

EMISSÃO DE RADIAÇÃO ELETROMAGNÉTICA
Cálculo do Campo Elétrico de Linhas MAT - Perfil do Campo Elétrico kV/m à Tensão Máxima

DADOS

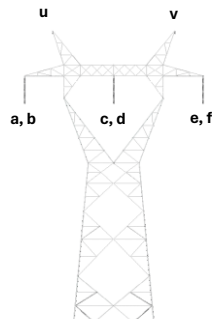
Apoios	Q
Cond. Geminados	Sim
Nº.de ternos	1

C. Condutor	ZAMBEZE
Diâmetro CC [mm]	31.80

C. Guarda	OPGW
Diâmetro CG [mm]	15.80

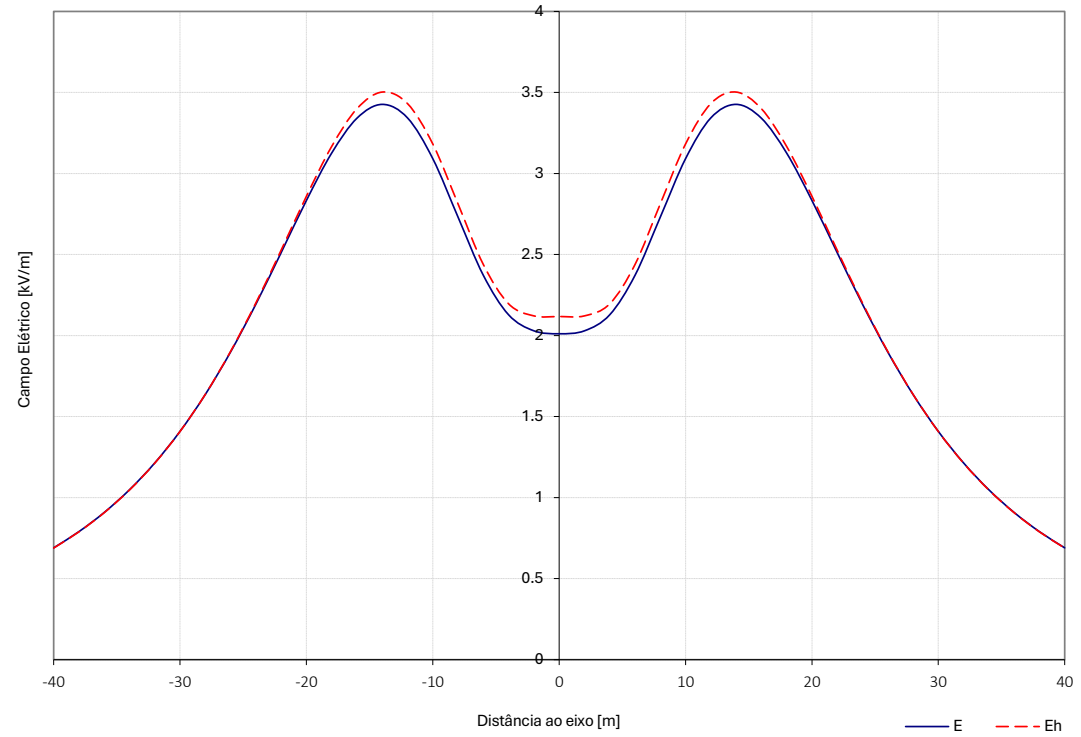
Uc [kV]	420.00
Us [kV]	242.49

Geometria dos Cabos [m]			
Cond.	Fase	X	Y
a	0	-11.60	15.44
b	0	-11.20	15.44
c	4	-0.20	15.44
d	4	0.20	15.44
e	8	11.20	15.44
f	8	11.60	15.44
u	-1	-8.57	20.44
v	1	8.57	20.44



xN	E	Eh
-40	0.69	0.69
-38	0.79	0.79
-36	0.91	0.91
-34	1.05	1.05
-32	1.21	1.21
-30	1.41	1.41
-28	1.64	1.64
-26	1.90	1.90
-24	2.19	2.20
-22	2.51	2.53
-20	2.83	2.86
-18	3.13	3.17
-16	3.34	3.40
-14	3.43	3.50
-12	3.34	3.43
-10	3.09	3.18
-8	2.73	2.81
-6	2.37	2.44
-4	2.13	2.20
-2	2.03	2.12
0	2.01	2.12
2	2.03	2.12
4	2.13	2.20
6	2.37	2.44
8	2.73	2.81
10	3.09	3.18
12	3.34	3.43
14	3.43	3.50
16	3.34	3.40
18	3.13	3.17
20	2.83	2.86
22	2.51	2.53
24	2.19	2.20
26	1.90	1.90
28	1.64	1.64
30	1.41	1.41
32	1.21	1.21
34	1.05	1.05
36	0.91	0.91
38	0.79	0.79
40	0.69	0.69

Perfil Transversal do Campo Elétrico



Cond.	a	b	c	d	e	f	u	v
Emáx. [kV/cm]	15.03	15.26	15.78	15.78	15.26	15.03	7.60	7.60

EMISSÃO DE RADIAÇÃO ELETROMAGNÉTICA
Cálculo do Campo Elétrico de Linhas MAT - Perfil do Campo Elétrico kV/m à Tensão Máxima

