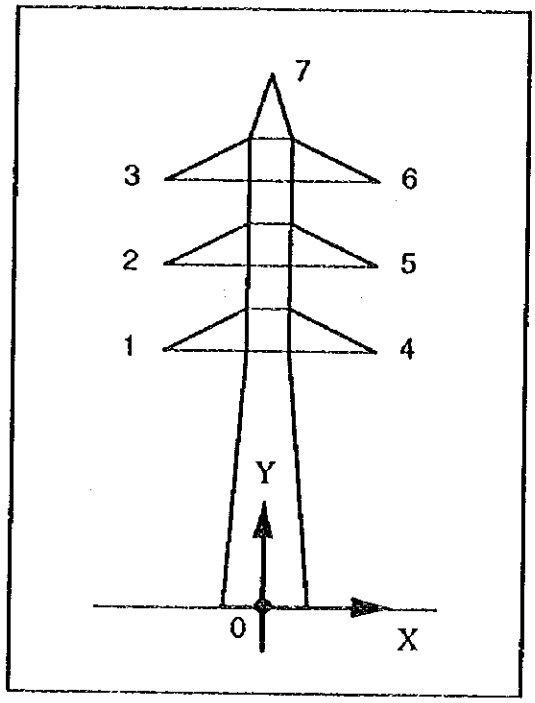
TOWER CONFIGURATION 2

Ref No.	1L8A
Title	SAPUGASKANDA(T) - SS
Voltage	132 kV

Double Circuit, Vertical Formation, 1 Earthwire

TOWER TYPE XAL

Phase(R-Y-B)	
3	Y
2	B
1	R



Phase(R-Y-B)	
6	Y
5	B
4	R

Insulator length + 2/3 sag 6.29

Suspension Tower Dimensions (m)		X	Y	Y_{AV}
Centre Point of Tower Base		0	0	0
Conductor Attachment Point	1	- 3.66	15.65	9.36
	2	- 3.66	19.49	13.20
	3	- 3.66	23.32	17.03
	4	3.66	15.65	9.36
	5	3.66	19.49	13.20
	6	3.66	23.32	17.03
Earthwire Attachment Point	7	0	27.28	24.62

2/3 E/W sag 2.66

Database Information for Overhead Lines

Reference No. 1L8B Title : SAPUGASKANDA(T) - SS

No.	Item	Unit	Data
1	Voltage	kV	132
2	Line Length	km	2.3 (Total A + B = 4.6)
3	No. of Circuits		2
4	Conductor Type / Name		ACSR "LYNX"
5	Conductor Size	mm²	183.4
6	No. of Subconductors / Phase		1
7	Subconductor Spacing	mm	—
8	Earthwire Type / Name		GS 19/2.36
9	Earthwire Size	mm²	83.1
10	No. of Earthwires		2
11	Basic Span	m	305
12	Max Operating Temperature	deg C	54
13	Basic Span Sag at max Temp.	m	6.3
14	Earthwire Sag at EDT	m	3.99
15	Minimum Ground Clearance	m	6.71
16	Tower Configuration		1
17	Insulator Type		CAP & PIN
18	Insulator Material		PORCELAIN
19	Insulator Design		STANDARD
20	Creepage / Disc	mm	292
21	Disc Spacing	mm	140
22	No. of Discs - Suspension		12
23	No. of Discs - Tension		13
24	Suspension Insulator Set Length	m	2.086
25	Mechanical Rating - Suspension	kN	67
26	Mechanical Rating - Tension	kN	125
27	Specific Creepage of Set	mm / kV	24
28	Insulator Manufacturer		NGK , JAPAN
29	Tower Manufacturer		SUMITOMO , JAPAN
30	Conductor Manufacturer		SUMITOMO , JAPAN
31	Main Contractor		SUMITOMO, JAPAN
32	Date of Completion		1971

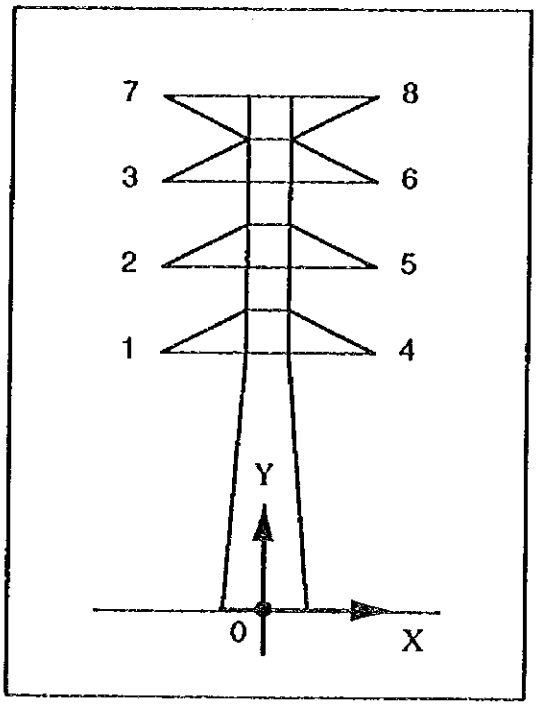
TOWER CONFIGURATION 1

Ref No.	1L8B	(same as 1L5)
Title	SAPUGASKANDA(T) - SS	
Voltage	132 kV	

Double Circuit, Vertical Formation, 2 Earthwires

TOWER TYPE XXAL

Phase(R-Y-B)	
3	Y
2	B
1	R



Phase(R-Y-B)	
6	Y
5	B
4	R

Insulator length + 2/3 sag 6.29

Suspension Tower Dimensions (m)		X	Y	Y_{AV}
Centre Point of Tower Base		0	0	0
Conductor Attachment Point	1	- 3.66	15.65	9.36
	2	- 3.66	19.49	13.20
	3	- 3.66	23.32	17.03
	4	3.66	15.65	9.36
	5	3.66	19.49	13.20
	6	3.66	23.32	17.03
Earthwire Attachment Point	7	- 3.66	26.37	23.71
	8	3.66	26.37	23.71

2/3 E/W sag 2.66

Database Information for Overhead Lines

Reference No. 1L9 Title : KOTUGODA - BOLAWATTA

No.	Item	Unit	Data
1	Voltage	kV	132
2	Line Length	km	21.0 *
3	No. of Circuits		2
4	Conductor Type / Name		ACSR "COYOTE"
5	Conductor Size	mm^2	132.1
6	No. of Subconductors / Phase		1
7	Subconductor Spacing	mm	—
8	Earthwire Type / Name		19 / 2.36
9	Earthwire Size	mm^2	83.11
10	No. of Earthwires		1
11	Basic Span	m	305
12	Max Operating Temperature	deg C	54
13	Basic Span Sag at max Temp.	m	8.91
14	Earthwire Sag at EDT	m	6.66
15	Minimum Ground Clearance	m	6.71
16	Tower Configuration		2
17	Insulator Type		CAP & PIN
18	Insulator Material		PORCELAIN
19	Insulator Design		STANDARD
20	Creepage / Disc	mm	292
21	Disc Spacing	mm	140
22	No. of Discs - Suspension		12
23	No. of Discs - Tension		13
24	Suspension Insulator Set Length	m	2.2 *
25	Mechanical Rating - Suspension	kN	
26	Mechanical Rating - Tension	kN	
27	Specific Creepage of Set	mm / kV	24
28	Insulator Manufacturer		
29	Tower Manufacturer		SAE, ITALY
30	Conductor Manufacturer		
31	Main Contractor		SAE, ITALY
32	Date of Completion		1960

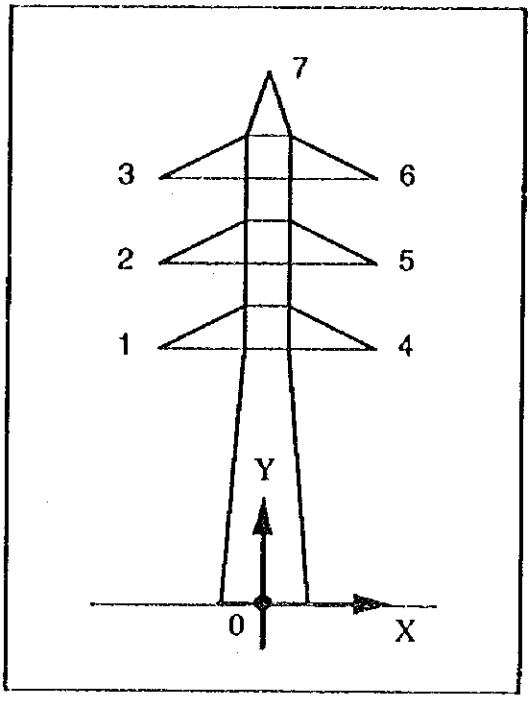
TOWER CONFIGURATION 2

Ref No.	1L9 (same as 1L6)
Title	KOTUGODA - BOLAWATTA
Voltage	132 kV

Double Circuit, Vertical Formation, 1 Earthwire

Phase(R-Y-B)	
3	R
2	Y
1	B

Phase Transposition Occurs



Phase(R-Y-B)	
6	B
5	Y
4	R

Insulator length + 2/3 sag 8.14

Suspension Tower Dimensions (m)		X	Y	Y_{AV}
Centre Point of Tower Base		0	0	0
Conductor Attachment Point	1	- 3.95	17.24	9.10
	2	- 3.95	21.39	13.25
	3	- 3.95	25.54	17.40
	4	3.95	17.24	9.10
	5	3.95	21.39	13.25
	6	3.95	25.54	17.40
Earthwire Attachment Point	7	0	29.02	24.58

2/3 E/W sag 4.44

Database Information for Overhead Lines

Reference No. 1L10 Title : BOLAWATTA - CHILAW(T)

No.	Item	Unit	Data
1	Voltage	kV	132
2	Line Length	km	22.6
3	No. of Circuits		2
4	Conductor Type / Name		ACSR "LYNX"
5	Conductor Size	mm^2	183.4
6	No. of Subconductors / Phase		1
7	Subconductor Spacing	mm	—
8	Earthwire Type / Name		GS 19/2.36
9	Earthwire Size	mm^2	83.11
10	No. of Earthwires		1
11	Basic Span	m	305
12	Max Operating Temperature	deg C	54
13	Basic Span Sag at max Temp.	m	6.30
14	Earthwire Sag at EDT	m	3.99
15	Minimum Ground Clearance	m	6.71
16	Tower Configuration		2
17	Insulator Type		CAP & PIN
18	Insulator Material		GLASS
19	Insulator Design		STANDARD
20	Creepage / Disc	mm	286
21	Disc Spacing	mm	140
22	No. of Discs - Suspension		12
23	No. of Discs - Tension		13
24	Suspension Insulator Set Length	m	2.311
25	Mechanical Rating - Suspension	kN	67
26	Mechanical Rating - Tension	kN	80
27	Specific Creepage of Set	mm / kV	23.7
28	Insulator Manufacturer		SEDIVER, FRANCE
29	Tower Manufacturer		SAE, ITALY
30	Conductor Manufacturer		LAMITREF, BELGIUM
31	Main Contractor		SAE, ITALY
32	Date of Completion		1963

