

B-3 Cost Estimate for AFL Equipment Works



Table of Direct Construction Cost



Shanghai Pudong International Airport Project (Airfield Lighting System)

Item No.	Description of Works	Unit	Quantity	Foreign Cost Component (Yen)		Local Cost Component (China RMB)		Combined Total China RMB
				Rate	Amount	Rate	Amount	
1.	Precision Approach Lighting System	lot	1		35,743,341		5,102,548.80	7,925,877.48
2.	Sequence Flashing Lights	lot	1		44,873,730		1,518,235.58	5,062,764.02
3.	Precision Approach Path Indicator	lot	1		10,265,114		104,343.21	915,173.70
4.	Runway Edge Lights	lot	1		10,394,199		2,764,856.86	3,585,883.64
5.	Runway Threshold Lights	lot	1		19,886,320		553,164.67	2,123,964.04
6.	Runway End Lights	lot	1		2,790,819		525,519.86	745,963.70
7.	Runway Center Line Lights	lot	1		108,674,214		5,651,561.03	14,235,622.17
8.	Runway Touchdown Zone Lights	lot	1		73,701,357		3,621,135.56	9,442,727.75
9.	Taxiway Center Line Lights	lot	1		276,699,388		35,353,937.97	57,210,129.76
10.	Taxiway Edge Lights	lot	1		39,517,145		13,506,552.66	16,627,970.12
11.	Stop Bar System	lot	1		59,841,417		3,145,808.19	7,872,618.38
12.	Runway Guard Lights	lot	1		4,103,403		63,398.11	387,521.57
13.	Taxiway Intersection Lights	lot	1		22,624,964		3,685,912.60	5,473,034.56
14.	Taxiway Guidance Signs	lot	1		1,581,092		9,738,451.59	9,863,340.38
15.	Wind Direction Indicator Lights	lot	1		1,340,130		277,398.10	383,253.56
16.	Apron Floodlighting	lot	1		168,725,552		45,337,772.88	58,665,225.65
17.	Visual Docking Guidance System	lot	1		338,428,200		733,980.78	27,466,066.09
18.	Aircraft Stand Identification Signs	lot	1				1,877,414.76	1,877,414.76
19.	Road-Holding Position Lights	lot	1		3,007,830		279,867.20	517,452.51
20.	Power Supply, Control and Monitoring System for Airfield Lig	lot	1		926,412,531		1,445,938.46	74,622,283.73
21.	AFL Main Duct	lot	1				25,970,375.99	25,970,375.99
	Sub-Total				2,148,610,746		161,258,174.86	330,974,663.56

Shanghai Pudong International Airport Project (Airfield Lighting System)

Item No.	Description of Works	Unit	Quantity	Foreign Cost Component (Yen)		Local Cost Component (China RMB)		Combined Total China RMB
				Rate	Amount	Rate	Amount	
1.	Power Distribution System (Main AFL Sub-Station)	lot	1		126,212,465		913,559.60	10,882,948.63
2.	Diesel Engine Generator (Main AFL Sub-Station)	lot	1		167,670,649		234,000.00	13,478,127.10
3.	Uninterruptible Power Supply System (Main AFL Sub-Station)	lot	1		149,383,008		89,000.00	11,888,605.69
4.	Power Distribution System (Secondary AFL Sub-Station)	lot	1		116,188,949		634,852.50	9,812,494.61
5.	Diesel Engine Generator (Secondary AFL Sub-Station)	lot	1		138,909,903		234,000.00	11,206,346.21
6.	Uninterruptible Power Supply System (Secondary AFL Sub-Station)	lot	1		99,591,034		89,000.00	7,955,590.37
7.	Control and Monitoring System for Power Distribution System	lot	1				691,021.68	691,021.68
8.	Maintenance Room Equipment	lot	1		288,986,500			22,826,737.76
Total					3,235,553,254		164,143,608.64	419,716,535.61