DADOS

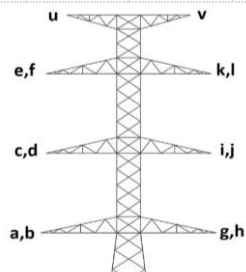
Apoios	DL
Cond. Geminados	Sim
Nº. de ternos	2

C. Condutor	ZAMBEZE
Diâmetro CC [mm]	31.80

C. Guarda	OPGW
Diâmetro CG [mm]	15.80

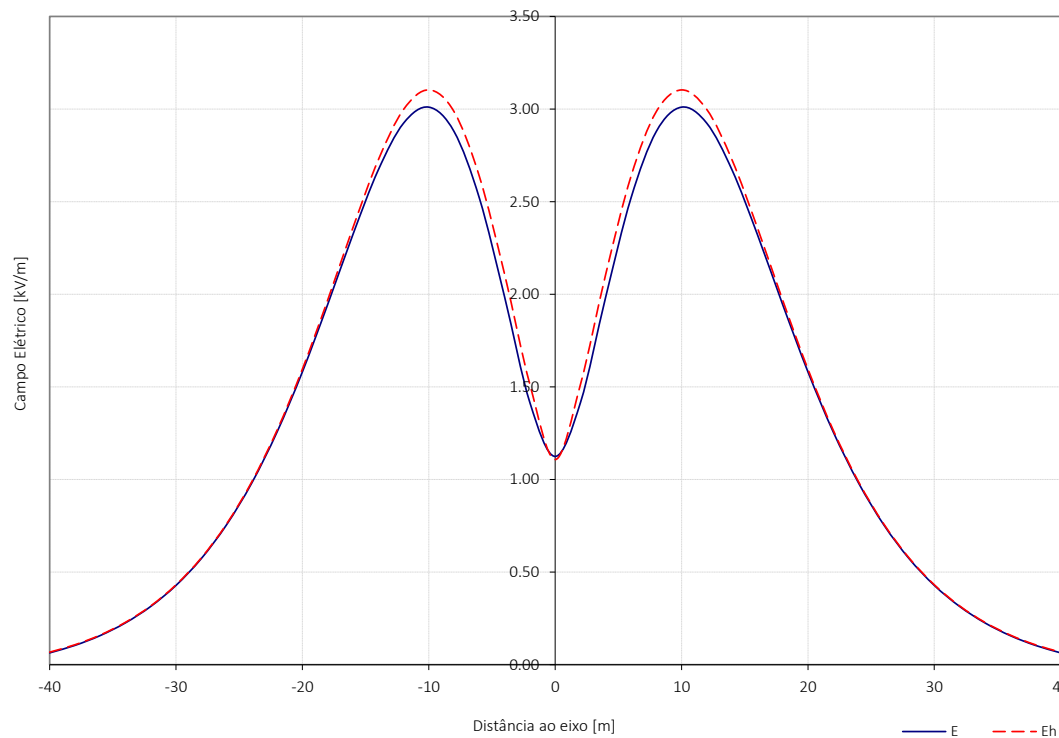
Uc [kV]	420.00
Us [kV]	242.49

Geometria dos Cabos [m]			
Cond.	Fase	X	Y
a	0	-8.70	14.89
b	0	-8.30	14.89
c	4	-8.20	23.14
d	4	-7.80	23.14
e	8	-8.20	31.39
f	8	-7.80	31.39
g	8	8.30	14.89
h	8	8.70	14.89
i	4	7.80	23.14
j	4	8.20	23.14
k	0	7.80	31.39
l	0	8.20	31.39
u	-1	-6.00	37.49
v	1	6.00	37.49



xN	E	Eh
-40	0.06	0.07
-38	0.10	0.11
-36	0.16	0.16
-34	0.23	0.23
-32	0.31	0.32
-30	0.43	0.43
-28	0.57	0.58
-26	0.76	0.76
-24	0.98	0.99
-22	1.26	1.27
-20	1.58	1.60
-18	1.94	1.97
-16	2.32	2.36
-14	2.67	2.72
-12	2.92	3.00
-10	3.01	3.10
-8	2.88	2.99
-6	2.52	2.64
-4	1.99	2.11
-2	1.41	1.51
0	1.12	1.11
2	1.41	1.51
4	1.99	2.11
6	2.52	2.64
8	2.88	2.99
10	3.01	3.10
12	2.92	3.00
14	2.67	2.72
16	2.32	2.36
18	1.94	1.97
20	1.58	1.60
22	1.26	1.27
24	0.98	0.99
26	0.76	0.76
28	0.57	0.58
30	0.43	0.43
32	0.31	0.32
34	0.23	0.23
36	0.16	0.16
38	0.10	0.11
40	0.06	0.07

Perfil Transversal do Campo Elétrico



Cond.	a	b	c	d	e	f	g	h	i	j	k	l	u	v
Emáx. [kV/cm]	16.22	16.30	16.64	16.57	16.30	16.40	16.30	16.22	16.57	16.64	16.40	16.30	6.05	6.05

EMISSÃO DE RADIAÇÃO ELETROMAGNÉTICA
Cálculo do Campo Elétrico de Linhas MAT - Perfil do Campo Elétrico kV/m à Tensão Máxima