TOWER CONFIGURATION 2

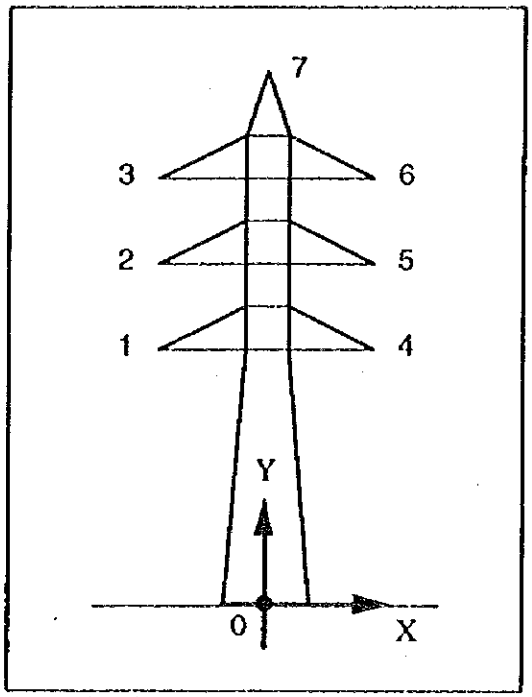
Ref No.	1L10
Title	BOLAWATTA - CHILAW(T)
Voltage	132 kV

Double Circuit, Vertical Formation, 1 Earthwire

TOWER TYPE HAL

Phase(R-Y-B)	
3	R
2	B
1	Y

Phase Transposition Occurs



Phase(R-Y-B)	
6	R
5	Y
4	B

Insulator length + 2/3 sag 6.51

Suspension Tower Dimensions (m)		X	Y	Y_{AV}
Centre Point of Tower Base		0	0	0
Conductor Attachment Point	1	- 3.60	15.80	9.29
	2	- 3.50	19.90	13.39
	3	- 3.50	24.00	17.49
	4	3.60	15.80	9.29
	5	3.50	19.90	13.39
	6	3.50	24.00	17.49
Earthwire Attachment Point	7	0	27.58	24.92

2/3 E/W sag 2.66

Database Information for Overhead Lines

Reference No. 1L11 Title : CHILAW(T) - PUTTALAM

No.	Item	Unit	Data
1	Voltage	kV	132
2	Line Length	km	61.4
3	No. of Circuits		2
4	Conductor Type / Name		ACSR "LYNX"
5	Conductor Size	mm^2	183.4
6	No. of Subconductors / Phase		1
7	Subconductor Spacing	mm	---
8	Earthwire Type / Name		GS 19/2.36
9	Earthwire Size	mm^2	83.11
10	No. of Earthwires		1
11	Basic Span	m	305
12	Max Operating Temperature	deg C	54
13	Basic Span Sag at max Temp.	m	6.30
14	Earthwire Sag at EDT	m	3.99
15	Minimum Ground Clearance	m	6.71
16	Tower Configuration		2
17	Insulator Type		CAP & PIN
18	Insulator Material		GLASS
19	Insulator Design		STANDARD
20	Creepage / Disc	mm	286
21	Disc Spacing	mm	140
22	No. of Discs - Suspension		12
23	No. of Discs - Tension		13
24	Suspension Insulator Set Length	m	2.311
25	Mechanical Rating - Suspension	kN	67
26	Mechanical Rating - Tension	kN	80
27	Specific Creepage of Set	mm / kV	23.7
28	Insulator Manufacturer		SEDIVER, FRANCE
29	Tower Manufacturer		SAE, ITALY
30	Conductor Manufacturer		LAMITREF, BELGIUM
31	Main Contractor		SAE, ITALY
32	Date of Completion		1963

TOWER CONFIGURATION 2

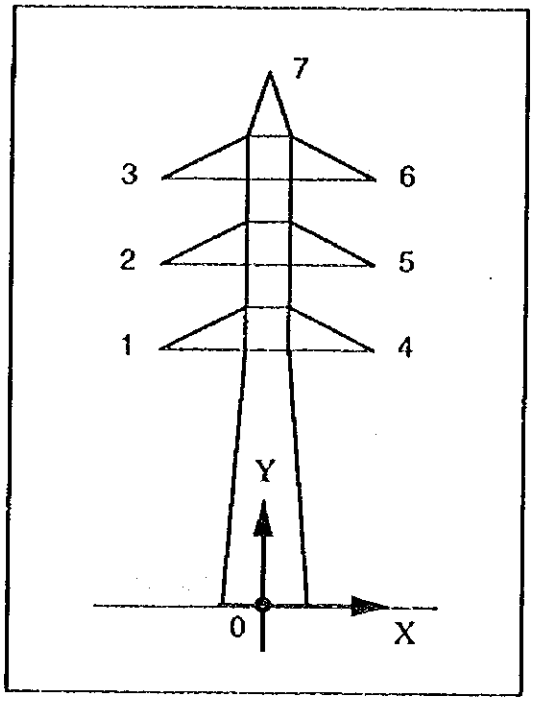
Ref No.	1L11	(same as 1L10)
Title	CHILAW(T) - PUTTALAM	
Voltage	132 kV	

Double Circuit, Vertical Formation, 1 Earthwire

TOWER TYPE HAL

Phase(R-Y-B)	
3	Y
2	B
1	R

Phase Transposition Occurs



Phase(R-Y-B)	
6	Y
5	R
4	B

Insulator length + 2/3 sag 6.51

Suspension Tower Dimensions (m)		X	Y	Y_{AV}
Centre Point of Tower Base		0	0	0
Conductor Attachment Point	1	- 3.60	15.80	9.29
	2	- 3.50	19.90	13.39
	3	- 3.50	24.00	17.49
	4	3.60	15.80	9.29
	5	3.50	19.90	13.39
	6	3.50	24.00	17.49
Earthwire Attachment Point	7	0	27.58	24.92

2/3 E/W sag 2.66

Database Information for Overhead Lines

Reference No. 1L12 Title : CHILAW(T) - SS

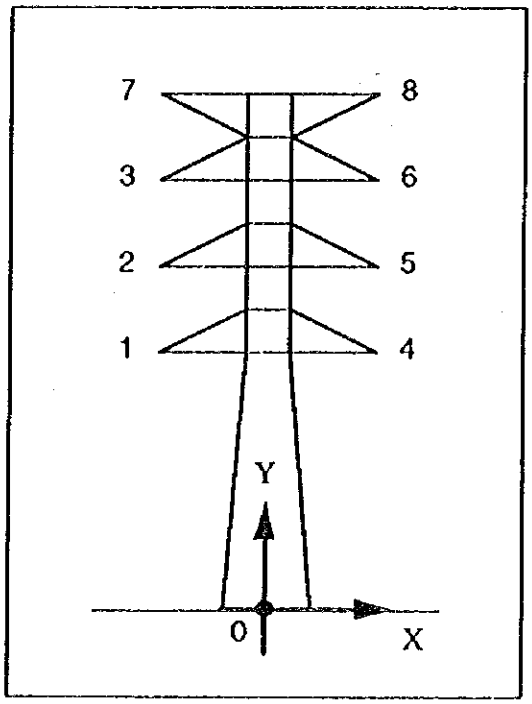
No.	Item	Unit	Data
1	Voltage	kV	132
2	Line Length	km	6.8
3	No. of Circuits		2
4	Conductor Type / Name		ACSR "LYNX"
5	Conductor Size	mm²	183.4
6	No. of Subconductors / Phase		1
7	Subconductor Spacing	mm	—
8	Earthwire Type / Name		GS 7/3.25
9	Earthwire Size	mm²	58.07
10	No. of Earthwires		2
11	Basic Span	m	305
12	Max Operating Temperature	deg C	75
13	Basic Span Sag at max Temp.	m	7.88
14	Earthwire Sag at EDT	m	4.89
15	Minimum Ground Clearance	m	6.71
16	Tower Configuration		1
17	Insulator Type		CAP & PIN
18	Insulator Material		PORCELAIN
19	Insulator Design		STANDARD
20	Creepage / Disc	mm	292
21	Disc Spacing	mm	140
22	No. of Discs - Suspension		12
23	No. of Discs - Tension		13
24	Suspension Insulator Set Length	m	2.2 *
25	Mechanical Rating - Suspension	kN	70
26	Mechanical Rating - Tension	kN	120
27	Specific Creepage of Set	mm / kV	24
28	Insulator Manufacturer		NGK, JAPAN
29	Tower Manufacturer		SAE, INDIA
30	Conductor Manufacturer		ALUMINIUM INDUSTRIES, INDIA
31	Main Contractor		CEB - Transmission Construction
32	Date of Completion		1995

TOWER CONFIGURATION 1

Ref No.	1L12
Title	CHILAW(T) - SS
Voltage	132 kV

Double Circuit, Vertical Formation, 2 Earthwires

Phase(R-Y-B)	
3	B
2	Y
1	R



Phase(R-Y-B)	
6	B
5	R
4	Y

Insulator length + 2/3 sag 7.45

Suspension Tower Dimensions (m)		X	Y	Y_{AV}
Centre Point of Tower Base		0	0	0
Conductor Attachment Point	1	- 3.90	17.25	9.80
	2	- 3.70	21.44	13.99
	3	- 3.70	25.58	18.13
	4	3.90	17.25	9.80
	5	3.70	21.44	13.99
	6	3.70	25.58	18.13
Earthwire Attachment Point	7	- 3.70	27.48	24.22
	8	3.70	27.48	24.22

2/3 E/W sag 3.26

Database Information for Overhead Lines

Reference No. 1L13 Title : KOLONNAWA - ORUWALA(T)

No.	Item	Unit	Data
1	Voltage	kV	132 (Kolonnawa -Polpitiya No. 1 & 2)
2	Line Length	km	14.0 *
3	No. of Circuits		2
4	Conductor Type / Name		ACSR "LYNX"
5	Conductor Size	mm^2	183.4
6	No. of Subconductors / Phase		1
7	Subconductor Spacing	mm	—
8	Earthwire Type / Name		GS 19 / 2.36
9	Earthwire Size	mm^2	83.11
10	No. of Earthwires		2
11	Basic Span	m	305
12	Max Operating Temperature	deg C	54
13	Basic Span Sag at max Temp.	m	6.30
14	Earthwire Sag at EDT	m	3.99
15	Minimum Ground Clearance	m	6.71
16	Tower Configuration		1
17	Insulator Type		CAP & PIN
18	Insulator Material		PORCELAIN
19	Insulator Design		STANDARD
20	Creepage / Disc	mm	292
21	Disc Spacing	mm	140
22	No. of Discs - Suspension		12
23	No. of Discs - Tension		13
24	Suspension Insulator Set Length	m	2.2 *
25	Mechanical Rating - Suspension	kN	
26	Mechanical Rating - Tension	kN	
27	Specific Creepage of Set	mm / kV	24
28	Insulator Manufacturer		
29	Tower Manufacturer		SAE, ITALY
30	Conductor Manufacturer		
31	Main Contractor		SAE, ITALY
32	Date of Completion		1959