Shanghai Pudong International Airport Project (Airfield Lighting System)

Item No.	Description of Works	Unit	Quantity	Foreign Cost Component (Yen)		Local Cost Component (China RMB)		Combined Total China RMB
				Rate	Amount	Rate	Amount	
1. Precision Approach Lighting System								
1	PALS surface-type white	pcs	10	271,650	2,716,500	261.24	2,612.40	
2	PALS surface-type red	pcs	12	302,550	3,630,600	261.24	3,134.88	
3	PALS elevated-type white	pcs	338	17,895	6,048,510	2,768.30	935,685.40	
4	PALS elevated-type red	pcs	96	17,895	1,717,920	2,768.30	265,756.80	
5	Foundation for PALS center line barrette	set	54			27,411.23	1,480,206.42	
6	Foundation for PALS side row barrette	set	28			23,498.36	657,954.08	
7	Foundation for PALS 150m cross bar	set	2			103,762.41	207,524.82	
8	Foundation for PALS 300m cross bar	set	2			103,033.77	206,067.54	
9	Foundation for PALS surface-type	set	22			1,355.93	29,830.46	
10	Transformer housing box	pcs	12			2,519.96	30,239.52	
11	5kv AFL primary cable	meter	22,590	627	14,163,930	6.50	146,835.00	
12	FEP 80	meter	4,610			83.53	385,073.30	
13	FEP 50	meter	3,000			74.28	222,840.00	
14	600v AFL secondary cable 30m with plug	set	12	40,800	489,600	194.94	2,339.28	
15	600v AFL secondary cable 40m with plug	set	10	48,900	489,000	214.32	2,143.20	
16	SGP 50	meter	390			85.13	33,200.70	
17	Flexible pipe 50 (stainless)	pcs	38			1,092.31	41,507.78	
18	Auxiliary materials for piping	lot	1			333.40	16,874.70	
19	Cable splice kit (5kv AFL primary cable)	pcs	24			136.80	8,001.60	
20	Plug and receptacle	set	456	9,840	4,487,040	6,505.54	62,380.80	
21	Earthing terminal	set	22				143,121.88	
22	Consumable and miscellaneous materials	lot	1		588,888		110,284.24	
23	Spare parts	lot	1		1,411,353		108,934.00	
24								
Total					35,743,341		5,102,548.80	

Shanghai Pudong International Airport Project (Airfield Lighting System)

Item No.	Description of Works	Unit	Quantity	Foreign Cost Component (Yen)		Local Cost Component (China RMB)		Combined Total China RMB
				Rate	Amount	Rate	Amount	
2. Sequence Flashing Lights								
1	SFL elevated-type with control cabinet	pcs	58	703,350	40,794,300	323.70	18,774.60	
2	Central control cabinet	pcs	2	included in the above.		570.00	1,140.00	
3	Foundation for control cabinet	set	58			392.10	22,741.80	
4	Hand hole 400x400x500	pcs	58			1,268.91	73,596.78	
5	600v XLPE/PVC 35mm ² -4c	meter	1,400			96.21	134,694.00	
6	600v XLPE/PVC 25mm ² -4c	meter	580			72.26	41,910.80	
7	600v XLPE/PVC 16mm ² -4c	meter	720			50.31	36,223.20	
8	600v XLPE/PVC 10mm ² -4c	meter	720			35.97	25,898.40	
9	600v PVC 4mm ² -30c	meter	720			108.13	77,853.60	
10	600v PVC 4mm ² -20c	meter	4,660			78.14	364,132.40	
11	Special 6-core cable	meter	2,790	included in the above.		10.26	28,625.40	
12	FEP 80	meter	2,930			83.53	244,742.90	
13	FEP 50	meter	4,230			74.28	314,204.40	
14	Auxiliary materials for piping	lot	1				11,990.40	
15	Earthing terminal	set	12				78,066.48	
16	Consumable and miscellaneous materials	lot	1				43,640.42	
17	Spare parts	lot	1		4,079,430			
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Total					44,873,730		1,518,235.58	