DADOS

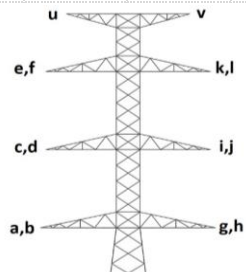
Apoios	DL		
Cond. Geminados	Não	Sim	
Nº.de ternos	2		

C. Condutor	ZEBRA	ZAMBEZE
Diâmetro CC [mm]	28.62	31.80

C. Guarda	OPGW	OPGW
Diâmetro CG [mm]	15.80	15.80

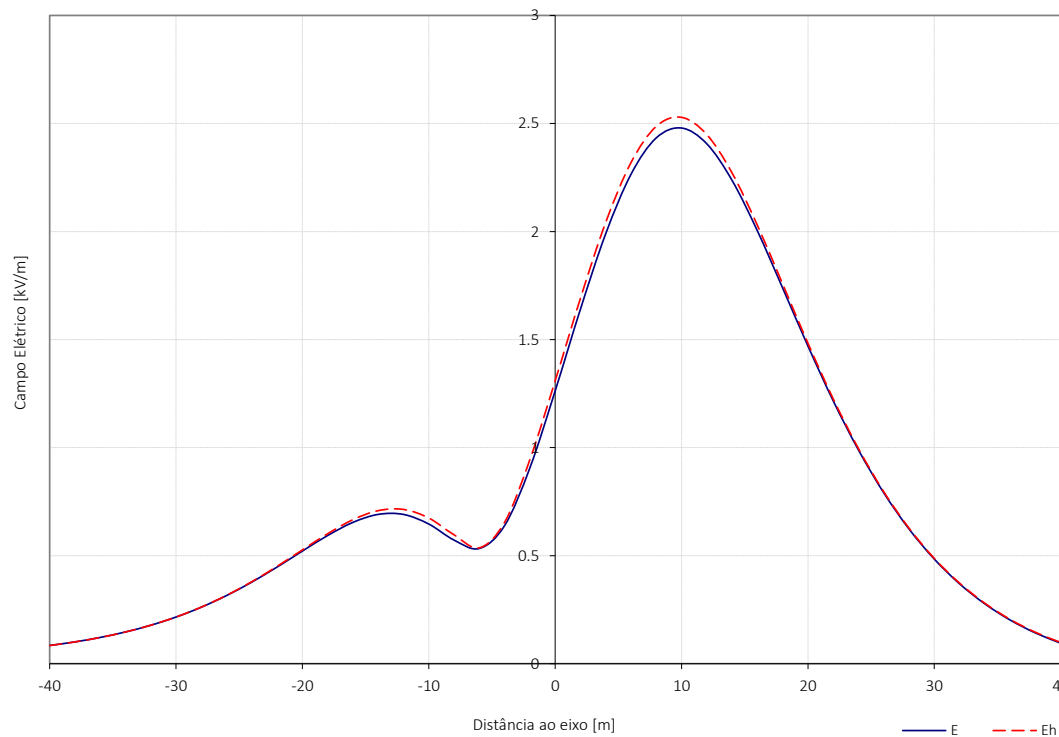
Uc [kV]	245	420
Us [kV]	141.45	242.49

Geometria dos Cabos [m]			
Cond.	Fase	X	Y
a	8	-8.50	17.67
b	-	-	-
c	4	-8.00	25.92
d	-	-	-
e	0	-8.00	34.17
f	-	-	-
g	0	8.30	17.67
h	0	8.70	17.67
i	4	7.80	25.92
j	4	8.20	25.92
k	8	7.80	34.17
l	8	8.20	34.17
u	-1	-6.00	40.27
v	1	6.00	40.27



xN	E	Eh
-40	0.08	0.08
-38	0.10	0.10
-36	0.12	0.12
-34	0.15	0.15
-32	0.18	0.18
-30	0.22	0.22
-28	0.26	0.26
-26	0.32	0.32
-24	0.38	0.38
-22	0.45	0.45
-20	0.52	0.53
-18	0.59	0.60
-16	0.65	0.67
-14	0.69	0.71
-12	0.69	0.71
-10	0.65	0.67
-8	0.57	0.60
-6	0.53	0.54
-4	0.64	0.65
-2	0.91	0.94
0	1.26	1.31
2	1.64	1.69
4	1.99	2.04
6	2.26	2.32
8	2.43	2.49
10	2.48	2.53
12	2.41	2.45
14	2.24	2.27
16	2.00	2.03
18	1.74	1.76
20	1.47	1.48
22	1.22	1.23
24	0.99	1.00
26	0.79	0.80
28	0.62	0.63
30	0.48	0.49
32	0.37	0.37
34	0.28	0.28
36	0.20	0.20
38	0.14	0.15
40	0.09	0.10

Perfil Transversal do Campo Elétrico



Cond.	a	b	c	d	e	f	g	h	i	j	k	l	u	v
Emáx. [kV/cm]	15.97	-	15.62	-	16.01	-	15.94	15.98	16.75	16.72	16.04	16.10	1.61	7.20

EMISSÃO DE RADIAÇÃO ELETROMAGNÉTICA
Cálculo do Campo Elétrico de Linhas MAT - Perfil do Campo Elétrico kV/m à Tensão Máxima