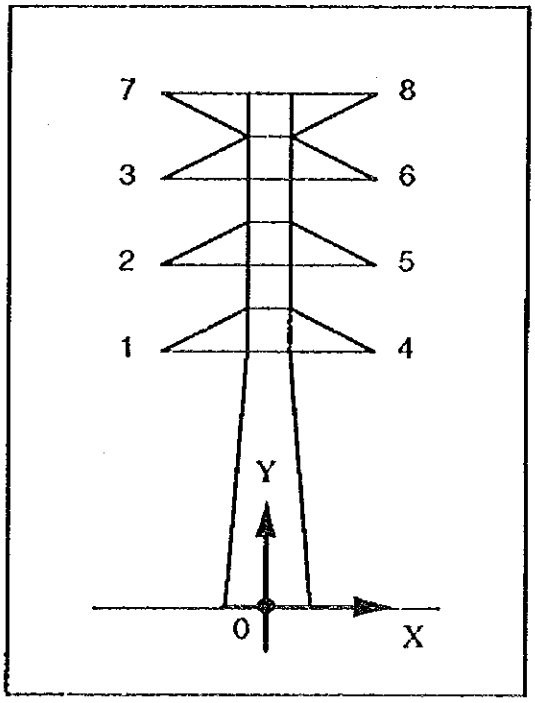
TOWER CONFIGURATION 1

Ref No.	1L13
Title	KOLONNAWA - ORUWALA(T)
Voltage	132 kV

Double Circuit, Vertical Formation, 2 Earthwires

Phase(R-Y-B)	
3	R
2	Y
1	B

Phase Transposition Occurs



Phase(R-Y-B)	
6	B
5	Y
4	R

Insulator length + 2/3 sag 6.4

Suspension Tower Dimensions (m)		X	Y	Y_{AV}
Centre Point of Tower Base		0	0	0
Conductor Attachment Point	1	- 3.95	17.24	10.84
	2	- 3.95	21.39	14.99
	3	- 3.95	25.54	19.14
	4	3.95	17.24	10.84
	5	3.95	21.39	14.99
	6	3.95	25.54	19.14
Earthwire Attachment Point	7	- 3.95	28.11	25.45
	8	3.95	28.11	25.45

2/3 E/W sag 2.66

Database Information for Overhead Lines

Reference No. 1L14 Title : ORUWALA(T) - SS

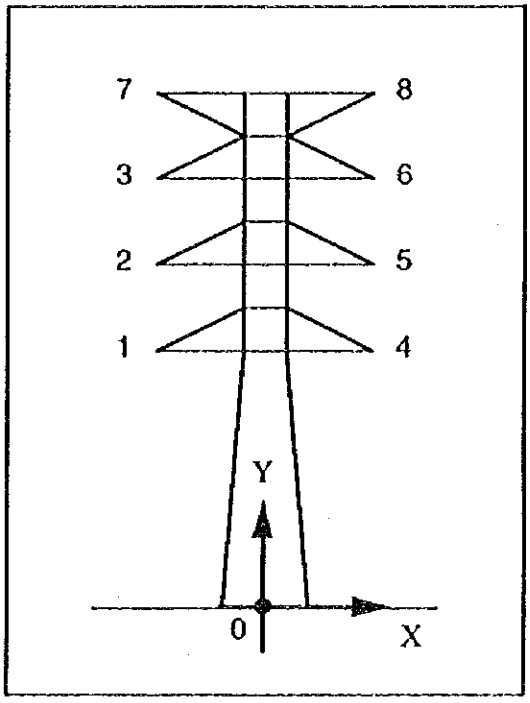
No.	Item	Unit	Data
1	Voltage	kV	132
2	Line Length	km	3.4 *
3	No. of Circuits		2
4	Conductor Type / Name		ACSR "LYNX"
5	Conductor Size	mm²	183.4
6	No. of Subconductors / Phase		1
7	Subconductor Spacing	mm	—
8	Earthwire Type / Name		GS 19 / 2.36
9	Earthwire Size	mm²	83.11
10	No. of Earthwires		2
11	Basic Span	m	305
12	Max Operating Temperature	deg C	54
13	Basic Span Sag at max Temp.	m	6.30
14	Earthwire Sag at EDT	m	3.99
15	Minimum Ground Clearance	m	6.71
16	Tower Configuration		1
17	Insulator Type		CAP & PIN
18	Insulator Material		GLASS
19	Insulator Design		STANDARD
20	Creepage / Disc	mm	286
21	Disc Spacing	mm	140
22	No. of Discs - Suspension		12
23	No. of Discs - Tension		13
24	Suspension Insulator Set Length	m	2.311
25	Mechanical Rating - Suspension	kN	67
26	Mechanical Rating - Tension	kN	80
27	Specific Creepage of Set	mm / kV	23.7
28	Insulator Manufacturer		SEDIVER, FRANCE
29	Tower Manufacturer		SAE, ITALY
30	Conductor Manufacturer		LAMITREF, BELGIUM
31	Main Contractor		SAE, ITALY
32	Date of Completion		1963

TOWER CONFIGURATION 1

Ref No.	1L14	(same as 1L13)
Title	ORUWALA(T) - SS	
Voltage	132 kV	

Double Circuit, Vertical Formation, 2 Earthwires

Phase(R-Y-B)	
3	Y
2	R
1	B



Phase(R-Y-B)	
6	Y
5	R
4	B

Insulator length + 2/3 sag 6.51

Suspension Tower Dimensions (m)		X	Y	Y_{AV}
Centre Point of Tower Base		0	0	0
Conductor Attachment Point	1	- 3.95	17.24	10.73
	2	- 3.95	21.39	14.88
	3	- 3.95	25.54	19.03
	4	3.95	17.24	10.73
	5	3.95	21.39	14.88
	6	3.95	25.54	19.03
Earthwire Attachment Point	7	- 3.95	28.11	25.45
	8	3.95	28.11	25.45

2/3 E/W sag 2.66

Database Information for Overhead Lines

Reference No. 1L15 Title : ORUWALA(T) - THULHIRIYA(T)

No.	Item	Unit	Data
1	Voltage	kV	132 (Kolonnawa -Polpitiya No. 1 & 2)
2	Line Length	km	36.0 *
3	No. of Circuits		2
4	Conductor Type / Name		ACSR "LYNX"
5	Conductor Size	mm^2	183.4
6	No. of Subconductors / Phase		1
7	Subconductor Spacing	mm	—
8	Earthwire Type / Name		GS 19 / 2.36
9	Earthwire Size	mm^2	83.11
10	No. of Earthwires		2
11	Basic Span	m	305
12	Max Operating Temperature	deg C	54
13	Basic Span Sag at max Temp.	m	6.30
14	Earthwire Sag at EDT	m	3.99
15	Minimum Ground Clearance	m	6.71
16	Tower Configuration		1
17	Insulator Type		CAP & PIN
18	Insulator Material		PORCELAIN
19	Insulator Design		STANDARD
20	Creepage / Disc	mm	292
21	Disc Spacing	mm	140
22	No. of Discs - Suspension		12
23	No. of Discs - Tension		13
24	Suspension Insulator Set Length	m	2.2 *
25	Mechanical Rating - Suspension	kN	
26	Mechanical Rating - Tension	kN	
27	Specific Creepage of Set	mm / kV	24
28	Insulator Manufacturer		
29	Tower Manufacturer		SAE, ITALY
30	Conductor Manufacturer		
31	Main Contractor		SAE, ITALY
32	Date of Completion		1959

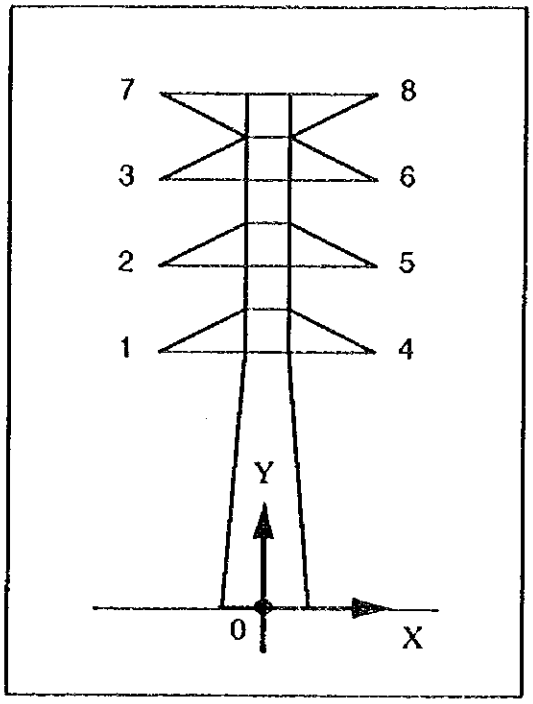
TOWER CONFIGURATION 1

Ref No.	1L15	(same as 1L13)
Title	ORUWALA(T) - THULHIRIYA(T)	
Voltage	132 kV	

Double Circuit, Vertical Formation, 2 Earthwires

Phase(R-Y-B)	
3	R
2	B
1	Y

Phase Transposition Occurs



Phase(R-Y-B)	
6	R
5	B
4	Y

Insulator length + 2/3 sag 6.40

Suspension Tower Dimensions (m)		X	Y	Y_{AV}
Centre Point of Tower Base		0	0	0
Conductor Attachment Point	1	- 3.95	17.24	10.84
	2	- 3.95	21.39	14.99
	3	- 3.95	25.54	19.14
	4	3.95	17.24	10.84
	5	3.95	21.39	14.99
	6	3.95	25.54	19.14
Earthwire Attachment Point	7	- 3.95	28.11	25.45
	8	3.95	28.11	25.45

2/3 E/W sag 2.66

Database Information for Overhead Lines

Reference No. 1L16 Title : THULHIRIYA(T) - SS

No.	Item	Unit	Data
1	Voltage	kV	132
2	Line Length	km	23.9
3	No. of Circuits		2
4	Conductor Type / Name		ACSR "LYNX"
5	Conductor Size	mm²	183.4
6	No. of Subconductors / Phase		1
7	Subconductor Spacing	mm	—
8	Earthwire Type / Name		GS 19/2.36
9	Earthwire Size	mm²	83.1
10	No. of Earthwires		2
11	Basic Span	m	305
12	Max Operating Temperature	deg C	54
13	Basic Span Sag at max Temp.	m	6.30
14	Earthwire Sag at EDT	m	3.99
15	Minimum Ground Clearance	m	6.71
16	Tower Configuration		1
17	Insulator Type		CAP & PIN
18	Insulator Material		PORCELAIN
19	Insulator Design		STANDARD
20	Creepage / Disc	mm	292
21	Disc Spacing	mm	140
22	No. of Discs - Suspension		12
23	No. of Discs - Tension		13
24	Suspension Insulator Set Length	m	2.086
25	Mechanical Rating - Suspension	kN	67
26	Mechanical Rating - Tension	kN	125
27	Specific Creepage of Set	mm / kV	24
28	Insulator Manufacturer		NGK, JAPAN
29	Tower Manufacturer		SUMITOMO, JAPAN
30	Conductor Manufacturer		SUMITOMO, JAPAN
31	Main Contractor		SUMITOMO, JAPAN
32	Date of Completion		1971