Shanghai Pudong International Airport Project (Airfield Lighting System)

Item No.	Description of Works	Unit	Quantity	Foreign Cost Component (Yen)		Local Cost Component (China RMB)		Combined Total China RMB
				Rate	Amount	Rate	Amount	
3. Precision Approach Path Indicator								
1	PAPI	pcs	8	779,250	6,234,000	1,067.40	8,539.20	
2	Foundation for PAPI	set	8			2,064.14	16,513.12	
3	5kv AFL primary cable	meter	4,900	627	3,072,300	6.50	31,850.00	
4	FEP 80	meter	300			83.53	25,059.00	
5	Auxiliary materials for piping	lot	1				630.00	
6	Cable splice kit (5kv AFL primary cable)	pcs	8			333.40	2,667.20	
7	Plug and receptacle	set	24	9,840	236,160	136.80	3,283.20	
8	Earthing terminal	set	2			6,505.54	13,011.08	
9	Consumable and miscellaneous materials	lot	1		99,254		2,790.41	
10	Spare parts	lot	1		623,400			
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Total					10,265,114		104,343.21	

Shanghai Pudong International Airport Project (Airfield Lighting System)

Item No.	Description of Works	Unit	Quantity	Foreign Cost Component (Yen)		Local Cost Component (China RMB)		Combined Total China RMB
				Rate	Amount	Rate	Amount	
4. Runway Edge Lights								
1	REDL elevated-type white/white	pcs	67			2,135.30	143,065.10	
2	REDL elevated-type white/yellow	pcs	36			2,135.30	76,870.80	
3	REDL surface-type white/white	pcs	25	259,350	6,483,750	261.24	6,531.00	
4	REDL surface-type white/yellow	pcs	4	262,950	1,051,800	261.24	1,044.96	
5	Foundation for REDL elevated-type	set	103			743.92	76,623.76	
6	Foundation for REDL surface-type	set	29			1,355.93	39,321.97	
7	Transformer housing box	pcs	29			2,519.96	73,078.84	
8	5kv AFL primary cable	meter	22,660			26.00	589,160.00	
9	FEP 50	meter	17,090			74.28	1,269,445.20	
10	600v AFL secondary cable 10m with plug	set	13	24,600	319,800	156.18	2,030.34	
11	600v AFL secondary cable 20m with plug	set	13	32,700	425,100	175.56	2,282.28	
12	SGP 50	meter	260			85.13	22,133.80	
13	Flexible pipe 50 (stainless)	pcs	29			1,092.31	31,676.99	
14	Auxiliary materials for piping	lot	1				25,620.00	
15	Cable splice kit (5kv AFL primary cable)	pcs	8			333.40	2,667.20	
16	Plug and receptacle	set	132	9,840	1,298,880	136.80	18,057.60	
17	Earthing terminal	set	44			6,505.54	286,243.76	
18	Consumable and miscellaneous materials	lot	1		61,314		73,150.26	
19	Spare parts	lot	1		753,555		25,853.00	
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Total					10,394,199		2,764,856.86	

Shanghai Pudong International Airport Project (Airfield Lighting System)