DADOS

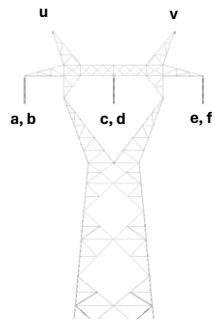
Apoios	Q
Cond. Geminados	Sim
Nº.de ternos	1

C. Condutor	ZAMBEZE
Diâmetro CC [mm]	31.80

C. Guarda	OPGW
Diâmetro CG [mm]	15.80

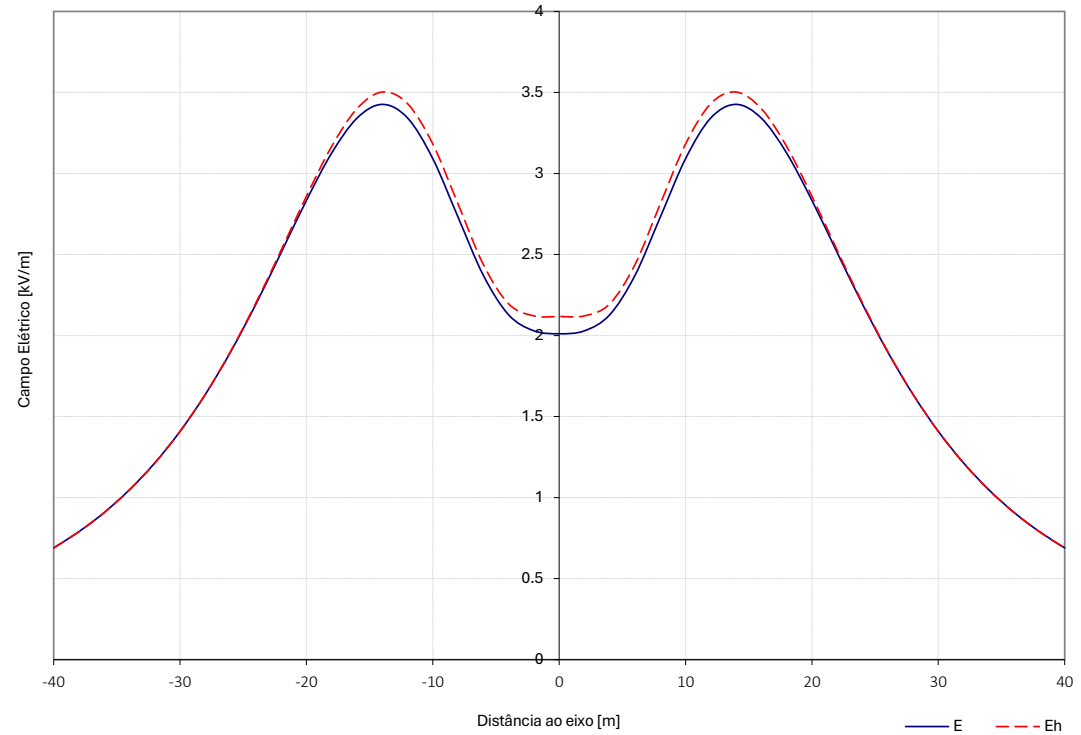
Uc [kV]	420.00
Us [kV]	242.49

Geometria dos Cabos [m]			
Cond.	Fase	X	Y
a	0	-11.60	15.44
b	0	-11.20	15.44
c	4	-0.20	15.44
d	4	0.20	15.44
e	8	11.20	15.44
f	8	11.60	15.44
u	-1	-8.57	20.44
v	1	8.57	20.44



xN	E	Eh
-40	0.69	0.69
-38	0.79	0.79
-36	0.91	0.91
-34	1.05	1.05
-32	1.21	1.21
-30	1.41	1.41
-28	1.64	1.64
-26	1.90	1.90
-24	2.19	2.20
-22	2.51	2.53
-20	2.83	2.86
-18	3.13	3.17
-16	3.34	3.40
-14	3.43	3.50
-12	3.34	3.43
-10	3.09	3.18
-8	2.73	2.81
-6	2.37	2.44
-4	2.13	2.20
-2	2.03	2.12
0	2.01	2.12
2	2.03	2.12
4	2.13	2.20
6	2.37	2.44
8	2.73	2.81
10	3.09	3.18
12	3.34	3.43
14	3.43	3.50
16	3.34	3.40
18	3.13	3.17
20	2.83	2.86
22	2.51	2.53
24	2.19	2.20
26	1.90	1.90
28	1.64	1.64
30	1.41	1.41
32	1.21	1.21
34	1.05	1.05
36	0.91	0.91
38	0.79	0.79
40	0.69	0.69

Perfil Transversal do Campo Elétrico



Cond.	a	b	c	d	e	f	u	v
Emáx. [kV/cm]	15.03	15.26	15.78	15.78	15.26	15.03	7.60	7.60

EMISSÃO DE RADIAÇÃO ELETROMAGNÉTICA
Cálculo do Campo Elétrico de Linhas MAT - Perfil do Campo Elétrico kV/m à Tensão Máxima