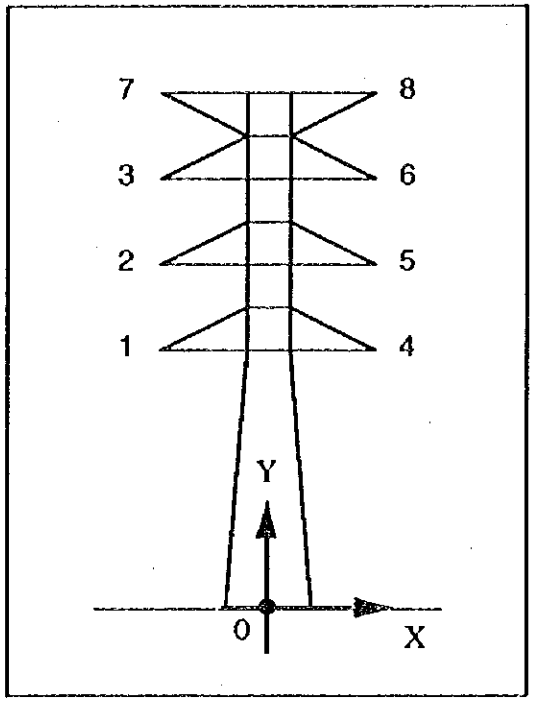
TOWER CONFIGURATION 1

Ref No.	1L16	(same as 1L5)
Title	THULHIRIYA(T) - SS	
Voltage	132 kV	

Double Circuit, Vertical Formation, 2 Earthwires

TOWER TYPE XXAL

Phase(R-Y-B)	
3	R
2	B
1	Y



Phase(R-Y-B)	
6	R
5	B
4	Y

Insulator length + 2/3 sag 6.29

Suspension Tower Dimensions (m)		X	Y	Y_{AV}
Centre Point of Tower Base		0	0	0
Conductor Attachment Point	1	- 3.66	15.65	9.36
	2	- 3.66	19.49	13.20
	3	- 3.66	23.32	17.03
	4	3.66	15.65	9.36
	5	3.66	19.49	13.20
	6	3.66	23.32	17.03
Earthwire Attachment Point	7	- 3.66	26.37	23.71
	8	3.66	26.37	23.71

2/3 E/W sag 2.66

Database Information for Overhead Lines

Reference No. 1L17 Title : THULHIRIYA(T) - POLPITIYA

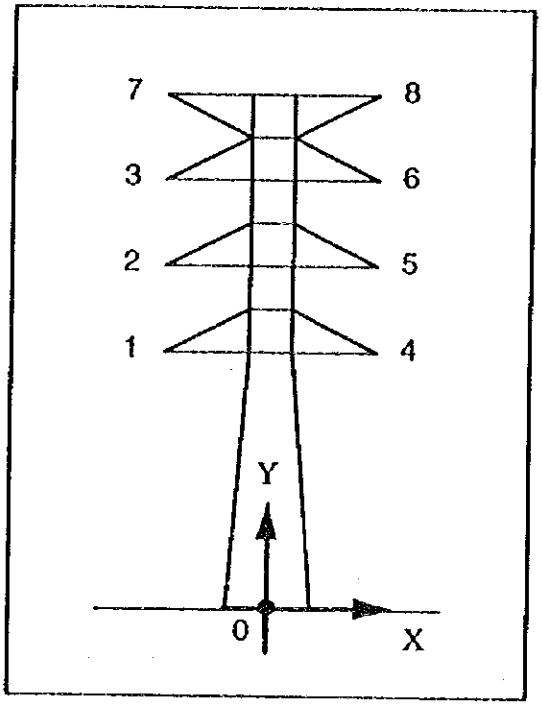
No.	Item	Unit	Data
1	Voltage	kV	132 (KOLONNAWA - POLPITIYA No. 1 & 2)
2	Line Length	km	28.0 *
3	No. of Circuits		2
4	Conductor Type / Name		ACSR "LYNX"
5	Conductor Size	mm^2	183.4
6	No. of Subconductors / Phase		1
7	Subconductor Spacing	mm	—
8	Earthwire Type / Name		GS 19/2.36
9	Earthwire Size	mm^2	83.11
10	No. of Earthwires		2
11	Basic Span	m	305
12	Max Operating Temperature	deg C	54
13	Basic Span Sag at max Temp.	m	6.30
14	Earthwire Sag at EDT	m	3.99
15	Minimum Ground Clearance	m	6.71
16	Tower Configuration		1
17	Insulator Type		CAP & PIN
18	Insulator Material		PORCELAIN
19	Insulator Design		STANDARD
20	Creepage / Disc	mm	292
21	Disc Spacing	mm	140
22	No. of Discs - Suspension		12
23	No. of Discs - Tension		13
24	Suspension Insulator Set Length	m	2.2 *
25	Mechanical Rating - Suspension	kN	
26	Mechanical Rating - Tension	kN	
27	Specific Creepage of Set	mm / kV	24
28	Insulator Manufacturer		
29	Tower Manufacturer		SAE, ITALY
30	Conductor Manufacturer		
31	Main Contractor		SAE, ITALY
32	Date of Completion		1959

TOWER CONFIGURATION 1

Ref No.	IL17	(same as IL13)
Title	THULHIRIYA(T) - POLPITIYA	
Voltage	132 kV	

Double Circuit, Vertical Formation, 2 Earthwires

Phase(R-Y-B)	
3	R
2	B
1	Y



Phase(R-Y-B)	
6	R
5	B
4	Y

Insulator length + 2/3 sag 6.40

Suspension Tower Dimensions (m)		X	Y	Y_{AV}
Centre Point of Tower Base		0	0	0
Conductor Attachment Point	1	- 3.95	17.24	10.84
	2	- 3.95	21.39	14.99
	3	- 3.95	25.54	19.14
	4	3.95	17.24	10.84
	5	3.95	21.39	14.99
	6	3.95	25.54	19.14
Earthwire Attachment Point	7	- 3.95	28.11	25.45
	8	3.95	28.11	25.45

2/3 E/W sag 2.66

Database Information for Overhead Lines

Reference No. IL18 Title : KOLONNAWA - AVISSAWELLA(T)

No.	Item	Unit	Data
1	Voltage	kV	132 (KOLONNAWA - POLPITIYA No. 3 & 4)
2	Line Length	km	31.9
3	No. of Circuits		2
4	Conductor Type / Name		ACSR "LYNX"
5	Conductor Size	mm^2	183.4
6	No. of Subconductors / Phase		1
7	Subconductor Spacing	mm	—
8	Earthwire Type / Name		GS 19/2.36
9	Earthwire Size	mm^2	83.1
10	No. of Earthwires		2
11	Basic Span	m	305
12	Max Operating Temperature	deg C	54
13	Basic Span Sag at max Temp.	m	6.30
14	Earthwire Sag at EDT	m	3.99
15	Minimum Ground Clearance	m	6.71
16	Tower Configuration		1
17	Insulator Type		CAP & PIN
18	Insulator Material		PORCELAIN
19	Insulator Design		STANDARD
20	Creepage / Disc	mm	292
21	Disc Spacing	mm	140
22	No. of Discs - Suspension		12
23	No. of Discs - Tension		13
24	Suspension Insulator Set Length	m	2.086
25	Mechanical Rating - Suspension	kN	67
26	Mechanical Rating - Tension	kN	125
27	Specific Creepage of Set	mm / kV	24
28	Insulator Manufacturer		NGK, JAPAN
29	Tower Manufacturer		SUMITOMO, JAPAN
30	Conductor Manufacturer		SUMITOMO, JAPAN
31	Main Contractor		SUMITOMO, JAPAN
32	Date of Completion		1971

TOWER CONFIGURATION 1

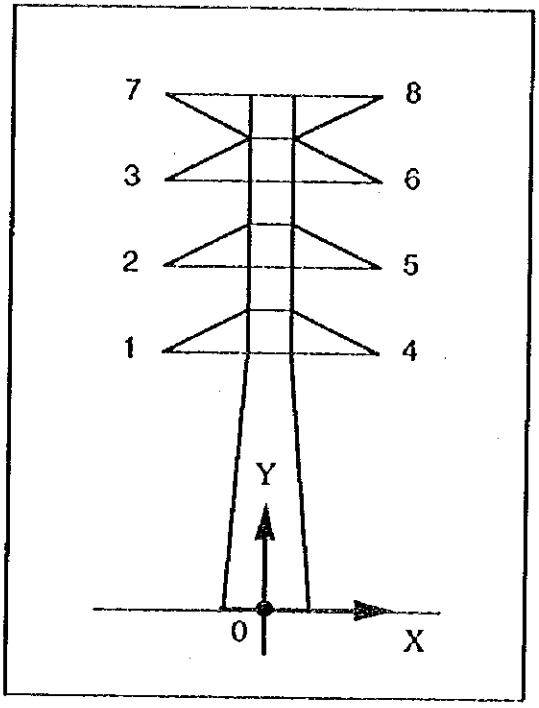
Ref No.	1L18 (same as 1L5)
Title	KOLONNAWA - AVISSAWELLA(T)
Voltage	132 kV

Double Circuit, Vertical Formation, 2 Earthwires

TOWER TYPE XXAL

Phase(R-Y-B)	
3	R
2	B
1	Y

Phase Transposition Occurs



Phase(R-Y-B)	
6	Y
5	B
4	R

Insulator length + 2/3 sag 6.29

Suspension Tower Dimensions (m)		X	Y	Y_{AV}
Centre Point of Tower Base		0	0	0
Conductor Attachment Point	1	- 3.66	15.65	9.36
	2	- 3.66	19.49	13.20
	3	- 3.66	23.32	17.03
	4	3.66	15.65	9.36
	5	3.66	19.49	13.20
	6	3.66	23.32	17.03
Earthwire Attachment Point	7	- 3.66	26.37	23.71
	8	3.66	26.37	23.71