Item No.	Description of Works	Unit	Quantity	Foreign Cost Component (Yen)		Local Cost Component (China RMB)		Combined Total China RMB
				Rate	Amount	Rate	Amount	
S. Runway Threshold Lights								
1	RTHL surface-type green	pcs	42	267,450	11,232,900	261.24	10,972.08	
2	WBAR elevated-type green	pcs	20	17,895	357,900	3,028.30	60,566.00	
3	Foundation for RTHL	seyl	42			1,355.93	56,949.06	
4	Foundation for WBAR	set	20			743.92	14,878.40	
5	Transformer housing box	pcs	32			2,519.96	80,638.72	
6	5kv AFL primary cable	meter	6,150	627	3,856,050	6.50	39,975.00	
7	FEP 80	meter	150			83.53	12,529.50	
8	600v AFL secondary cable 10m with plug	set	12	24,600	295,200	156.18	1,874.16	
9	600v AFL secondary cable 20m with plug	set	12	32,700	392,400	175.56	2,106.72	
10	600v AFL secondary cable 30m with plug	set	16	40,800	652,800	194.94	3,119.04	
11	600v AFL secondary cable 40m with plug	set	12	48,900	586,800	214.32	2,571.84	
12	600v AFL secondary cable 50m with plug	set	10	57,000	570,000	233.70	2,337.00	
13	SGP 80	meter	400			107.36	42,944.00	
14	SGP 50	meter	240			85.13	20,431.20	
15	Flexible pipe 80 (stainless)	pcs	24			2,275.68	54,616.32	
16	Flexible pipe 50 (stainless)	pcs	44			1,092.31	48,061.64	
17	Auxiliary materials for piping	lot	1				7,378.20	
18	Cable splice kit (5kv AFL Primary Cable)	pcs	12			333.40	4,000.80	
19	Plug and receptacle	set	62	9,840	610,080	136.80	8,481.60	
20	Earthing terminal	set	2			6,505.54	13,011.08	
21	Consumable and miscellaneous materials	lot	1		208,900		10,322.31	
22	Spare parts	lot	1		1,123,290		55,400.00	
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Total					19,886,320		553,164.67	

Shanghai Pudong International Airport Project (Airfield Lighting System)

Item No.	Description of Works	Unit	Quantity	Foreign Cost Component (Yen)		Local Cost Component (China RMB)		Combined Total China RMB
				Rate	Amount	Rate	Amount	
6. Runway End Lights								
1	RENL surface-type red	pcs	22	17,895	393,690	6,873.24	151,211.28	
2	Foundation for RENL	set	22			1,355.93	29,830.46	
3	Transformer housing box	pcs	22			2,519.96	55,439.12	
4	600v AFL secondary cable 20m with plug	set	4	32,700	130,800	175.56	702.24	
5	600v AFL secondary cable 30m with plug	set	8	40,800	326,400	194.94	1,559.52	
6	600v AFL secondary cable 40m with plug	set	8	48,900	391,200	214.32	1,714.56	
7	600v AFL secondary cable 50m with plug	set	2	57,000	114,000	233.70	467.40	
8	SGP 80	meter	130			107.36	13,956.80	
9	SGP 50	meter	260			85.13	22,133.80	
10	Flexible pipe 80 (stainless)	pcs	12			2,275.68	27,308.16	
11	Flexible pipe 50 (stainless)	pcs	32			1,092.31	34,953.92	
12	Auxiliary materials for piping	lot	1				3,720.60	
13	Plug and receptacle	set	22	9,840	216,480	136.80	3,009.60	
14	Consumable and miscellaneous materials	lot	1		1,178,880		164,966.00	
15	Spare parts	lot	1		39,369		14,546.40	
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Total					2,790,819		525,519.86	

Shanghai Pudong International Airport Project (Airfield Lighting System)