DADOS

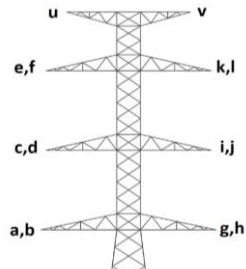
Apoios	DL
Cond. Geminados	Sim
Nº. de ternos	2

C. Condutor	ZAMBEZE
Diâmetro CC [mm]	31.80

C. Guarda	OPGW
Diâmetro CG [mm]	15.80

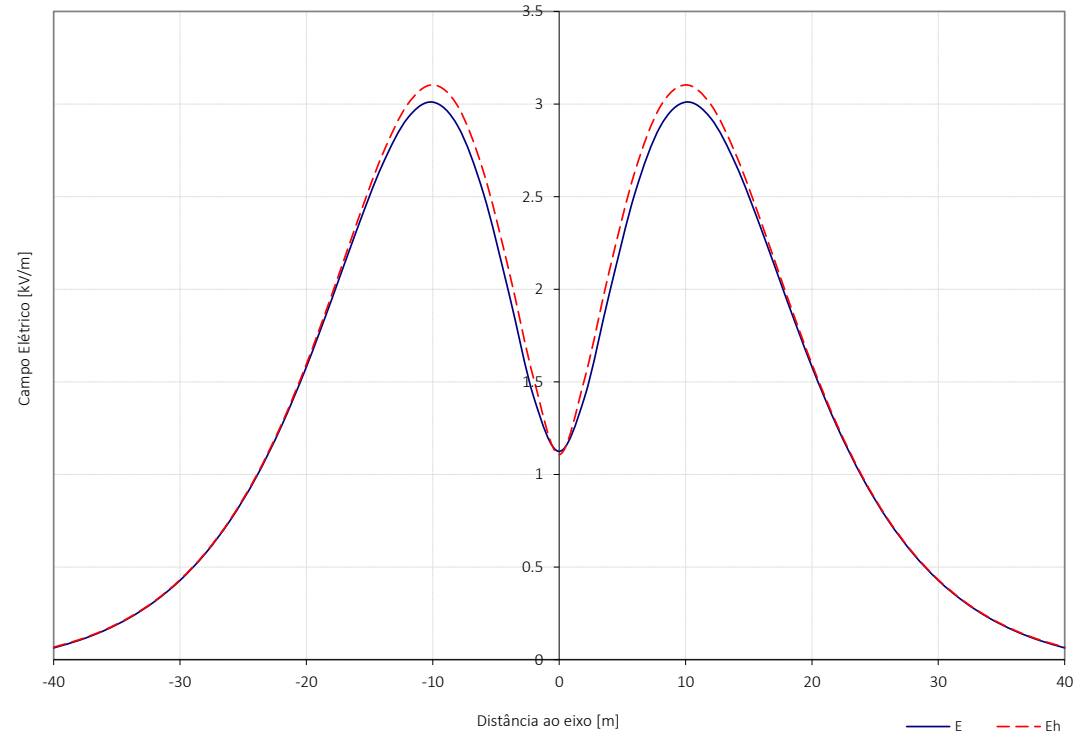
Uc [kV]	420.00
Us [kV]	242.49

Geometria dos Cabos [m]			
Cond.	Fase	X	Y
a	0	-8.70	14.89
b	0	-8.30	14.89
c	4	-8.20	23.14
d	4	-7.80	23.14
e	8	-8.20	31.39
f	8	-7.80	31.39
g	8	8.30	14.89
h	8	8.70	14.89
i	4	7.80	23.14
j	4	8.20	23.14
k	0	7.80	31.39
l	0	8.20	31.39
u	-1	-6.00	37.49
v	1	6.00	37.49



xN	E	Eh
-40	0.06	0.07
-38	0.10	0.11
-36	0.16	0.16
-34	0.23	0.23
-32	0.31	0.32
-30	0.43	0.43
-28	0.57	0.58
-26	0.76	0.76
-24	0.98	0.99
-22	1.26	1.27
-20	1.58	1.60
-18	1.94	1.97
-16	2.32	2.36
-14	2.67	2.72
-12	2.92	3.00
-10	3.01	3.10
-8	2.88	2.99
-6	2.52	2.64
-4	1.99	2.11
-2	1.41	1.51
0	1.12	1.11
2	1.41	1.51
4	1.99	2.11
6	2.52	2.64
8	2.88	2.99
10	3.01	3.10
12	2.92	3.00
14	2.67	2.72
16	2.32	2.36
18	1.94	1.97
20	1.58	1.60
22	1.26	1.27
24	0.98	0.99
26	0.76	0.76
28	0.57	0.58
30	0.43	0.43
32	0.31	0.32
34	0.23	0.23
36	0.16	0.16
38	0.10	0.11
40	0.06	0.07

Perfil Transversal do Campo Elétrico



Cond.	a	b	c	d	e	f	g	h	i	j	k	l	u	v
Emáx. [kV/cm]	16.22	16.30	16.64	16.57	16.30	16.40	16.30	16.22	16.57	16.64	16.40	16.30	6.05	6.05

EMISSÃO DE RADIAÇÃO ELETROMAGNÉTICA
Cálculo do Campo Elétrico de Linhas MAT - Perfil do Campo Elétrico kV/m à Tensão Máxima