2/3 E/W sag 2.66

Database Information for Overhead Lines

Reference No. 1L19 Title : AVISSAWELLA (T) - SS

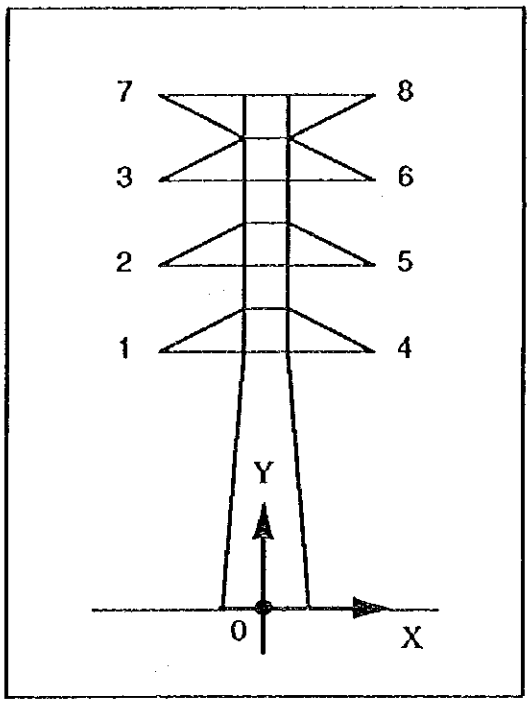
No.	Item	Unit	Data
1	Voltage	kV	132
2	Line Length	km	0.5 *
3	No. of Circuits		2
4	Conductor Type / Name		ACSR "LYNX"
5	Conductor Size	mm^2	183.4
6	No. of Subconductors / Phase		1
7	Subconductor Spacing	mm	—
8	Earthwire Type / Name		GS 7/3.25
9	Earthwire Size	mm^2	58.07
10	No. of Earthwires		2
11	Basic Span	m	305
12	Max Operating Temperature	deg C	75
13	Basic Span Sag at max Temp.	m	7.88
14	Earthwire Sag at EDT	m	4.89
15	Minimum Ground Clearance	m	7.01
16	Tower Configuration		1
17	Insulator Type		CAP & PIN
18	Insulator Material		PORCELAIN
19	Insulator Design		STANDARD
20	Creepage / Disc	mm	292
21	Disc Spacing	mm	146
22	No. of Discs - Suspension		12
23	No. of Discs - Tension		12
24	Suspension Insulator Set Length	m	2.27
25	Mechanical Rating - Suspension	kN	70
26	Mechanical Rating - Tension	kN	120
27	Specific Creepage of Set	mm / kV	22
28	Insulator Manufacturer		NGK, JAPAN
29	Tower Manufacturer		SAE, INDIA
30	Conductor Manufacturer		ALUMINIUM INDUSTRIES, INDIA
31	Main Contractor		SRI U-THONG, THAILAND
32	Date of Completion		anticipated 1996

TOWER CONFIGURATION 1

Ref No.	1L19	(same as 1L24)
Title	AVISSAWELLA (T) - SS	
Voltage	132 kV	

Double Circuit, Vertical Formation, 2 Earthwires

Phase(R-Y-B)	
3	
2	
1	



Phase(R-Y-B)	
6	
5	
4	

Insulator length + 2/3 sag 7.52

Suspension Tower Dimensions (m)		X	Y	Y_{AV}
Centre Point of Tower Base		0	0	0
Conductor Attachment Point	1	- 3.90	17.25	9.73
	2	- 3.67	21.44	13.92
	3	- 3.67	25.58	18.06
	4	3.90	17.25	9.73
	5	3.67	21.44	13.92
	6	3.67	25.58	18.06
Earthwire Attachment Point	7	- 3.67	27.25	23.99
	8	3.67	27.25	23.99

2/3 E/W sag 3.26

Database Information for Overhead Lines

Reference No. 1L20 Title : AVISSAWELLA(T) - POLPITIYA

No.	Item	Unit	Data
1	Voltage	kV	132 (KOLONNAWA - POLPITIYA No. 3 & 4)
2	Line Length	km	34.4
3	No. of Circuits		2
4	Conductor Type / Name		ACSR "LYNX"
5	Conductor Size	mm^2	183.4
6	No. of Subconductors / Phase		1
7	Subconductor Spacing	mm	—
8	Earthwire Type / Name		GS 19/2.36
9	Earthwire Size	mm^2	83.1
10	No. of Earthwires		2
11	Basic Span	m	305
12	Max Operating Temperature	deg C	54
13	Basic Span Sag at max Temp.	m	6.30
14	Earthwire Sag at EDT	m	3.99
15	Minimum Ground Clearance	m	6.71
16	Tower Configuration		1
17	Insulator Type		CAP & PIN
18	Insulator Material		PORCELAIN
19	Insulator Design		STANDARD
20	Creepage / Disc	mm	292
21	Disc Spacing	mm	140
22	No. of Discs - Suspension		12
23	No. of Discs - Tension		13
24	Suspension Insulator Set Length	m	2.086
25	Mechanical Rating - Suspension	kN	67
26	Mechanical Rating - Tension	kN	125
27	Specific Creepage of Set	mm / kV	24
28	Insulator Manufacturer		NGK, JAPAN
29	Tower Manufacturer		SUMITOMO, JAPAN
30	Conductor Manufacturer		SUMITOMO, JAPAN
31	Main Contractor		SUMITOMO, JAPAN
32	Date of Completion		1971

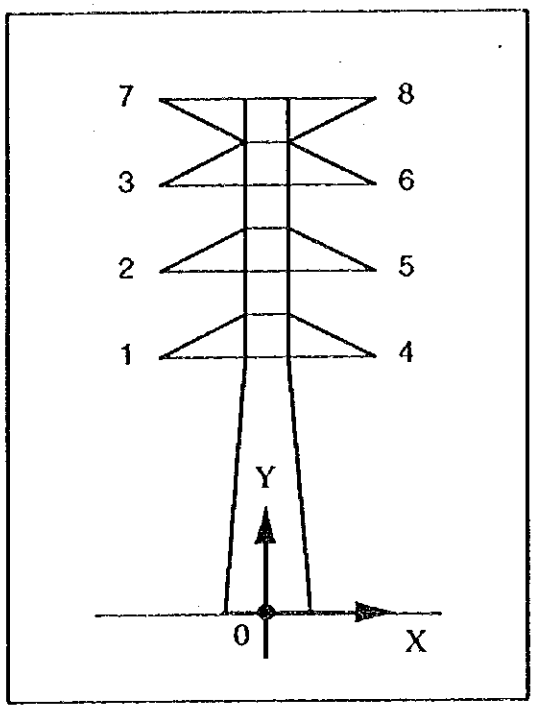
TOWER CONFIGURATION 1

Ref No.	1L20	(same as 1L5)
Title	AVISSAWELLA(T) - POLPITIYA	
Voltage	132 kV	

Double Circuit, Vertical Formation, 2 Earthwires

TOWER TYPE XXAL

Phase(R-Y-B)	
3	Y
2	R
1	B



Phase(R-Y-B)	
6	B
5	R
4	Y

Insulator length + 2/3 sag 6.29

Suspension Tower Dimensions (m)		X	Y	Y_{AV}
Centre Point of Tower Base		0	0	0
Conductor Attachment Point	1	- 3.66	15.65	9.36
	2	- 3.66	19.49	13.20
	3	- 3.66	23.32	17.03
	4	3.66	15.65	9.36
	5	3.66	19.49	13.20
	6	3.66	23.32	17.03
Earthwire Attachment Point	7	- 3.66	26.37	23.71
	8	3.66	26.37	23.71

2/3 E/W sag 2.66

Database Information for Overhead Lines

Reference No. 1L21 Title : PANNIPITIYA - RATMALANA

No.	Item	Unit	Data
1	Voltage	kV	132
2	Line Length	km	6.9
3	No. of Circuits		2
4	Conductor Type / Name		ACSR "LYNX"
5	Conductor Size	mm²	183.4
6	No. of Subconductors / Phase		1
7	Subconductor Spacing	mm	—
8	Earthwire Type / Name		GS 19/2.36
9	Earthwire Size	mm²	83.1
10	No. of Earthwires		2
11	Basic Span	m	305
12	Max Operating Temperature	deg C	54
13	Basic Span Sag at max Temp.	m	6.30
14	Earthwire Sag at EDT	m	3.99
15	Minimum Ground Clearance	m	6.71
16	Tower Configuration		1
17	Insulator Type		CAP & PIN
18	Insulator Material		PORCELAIN
19	Insulator Design		STANDARD
20	Creepage / Disc	mm	292
21	Disc Spacing	mm	140
22	No. of Discs - Suspension		12
23	No. of Discs - Tension		13
24	Suspension Insulator Set Length	m	2.086
25	Mechanical Rating - Suspension	kN	67
26	Mechanical Rating - Tension	kN	125
27	Specific Creepage of Set	mm / kV	24
28	Insulator Manufacturer		NGK, JAPAN
29	Tower Manufacturer		SUMITOMO, JAPAN
30	Conductor Manufacturer		SUMITOMO, JAPAN
31	Main Contractor		SUMITOMO, JAPAN
32	Date of Completion		1971 (2nd cct 1984)

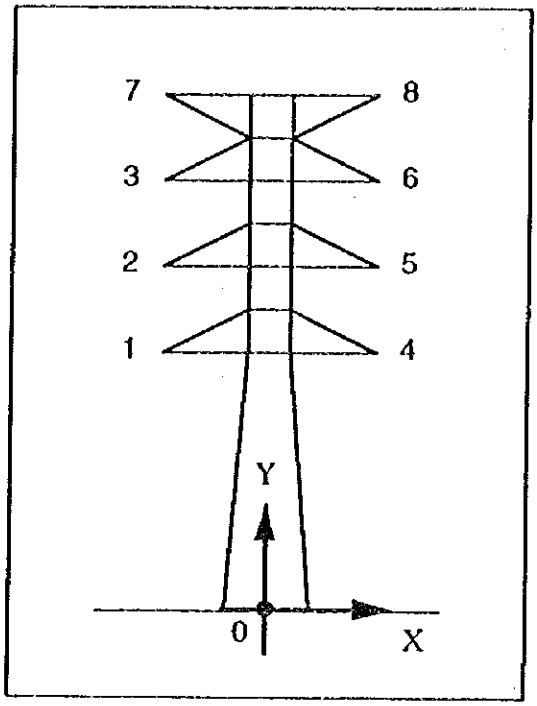
TOWER CONFIGURATION 1

Ref No.	1L21 (same as 1L5)
Title	PANNIPITIYA - RATMALANA
Voltage	132 kV

Double Circuit, Vertical Formation, 2 Earthwires

TOWER TYPE XXAL

Phase(R-Y-B)	
3	R
2	Y
1	B



Phase(R-Y-B)	
6	B
5	Y
4	R

Insulator length + 2/3 sag 6.29

Suspension Tower Dimensions (m)		X	Y	Y_{AV}
Centre Point of Tower Base		0	0	0
Conductor Attachment Point	1	- 3.66	15.65	9.36
	2	- 3.66	19.49	13.20
	3	- 3.66	23.32	17.03
	4	3.66	15.65	9.36
	5	3.66	19.49	13.20
	6	3.66	23.32	17.03
Earthwire Attachment Point	7	- 3.66	26.37	23.71
	8	3.66	26.37	23.71

2/3 E/W sag 2.66

Database Information for Overhead Lines

Reference No. 1L22 Title : PANNIPITIYA - PANADURA(T)