Item No.	Description of Works	Unit	Quantity	Foreign Cost Component (Yen)		Local Cost Component (China RMB)		Combined Total China RMB
				Rate	Amount	Rate	Amount	
7. Runway Center Line Lights								
1	RCLL white/white	pcs	187	156,900	29,340,300	261.24	48,851.88	
2	RCLL white/yellow	pcs	80	168,450	13,476,000	261.24	20,899.20	
3	Foundation for RCLL	set	267			1,355.93	362,033.31	
4	Transformer housing box	pcs	534			2,519.96	1,345,658.64	
5	5kv AFL primary cable	meter	45,320	627	28,415,640	6.50	294,580.00	
6	FEP 80	meter	19,200			83.53	1,603,776.00	
7	600v AFL secondary cable 40m with plug	set	534	48,900	26,112,600	214.32	114,446.88	
8	SGP 50	meter	12,180			85.13	1,036,883.40	
9	Flexible pipe 50 (stainless)	pcs	267			1,092.31	291,646.77	
10	Auxiliary materials for piping	lot	1				135,689.40	
11	Cable splice kit (5kv AFL Primary Cable)	pcs	16			333.40	5,334.40	
12	Plug and receptacle	set	534	9,840	5,254,560	136.80	73,051.20	
13	Earthing terminal	set	24			6,505.54	156,132.96	
14	Consumable and miscellaneous materials	lot	1		1,793,484		162,576.99	
15	Spare parts	lot	1		4,281,630			
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Total					108,674,214		5,651,561.03	

Shanghai Pudong International Airport Project (Airfield Lighting System)

Item No.	Description of Works	Unit	Quantity	Foreign Cost Component (Yen)		Local Cost Component (China RMB)		Combined Total China RMB
				Rate	Amount	Rate	Amount	
8. Runway Touchdown Zone Lights								
1	RTZL white	pcs	360	115,050	41,418,000	261.24	94,046.40	
2	Foundation for RTZL	set	360			1,355.93	488,134.80	
3	Transformer housing box	pcs	240			2,519.96	604,790.40	
4	5kv AFL primary cable	meter	14,500	627	9,091,500	6.50	94,250.00	
5	FEP 50	meter	7,400			74.28	549,672.00	
6	600v AFL secondary cable 30m with plug	set	360	40,800	14,688,000	194.94	70,178.40	
7	SGP 50	meter	8,280			85.13	704,876.40	
8	Flexible pipe 50 (stainless)	pcs	600			1,092.31	655,386.00	
9	Auxiliary materials for piping	lot	1				75,044.40	
10	Cable splice kit (5kv AFL Primary Cable)	pcs	8			333.40	2,667.20	
11	Plug and receptacle	set	360	9,840	3,542,400	136.80	49,248.00	
12	Earthing terminal	set	20			6,505.54	130,110.80	
13	Consumable and miscellaneous materials	lot	1		819,657		102,730.76	
14	Spare parts	lot	1		4,141,800			
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Total					73,701,357		3,621,135.56	

Shanghai Pudong International Airport Project (Airfield Lighting System)