DADOS

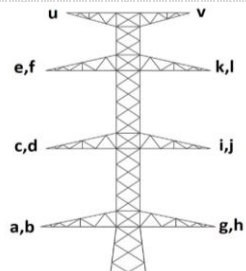
Apoios	DL		
Cond. Geminados	Não	Sim	
Nº.de ternos	2		

C. Condutor	ZEBRA	ZAMBEZE
Diâmetro CC [mm]	28.62	31.80

C. Guarda	OPGW	OPGW
Diâmetro CG [mm]	15.80	15.80

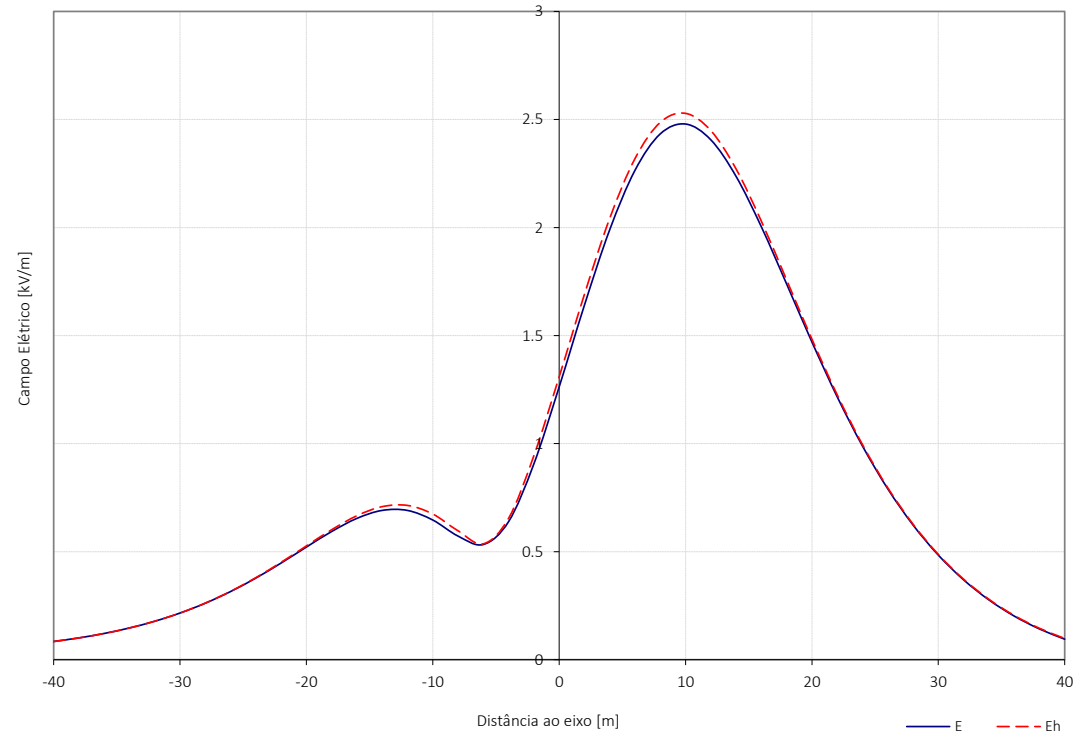
Uc [kV]	245	420
Us [kV]	141.45	242.49

Geometria dos Cabos [m]			
Cond.	Fase	X	Y
a	8	-8.50	17.67
b	-	-	-
c	4	-8.00	25.92
d	-	-	-
e	0	-8.00	34.17
f	-	-	-
g	0	8.30	17.67
h	0	8.70	17.67
i	4	7.80	25.92
j	4	8.20	25.92
k	8	7.80	34.17
l	8	8.20	34.17
u	-1	-6.00	40.27
v	1	6.00	40.27



xN	E	Eh
-40	0.08	0.08
-38	0.10	0.10
-36	0.12	0.12
-34	0.15	0.15
-32	0.18	0.18
-30	0.22	0.22
-28	0.26	0.26
-26	0.32	0.32
-24	0.38	0.38
-22	0.45	0.45
-20	0.52	0.53
-18	0.59	0.60
-16	0.65	0.67
-14	0.69	0.71
-12	0.69	0.71
-10	0.65	0.67
-8	0.57	0.60
-6	0.53	0.54
-4	0.64	0.65
-2	0.91	0.94
0	1.26	1.31
2	1.64	1.69
4	1.99	2.04
6	2.26	2.32
8	2.43	2.49
10	2.48	2.53
12	2.41	2.45
14	2.24	2.27
16	2.00	2.03
18	1.74	1.76
20	1.47	1.48
22	1.22	1.23
24	0.99	1.00
26	0.79	0.80
28	0.62	0.63
30	0.48	0.49
32	0.37	0.37
34	0.28	0.28
36	0.20	0.20
38	0.14	0.15
40	0.09	0.10

Perfil Transversal do Campo Elétrico



Cond.	a	b	c	d	e	f	g	h	i	j	k	l	u	v
Emáx. [kV/cm]	15.97	-	15.62	-	16.01	-	15.94	15.98	16.75	16.72	16.04	16.10	1.61	7.20

EMISSÃO DE RADIAÇÃO ELETROMAGNÉTICA
Cálculo do Campo Elétrico de Linhas MAT - Perfil do Campo Elétrico kV/m à Tensão Máxima