No.	Item	Unit	Data
1	Voltage	kV	132
2	Line Length	km	12.3
3	No. of Circuits		2
4	Conductor Type / Name		ACSR "GOAT"
5	Conductor Size	mm^2	324.3
6	No. of Subconductors / Phase		1
7	Subconductor Spacing	mm	—
8	Earthwire Type / Name		GS 7 / 3.5
9	Earthwire Size	mm^2	58.07
10	No. of Earthwires		1
11	Basic Span	m	305
12	Max Operating Temperature	deg C	75
13	Basic Span Sag at max Temp.	m	7.02
14	Earthwire Sag at EDT	m	3.97
15	Minimum Ground Clearance	m	6.71
16	Tower Configuration		2
17	Insulator Type		CAP & PIN
18	Insulator Material		PORCELAIN
19	Insulator Design		STANDARD
20	Creepage / Disc	mm	292
21	Disc Spacing	mm	146
22	No. of Discs - Suspension		12
23	No. of Discs - Tension		13
24	Suspension Insulator Set Length	m	2.2 *
25	Mechanical Rating - Suspension	kN	
26	Mechanical Rating - Tension	kN	
27	Specific Creepage of Set	mm / kV	24
28	Insulator Manufacturer		NGK, JAPAN
29	Tower Manufacturer		HIND GALVANIZING INDIA
30	Conductor Manufacturer		
31	Main Contractor		CEB
32	Date of Completion		1985

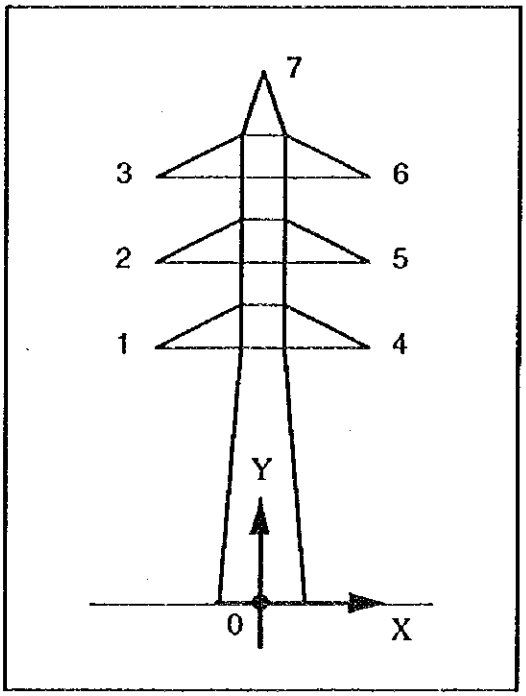
TOWER CONFIGURATION 2

Ref No.	1L22
Title	PANNIPITIYA - PANADURA(T)
Voltage	132 kV

Double Circuit, Vertical Formation, 1 Earthwire

TOWER TYPE NDAL

Phase(R-Y-B)	
3	B
2	Y
1	R



Phase(R-Y-B)	
6	R
5	Y
4	B

Insulator length + 2/3 sag 6.88

Suspension Tower Dimensions (m)		X	Y	Y_{AV}
Centre Point of Tower Base		0	0	0
Conductor Attachment Point	1	- 3.70	15.21	8.33
	2	- 3.55	19.26	12.38
	3	- 3.55	23.31	16.43
	4	3.70	15.21	8.33
	5	3.55	19.26	12.38
	6	3.55	23.31	16.43
Earthwire Attachment Point	7	0	27.31	24.66

2/3 E/W sag 2.65

Database Information for Overhead Lines

Reference No. 1L23 Title : PANADURA(T) - MATUGAMA

No.	Item	Unit	Data
1	Voltage	kV	132
2	Line Length	km	29.1
3	No. of Circuits		2
4	Conductor Type / Name		ACSR "GOAT"
5	Conductor Size	mm^2	324.3
6	No. of Subconductors / Phase		1
7	Subconductor Spacing	mm	—
8	Earthwire Type / Name		GS 7 / 3.5
9	Earthwire Size	mm^2	58.07
10	No. of Earthwires		1
11	Basic Span	m	305
12	Max Operating Temperature	deg C	75
13	Basic Span Sag at max Temp.	m	7.02
14	Earthwire Sag at EDT	m	3.97
15	Minimum Ground Clearance	m	6.71
16	Tower Configuration		2
17	Insulator Type		CAP & PIN
18	Insulator Material		PORCELAIN
19	Insulator Design		STANDARD
20	Creepage / Disc	mm	292
21	Disc Spacing	mm	146
22	No. of Discs - Suspension		12
23	No. of Discs - Tension		13
24	Suspension Insulator Set Length	m	2.2 *
25	Mechanical Rating - Suspension	kN	
26	Mechanical Rating - Tension	kN	
27	Specific Creepage of Set	mm / kV	24
28	Insulator Manufacturer		NGK, JAPAN
29	Tower Manufacturer		HIND GALVANIZING INDIA
30	Conductor Manufacturer		
31	Main Contractor		CEB
32	Date of Completion		1985

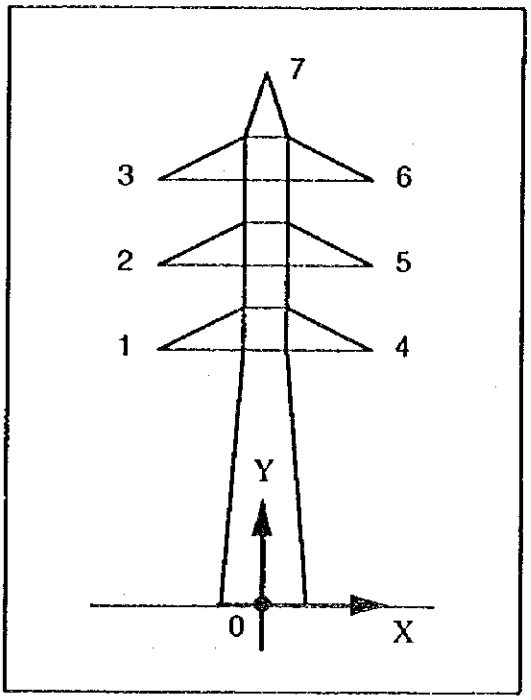
TOWER CONFIGURATION 2

Ref No.	1L23	(same as 1L22)
Title	PANADURA(T) - MATUGAMA	
Voltage	132 kV	

Double Circuit, Vertical Formation, 1 Earthwire

TOWER TYPE NDAL

Phase(R-Y-B)	
3	B
2	Y
1	R



Phase(R-Y-B)	
6	R
5	Y
4	B

Insulator length + 2/3 sag 6.88

Suspension Tower Dimensions (m)		X	Y	Y_{AV}
Centre Point of Tower Base		0	0	0
Conductor Attachment Point	1	- 3.70	15.21	8.33
	2	- 3.55	19.26	12.38
	3	- 3.55	23.31	16.43
	4	3.70	15.21	8.33
	5	3.55	19.26	12.38
	6	3.55	23.31	16.43
Earthwire Attachment Point	7	0	27.31	24.66

2/3 E/W sag 2.65

Database Information for Overhead Lines

Reference No. 1L24 Title : PANADURA(T) - SS

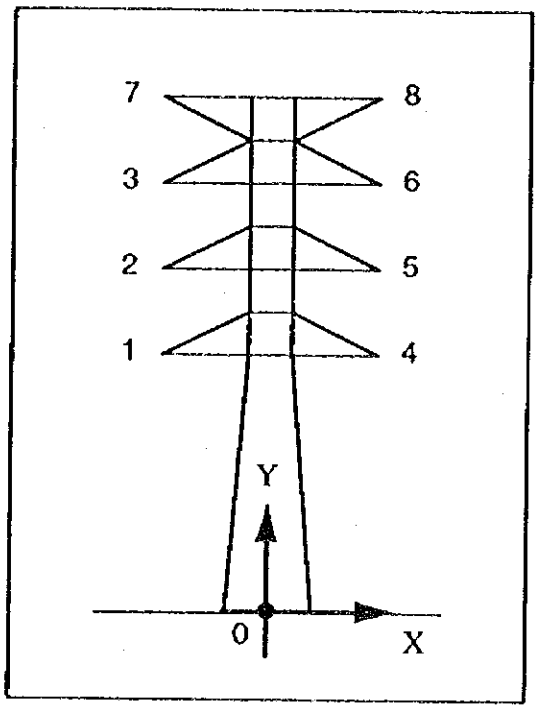
No.	Item	Unit	Data
1	Voltage	kV	132
2	Line Length	km	4.7
3	No. of Circuits		2
4	Conductor Type / Name		ACSR "LYNX"
5	Conductor Size	mm^2	183.4
6	No. of Subconductors / Phase		1
7	Subconductor Spacing	mm	—
8	Earthwire Type / Name		GS 7/3.25
9	Earthwire Size	mm^2	58.07
10	No. of Earthwires		2
11	Basic Span	m	305
12	Max Operating Temperature	deg C	75
13	Basic Span Sag at max Temp.	m	7.88
14	Earthwire Sag at EDT	m	4.89
15	Minimum Ground Clearance	m	7.01
16	Tower Configuration		1
17	Insulator Type		CAP & PIN
18	Insulator Material		PORCELAIN
19	Insulator Design		STANDARD
20	Creepage / Disc	mm	292
21	Disc Spacing	mm	146
22	No. of Discs - Suspension		11
23	No. of Discs - Tension		12
24	Suspension Insulator Set Length	m	2.27
25	Mechanical Rating - Suspension	kN	70
26	Mechanical Rating - Tension	kN	120
27	Specific Creepage of Set	mm / kV	22
28	Insulator Manufacturer		NGK, JAPAN
29	Tower Manufacturer		SAE, INDIA
30	Conductor Manufacturer		ALUMINIUM INDUSTRIES, INDIA
31	Main Contractor		SRI U-THONG, THAILAND
32	Date of Completion		1995

TOWER CONFIGURATION 1

Ref No.	1L24
Title	PANADURA(T) - SS
Voltage	132 kV

Double Circuit, Vertical Formation, 2 Earthwires

Phase(R-Y-B)	
3	B
2	Y
1	R



Phase(R-Y-B)	
6	B
5	Y
4	R

Insulator length + 2/3 sag 7.52

Suspension Tower Dimensions (m)		X	Y	Y_{AV}
Centre Point of Tower Base		0	0	0
Conductor Attachment Point	1	- 3.90	17.25	9.73
	2	- 3.67	21.44	13.92
	3	- 3.67	25.58	18.06
	4	3.90	17.25	9.73
	5	3.67	21.44	13.92
	6	3.67	25.58	18.06
Earthwire Attachment Point	7	- 3.67	27.25	23.99
	8	3.67	27.25	23.99

2/3 E/W sag 3.26

Database Information for Overhead Lines

Reference No. 1L25 Title : POLPITIYA - LAXAPANA

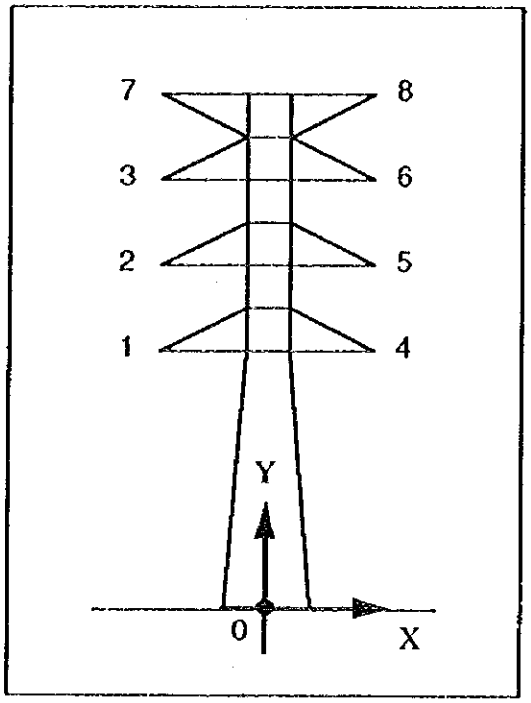
No.	Item	Unit	Data
1	Voltage	kV	132
2	Line Length	km	8.3
3	No. of Circuits		2
4	Conductor Type / Name		ACSR "LYNX"
5	Conductor Size	mm^2	183.4
6	No. of Subconductors / Phase		1
7	Subconductor Spacing	mm	—
8	Earthwire Type / Name		GS 19/2.36
9	Earthwire Size	mm^2	83.11
10	No. of Earthwires		2
11	Basic Span	m	305
12	Max Operating Temperature	deg C	54
13	Basic Span Sag at max Temp.	m	6.30
14	Earthwire Sag at EDT	m	3.99
15	Minimum Ground Clearance	m	6.71
16	Tower Configuration		1
17	Insulator Type		CAP & PIN
18	Insulator Material		PORCELAIN
19	Insulator Design		STANDARD
20	Creepage / Disc	mm	292
21	Disc Spacing	mm	140
22	No. of Discs - Suspension		12
23	No. of Discs - Tension		13
24	Suspension Insulator Set Length	m	2.2 *
25	Mechanical Rating - Suspension	kN	
26	Mechanical Rating - Tension	kN	
27	Specific Creepage of Set	mm / kV	24
28	Insulator Manufacturer		
29	Tower Manufacturer		SAE, ITALY
30	Conductor Manufacturer		
31	Main Contractor		SAE, ITALY
32	Date of Completion		1960

TOWER CONFIGURATION 1

Ref No.	1L25	(same as 1L13)
Title	POLPITIYA - LAXAPANA	
Voltage	132 kV	

Double Circuit, Vertical Formation, 2 Earthwires

Phase(R-Y-B)	
3	R
2	Y
1	B



Phase(R-Y-B)	
6	B
5	Y
4	R

Insulator length + 2/3 sag 6.40

Suspension Tower Dimensions (m)		X	Y	Y_{AV}
Centre Point of Tower Base		0	0	0
Conductor Attachment Point	1	- 3.95	17.24	10.84
	2	- 3.95	21.39	14.99
	3	- 3.95	25.54	19.14
	4	3.95	17.24	10.84
	5	3.95	21.39	14.99
	6	3.95	25.54	19.14
Earthwire Attachment Point	7	- 3.95	28.11	25.45
	8	3.95	28.11	25.45

2/3 E/W sag 2.66

Database Information for Overhead Lines

Reference No. 1L26 Title : LAXAPANA - WIMALASURENDRA

No.	Item	Unit	Data
1	Voltage	kV	132
2	Line Length	km	5.1 *
3	No. of Circuits		2
4	Conductor Type / Name		ACSR "LYNX"
5	Conductor Size	mm²	183.4
6	No. of Subconductors / Phase		1
7	Subconductor Spacing	mm	—
8	Earthwire Type / Name		GS 19/2.36
9	Earthwire Size	mm²	83.11
10	No. of Earthwires		2
11	Basic Span	m	305
12	Max Operating Temperature	deg C	54
13	Basic Span Sag at max Temp.	m	6.30
14	Earthwire Sag at EDT	m	3.99
15	Minimum Ground Clearance	m	6.71
16	Tower Configuration		1
17	Insulator Type		CAP & PIN
18	Insulator Material		GLASS
19	Insulator Design		STANDARD
20	Creepage / Disc	mm	286
21	Disc Spacing	mm	140
22	No. of Discs - Suspension		12
23	No. of Discs - Tension		11
24	Suspension Insulator Set Length	m	2.49
25	Mechanical Rating - Suspension	kN	80
26	Mechanical Rating - Tension	kN	160
27	Specific Creepage of Set	mm / kV	23.7
28	Insulator Manufacturer		SEDIVER, FRANCE
29	Tower Manufacturer		SAE, ITALY
30	Conductor Manufacturer		LAMITREF, BELGIUM
31	Main Contractor		SAE, ITALY
32	Date of Completion		1963

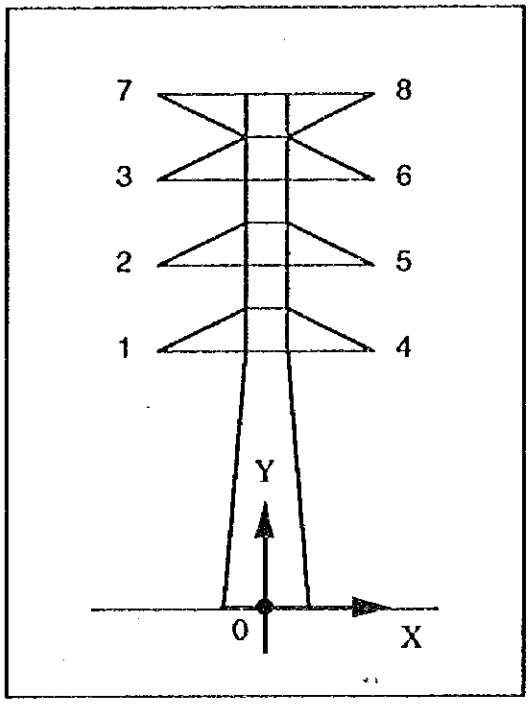
TOWER CONFIGURATION 1

Ref No.	1L26	(same as 1L4)
Title	LAXAPANA - WIMALASURENDRA	
Voltage	132 kV	

Double Circuit, Vertical Formation, 2 Earthwires

TOWER TYPE GGAL

Phase(R-Y-B)	
3	R
2	Y
1	B



Phase(R-Y-B)	
6	B
5	Y
4	R

Insulator length + 2/3 sag 6.69

Suspension Tower Dimensions (m)		X	Y	Y_{AV}
Centre Point of Tower Base		0	0	0
Conductor Attachment Point	1	-3.96	16.93	10.24
	2	-3.20	21.05	14.36
	3	-3.20	25.16	18.47
	4	3.96	16.93	10.24
	5	3.20	21.05	14.36
	6	3.20	25.16	18.47
Earthwire Attachment Point	7	-3.20	27.85	25.19
	8	3.20	27.85	25.19

2/3 E/W sag 2.66

Database Information for Overhead Lines

Reference No. IL27 Title : LAXAPANA - NEW LAXAPANA

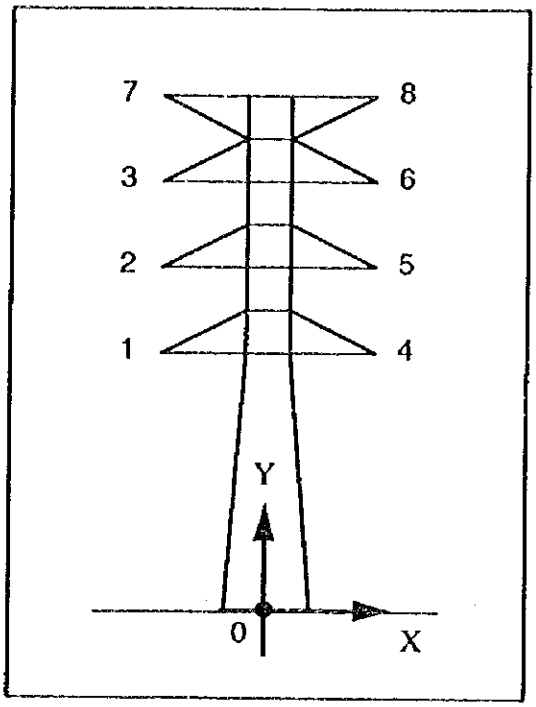
No.	Item	Unit	Data
1	Voltage	kV	132
2	Line Length	km	0.6 *
3	No. of Circuits		2
4	Conductor Type / Name		ACSR "LYNX"
5	Conductor Size	mm²	183.4
6	No. of Subconductors / Phase		1
7	Subconductor Spacing	mm	—
8	Earthwire Type / Name		GS 19/2.36
9	Earthwire Size	mm²	83.11
10	No. of Earthwires		2
11	Basic Span	m	305
12	Max Operating Temperature	deg C	54
13	Basic Span Sag at max Temp.	m	6.30
14	Earthwire Sag at EDT	m	3.99
15	Minimum Ground Clearance	m	6.71
16	Tower Configuration		1
17	Insulator Type		CAP & PIN
18	Insulator Material		PORCELAIN
19	Insulator Design		STANDARD
20	Creepage / Disc	mm	292
21	Disc Spacing	mm	140
22	No. of Discs - Suspension		12
23	No. of Discs - Tension		13
24	Suspension Insulator Set Length	m	2.2 *
25	Mechanical Rating - Suspension	kN	
26	Mechanical Rating - Tension	kN	
27	Specific Creepage of Set	mm / kV	24
28	Insulator Manufacturer		
29	Tower Manufacturer		SAE, ITALY
30	Conductor Manufacturer		
31	Main Contractor		SAE, ITALY
32	Date of Completion		1960

TOWER CONFIGURATION 1

Ref No.	1L27	(same as 1L13)
Title	LAXAPANA - NEW LAXAPANA	
Voltage	132 kV	

Double Circuit, Vertical Formation, 2 Earthwires

Phase(R-Y-B)	
3	B
2	Y
1	R



Phase(R-Y-B)	
6	R
5	Y
4	B

Insulator length + 2/3 sag 6.40

Suspension Tower Dimensions (m)		X	Y	Y_{AV}
Centre Point of Tower Base		0	0	0
Conductor Attachment Point	1	- 3.95	17.24	10.84
	2	- 3.95	21.39	14.99
	3	- 3.95	25.54	19.14
	4	3.95	17.24	10.84
	5	3.95	21.39	14.99
	6	3.95	25.54	19.14
Earthwire Attachment Point	7	- 3.95	28.11	25.45
	8	3.95	28.11	25.45