DADOS

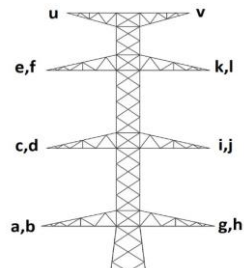
Apoios	DL
Cond. Geminados	Sim
Nº. de ternos	2

C. Condutor	ZAMBEZE
Diâmetro CC [mm]	31.80

C. Guarda	OPGW
Diâmetro CG [mm]	15.80

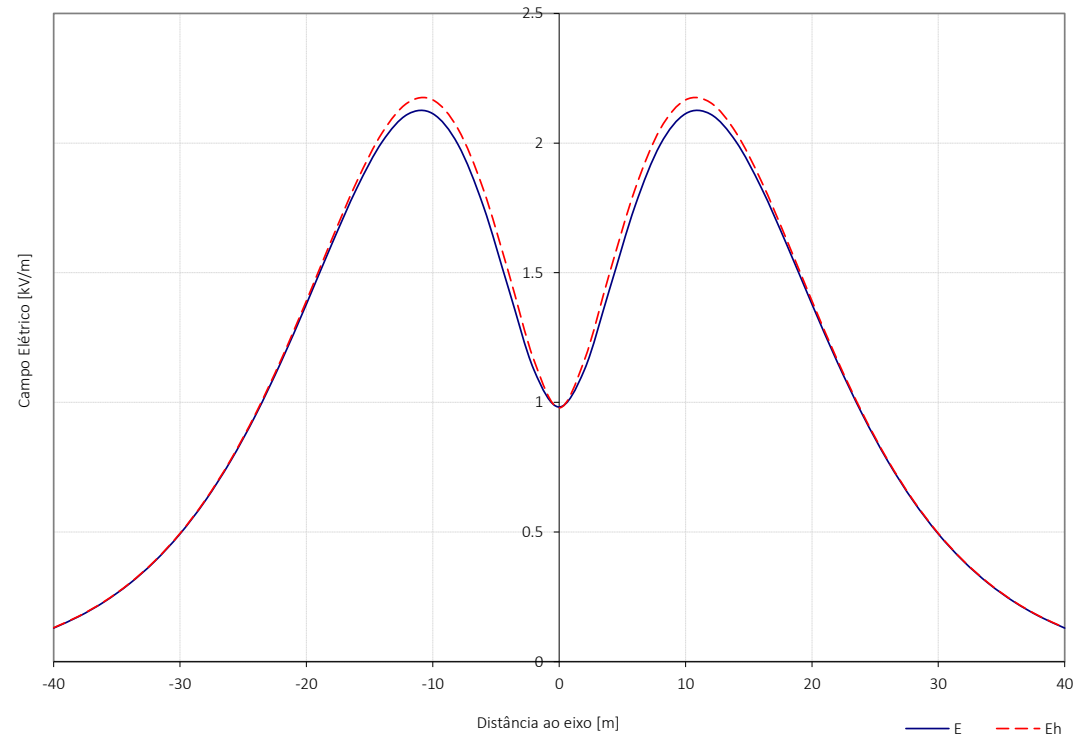
Uc [kV]	420.00
Us [kV]	242.49

Geometria dos Cabos [m]			
Cond.	Fase	X	Y
a	0	-8.70	17.89
b	0	-8.30	17.89
c	4	-8.20	26.14
d	4	-7.80	26.14
e	8	-8.20	34.39
f	8	-7.80	34.39
g	8	8.30	17.89
h	8	8.70	17.89
i	4	7.80	26.14
j	4	8.20	26.14
k	0	7.80	34.39
l	0	8.20	34.39
u	-1	-6.00	40.49
v	1	6.00	40.49



xN	E	Eh
-40	0.13	0.13
-38	0.17	0.18
-36	0.23	0.23
-34	0.30	0.30
-32	0.39	0.39
-30	0.49	0.49
-28	0.62	0.62
-26	0.77	0.78
-24	0.95	0.96
-22	1.16	1.16
-20	1.38	1.39
-18	1.61	1.63
-16	1.83	1.85
-14	2.01	2.04
-12	2.11	2.16
-10	2.11	2.17
-8	1.99	2.05
-6	1.76	1.82
-4	1.44	1.50
-2	1.13	1.16
0	0.98	0.98
2	1.13	1.16
4	1.44	1.50
6	1.76	1.82
8	1.99	2.05
10	2.11	2.17
12	2.11	2.16
14	2.01	2.04
16	1.83	1.85
18	1.61	1.63
20	1.38	1.39
22	1.16	1.16
24	0.95	0.96
26	0.77	0.78
28	0.62	0.62
30	0.49	0.49
32	0.39	0.39
34	0.30	0.30
36	0.23	0.23
38	0.17	0.18
40	0.13	0.13

Perfil Transversal do Campo Elétrico



Cond.	a	b	c	d	e	f	g	h	i	j	k	l	u	v
Emáx. [kV/cm]	16.13	16.22	16.66	16.60	16.30	16.40	16.22	16.13	16.60	16.66	16.40	16.30	6.05	6.05