2/3 E/W sag 2.66

Database Information for Overhead Lines

Reference No. 1L28 Title : NEW LAXAPANA - POLPITIYA

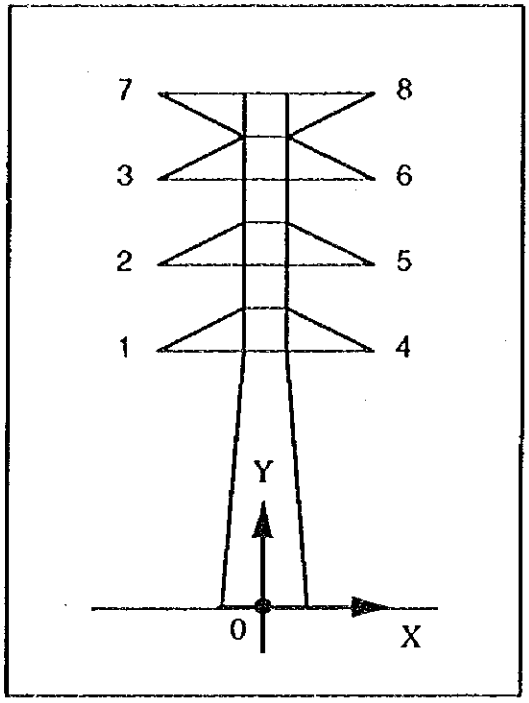
No.	Item	Unit	Data
1	Voltage	kV	132
2	Line Length	km	8.0 *
3	No. of Circuits		2
4	Conductor Type / Name		ACSR "LYNX"
5	Conductor Size	mm²	183.4
6	No. of Subconductors / Phase		1
7	Subconductor Spacing	mm	—
8	Earthwire Type / Name		GS 19/2.36
9	Earthwire Size	mm²	83.11
10	No. of Earthwires		2
11	Basic Span	m	305
12	Max Operating Temperature	deg C	54
13	Basic Span Sag at max Temp.	m	6.30
14	Earthwire Sag at EDT	m	3.99
15	Minimum Ground Clearance	m	6.71
16	Tower Configuration		1
17	Insulator Type		CAP & PIN
18	Insulator Material		PORCELAIN
19	Insulator Design		STANDARD
20	Creepage / Disc	mm	292
21	Disc Spacing	mm	140
22	No. of Discs - Suspension		12
23	No. of Discs - Tension		13
24	Suspension Insulator Set Length	m	2.2 *
25	Mechanical Rating - Suspension	kN	
26	Mechanical Rating - Tension	kN	
27	Specific Creepage of Set	mm / kV	24
28	Insulator Manufacturer		
29	Tower Manufacturer		
30	Conductor Manufacturer		
31	Main Contractor		SAE, ITALY
32	Date of Completion		1960

TOWER CONFIGURATION 1

Ref No.	1L28 (same as 1L13)
Title	NEW LAXAPANA - POLPITIYA
Voltage	132 kV

Double Circuit, Vertical Formation, 2 Earthwires

Phase(R-Y-B)	
3	R
2	Y
1	B



Phase(R-Y-B)	
6	B
5	Y
4	R

Insulator length + 2/3 sag 6.40

Suspension Tower Dimensions (m)		X	Y	Y_{AV}
Centre Point of Tower Base		0	0	0
Conductor Attachment Point	1	- 3.95	17.24	10.84
	2	- 3.95	21.39	14.99
	3	- 3.95	25.54	19.14
	4	3.95	17.24	10.84
	5	3.95	21.39	14.99
	6	3.95	25.54	19.14
Earthwire Attachment Point	7	- 3.95	28.11	25.45
	8	3.95	28.11	25.45

2/3 E/W sag 2.66

Database Information for Overhead Lines

Reference No. 1L29 Title : NEW LAXAPANA - CANYON

No.	Item	Unit	Data
1	Voltage	kV	132
2	Line Length	km	10.0 *
3	No. of Circuits		1
4	Conductor Type / Name		ACSR "LYNX"
5	Conductor Size	mm²	183.4
6	No. of Subconductors / Phase		1
7	Subconductor Spacing	mm	—
8	Earthwire Type / Name		GS 19/2.36
9	Earthwire Size	mm²	83.1
10	No. of Earthwires		2
11	Basic Span	m	305
12	Max Operating Temperature	deg C	54
13	Basic Span Sag at max Temp.	m	6.3
14	Earthwire Sag at EDT	m	3.99
15	Minimum Ground Clearance	m	6.71
16	Tower Configuration		5
17	Insulator Type		CAP & PIN
18	Insulator Material		PORCELAIN
19	Insulator Design		STANDARD
20	Creepage / Disc	mm	292
21	Disc Spacing	mm	140
22	No. of Discs - Suspension		12
23	No. of Discs - Tension		13
24	Suspension Insulator Set Length	m	2.134
25	Mechanical Rating - Suspension	kN	
26	Mechanical Rating - Tension	kN	
27	Specific Creepage of Set	mm / kV	24
28	Insulator Manufacturer		
29	Tower Manufacturer		HIND GALVANIZING, INDIA
30	Conductor Manufacturer		
31	Main Contractor		CEB
32	Date of Completion		1983

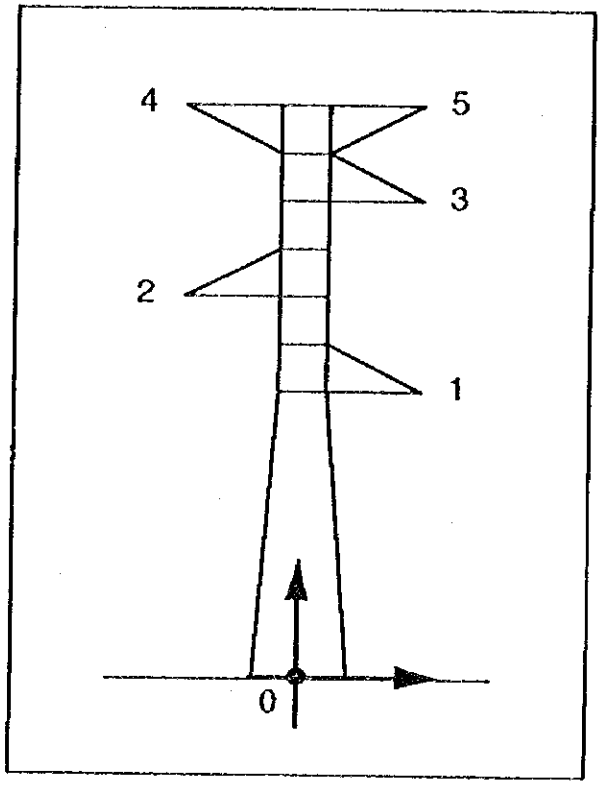
TOWER CONFIGURATION 5

Ref No.	1L29
Title	NEW LAXAPANA - CANYON
Voltage	132 kV

Single Circuit, Semi Delta Formation, 2 Earthwires

TOWER TYPE CCSAL

Phase(R-Y-B)	
3	B
2	R
1	Y



Insulator length + 2/3 sag 6.33

Suspension Tower Dimensions (m)		X	Y	Y_{AV}
Centre Point of Tower Base		0	0	0
Conductor Attachment Point	1	3.50	15.35	9.02
	2	- 3.35	17.35	11.02
	3	3.35	19.35	13.02
Earthwire Attachment Point	4	- 3.35	22.20	19.54
	5	3.35	22.20	19.54

2/3 E/W sag 2.66

Database Information for Overhead Lines

Reference No. 1L30 Title : POLPITIYA - KOTMALE

No.	Item	Unit	Data
1	Voltage	kV	132
2	Line Length	km	29.5
3	No. of Circuits		1 (DOUBLE CIRCUIT TOWER)
4	Conductor Type / Name		ACSR "LYNX"
5	Conductor Size	mm^2	183.4
6	No. of Subconductors / Phase		1
7	Subconductor Spacing	mm	—
8	Earthwire Type / Name		GS 19/2.36
9	Earthwire Size	mm^2	83.1
10	No. of Earthwires		2
11	Basic Span	m	305
12	Max Operating Temperature	deg C	54
13	Basic Span Sag at max Temp.	m	6.30
14	Earthwire Sag at EDT	m	3.99
15	Minimum Ground Clearance	m	6.71
16	Tower Configuration		1
17	Insulator Type		CAP & PIN
18	Insulator Material		PORCELAIN
19	Insulator Design		STANDARD
20	Creepage / Disc	mm	292
21	Disc Spacing	mm	140
22	No. of Discs - Suspension		12
23	No. of Discs - Tension		13
24	Suspension Insulator Set Length	m	2.086
25	Mechanical Rating - Suspension	kN	67
26	Mechanical Rating - Tension	kN	125
27	Specific Creepage of Set	mm / kV	24
28	Insulator Manufacturer		NGK, JAPAN
29	Tower Manufacturer		SUMITOMO, JAPAN
30	Conductor Manufacturer		SUMITOMO, JAPAN
31	Main Contractor		SUMITOMO, JAPAN
32	Date of Completion		1971

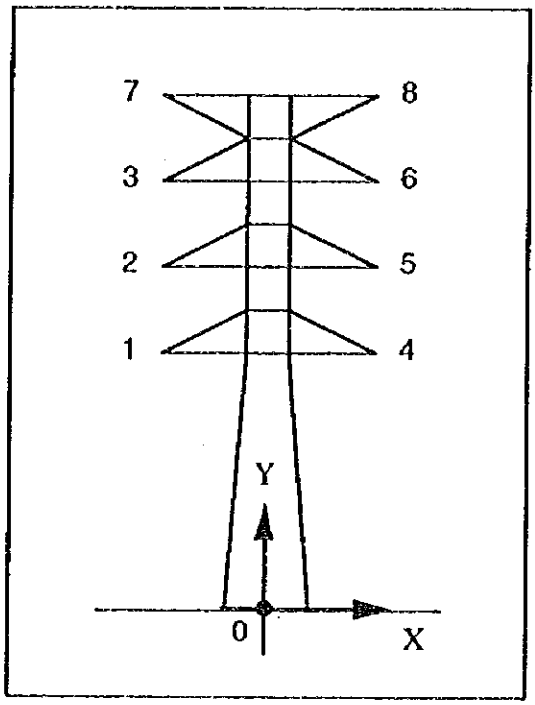
TOWER CONFIGURATION 1

Ref No.	1L30	(same as 1L5)
Title	POLPITIYA - KOTMALE	
Voltage	132 kV	

Double Circuit, Vertical Formation, 2 Earthwires

TOWER TYPE XXAL

Phase(R-Y-B)	
3	R
2	Y
1	B



Phase(R-Y-B)	
6	
5	
4	

Insulator length + 2/3 sag 6.29

Suspension Tower Dimensions (m)		X	Y	Y_{AV}
Centre Point of Tower Base		0	0	0
Conductor Attachment Point	1	- 3.66	15.65	9.36
	2	- 3.66	19.49	13.20
	3	- 3.66	23.32	17.03
	4	3.66	15.65	9.36
	5	3.66	19.49	13.20
	6	3.66	23.32	17.03
Earthwire Attachment Point	7	- 3.66	26.37	23.71
	8	3.66	26.37	23.71

2/3 E/W sag 2.66