EMISSÃO DE RADIAÇÃO ELETROMAGNÉTICA
Cálculo do Campo Elétrico de Linhas MAT - Perfil do Campo Elétrico kV/m à Tensão Máxima

Recetor Sensível PR1

DADOS

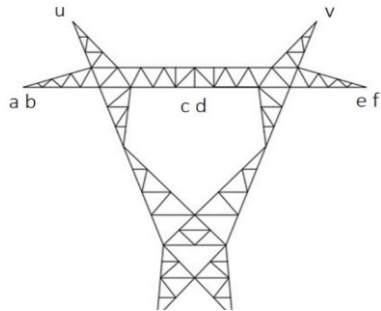
Apoios	YS
Cond. Geminados	Sim
Nº de ternos	2

C. Condutor	ZAMBEZE
Diâmetro CC [mm]	31.80

C. Guarda	OPGW
Diâmetro CG [mm]	15.80

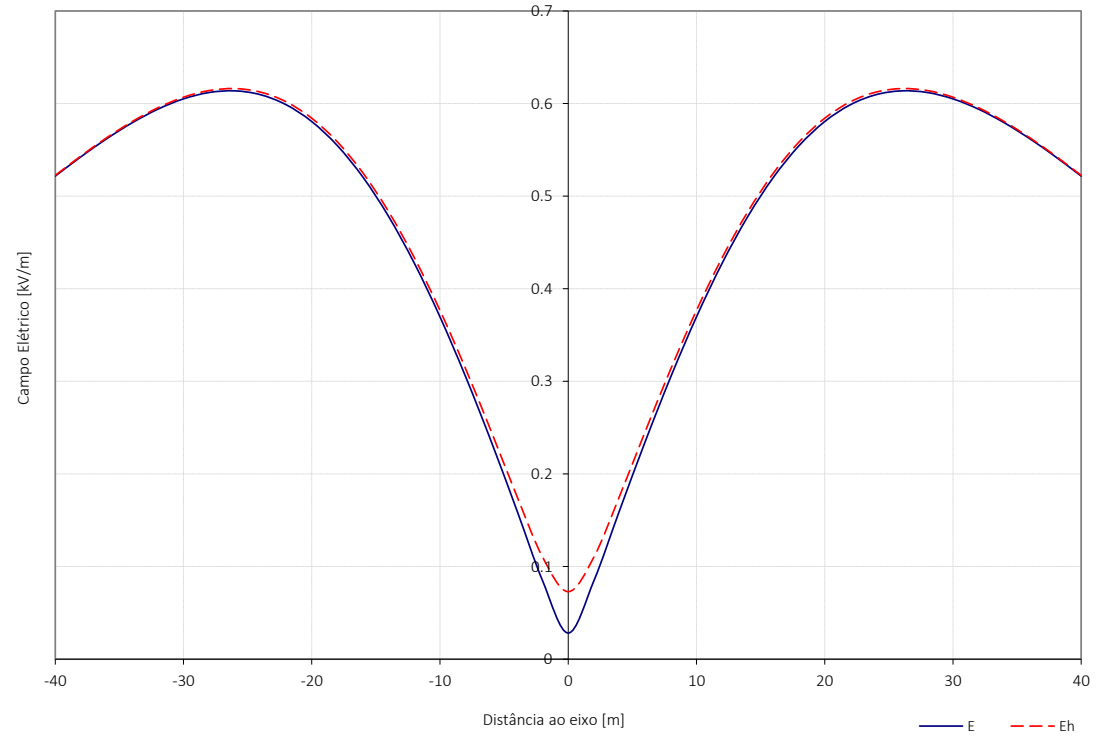
Uc [kV]	420.00
Us [kV]	242.49

Geometria dos Cabos [m]			
Cond.	Fase	X	Y
a	0	-12.20	41.48
b	0	-11.80	41.48
c	4	-0.20	41.48
d	4	0.20	41.48
e	8	11.80	41.48
f	8	12.20	41.48
u	-1	-7.80	46.48
v	1	7.80	46.48



xN	E	Eh
-40	0.52	0.52
-38	0.54	0.54
-36	0.56	0.56
-34	0.58	0.58
-32	0.59	0.60
-30	0.61	0.61
-28	0.61	0.61
-26	0.61	0.62
-24	0.61	0.61
-22	0.60	0.60
-20	0.58	0.58
-18	0.55	0.56
-16	0.52	0.52
-14	0.48	0.48
-12	0.43	0.43
-10	0.37	0.38
-8	0.31	0.31
-6	0.23	0.25
-4	0.16	0.18
-2	0.08	0.11
0	0.03	0.07
2	0.08	0.11
4	0.16	0.18
6	0.23	0.25
8	0.31	0.31
10	0.37	0.38
12	0.43	0.43
14	0.48	0.48
16	0.52	0.52
18	0.55	0.56
20	0.58	0.58
22	0.60	0.60
24	0.61	0.61
26	0.61	0.62
28	0.61	0.61
30	0.61	0.61
32	0.59	0.60
34	0.58	0.58
36	0.56	0.56
38	0.54	0.54
40	0.52	0.52

Perfil Transversal do Campo Elétrico



Cond.	a	b	c	d	e	f	u	v
Emáx. [kV/cm]	14.45	14.69	15.69	15.69	14.69	14.45	7.14	7.14