Item No.	Description of Works	Unit	Quantity	Foreign Cost Component (Yen)		Local Cost Component (China RMB)		Combined Total China RMB
				Rate	Amount	Rate	Amount	
9. Taxiway Center Line Lights								
1	TCLL narrow green/yellow (with shallow base)	pcs	6	16,185	97,110	3,043.24	18,259.44	
2	TCLL narrow green/green (with shallow base)	pcs	813	16,185	13,158,405	3,043.24	2,474,154.12	
3	TCLL wide green/green (with shallow base)	pcs	1,093	16,185	17,690,205	3,043.24	3,326,261.32	
4	TCLL narrow green/green (with deep base)	pcs	139	16,185	2,249,715	3,741.24	520,032.36	
5	TCLL wide green/green (with deep base)	pcs	119	16,185	1,926,015	3,741.24	445,207.56	
6	HSTCLL narrow green (with shallow base)	pcs	79	16,185	1,278,615	3,043.24	240,415.96	
7	HSTCLL wide green (with shallow base)	pcs	249	16,185	4,030,065	3,043.24	757,766.76	
8	HSTCLL narrow yellow (stb-R/W) (with shallow base)	pcs	24	124,950	2,998,800	261.24	6,269.76	
9	HSTCLL narrow green (stb-R/W) (with shallow base)	pcs	24	124,950	2,998,800	261.24	6,269.76	
10	HSTCLL wide yellow (stb-R/W) (with shallow base)	pcs	66	124,950	8,246,700	261.24	17,241.84	
11	HSTCLL wide green (stb-R/W) (with shallow base)	pcs	60	124,950	7,497,000	261.24	15,674.40	
12	Foundation for TCLL (typical)	set	1,912			1,355.93	2,592,538.16	
13	Foundation for TCLL (apron area) with TR housing box	set	258			3,387.22	873,902.76	
14	Foundation for HSTCLL (typical)	set	502			1,355.93	680,676.86	
15	Transformer housing box	pcs	2,414			2,519.96	6,083,183.44	
16	Hand hole 400x400x500	pcs	8			1,268.91	10,151.28	
17	Skv AFL primary cable	meter	118,690	627	74,418,630	6.50	771,485.00	
18	FEP 80	meter	11,220			83.53	937,206.60	
19	FEP 50	meter	10,600			74.28	787,368.00	
20	600v AFL secondary cable 30m with plug	set	2,123	40,800	86,618,400	194.94	413,857.62	
21	600v AFL secondary cable 40m with plug	set	142	48,900	6,943,800	214.32	30,433.44	
22	600v AFL secondary cable 50m with plug	set	131	57,000	7,467,000	233.70	30,614.70	
23	600v AFL secondary cable 60m with plug	set	6	65,100	390,600	253.08	1,518.48	
24	600v AFL secondary cable 70m with plug	set	12	73,200	878,400	272.46	3,269.52	
Sub-Total					238,888,260		21,043,759.14	

Shanghai Pudong International Airport Project (Airfield Lighting System)

Item No.	Description of Works	Unit	Quantity	Foreign Cost Component (Yen)		Local Cost Component (China RMB)		Combined Total China RMB
				Rate	Amount	Rate	Amount	
25	SGP 80	meter	1,420			107.36	152,451.20	
26	SGP 50	meter	92,740			85.13	7,894,956.20	
27	Flexible pipe 50 (stainless)	pcs	2,414			1,092.31	2,636,836.34	
28	Auxiliary materials for piping	lot	1				994,805.40	
29	Cable splice kit (5kv AFL Primary Cable)	pcs	130			333.40	43,342.00	
30	Plug and receptacle	set	2,672	9,840	26,292,480	136.80	365,529.60	
31	Earthing terminal	set	117			6,505.54	761,148.18	
32	Consumable and miscellaneous materials	lot	1		5,301,505		748,157.91	
33	Spare parts	lot	1		6,217,143		712,952.00	
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Total					276,699,388		35,353,937.97	

Shanghai Pudong International Airport Project (Airfield Lighting System)

Item No.	Description of Works	Unit	Quantity	Foreign Cost Component (Yen)		Local Cost Component (China RMB)		Combined Total China RMB
				Rate	Amount	Rate	Amount	
10. Taxiway Edge Lights								
1	TWYL elevated-type blue	pcs	1,114			2,102.30	2,341,962.20	
2	Foundation for TWYL with normal bend	set	1,114			205.06	228,436.84	
3	Transformer housing box	pcs	1,114			2,519.96	2,807,255.44	
4	5kv AFL primary cable	meter	75,220			26.00	1,955,720.00	
5	FEP 80	meter	6,390			83.53	533,756.70	
6	FEP 50	meter	21,680			74.28	1,610,390.40	
7	600v AFL secondary cable 10m with plug	set	1,114	24,600	27,404,400	156.18	173,984.52	
8	SGP 50	meter	10,030			85.13	853,853.90	
9	Flexible pipe 50 (stainless)	pcs	1,114			1,092.31	1,216,833.34	
10	Auxiliary materials for piping	lot	1				121,872.30	
11	Cable splice kit (5kv AFL Primary Cable)	pcs	68			333.40	22,671.20	
12	Plug and receptacle	set	1,114	9,840	10,961,760	136.80	152,395.20	
13	Earthing terminal	set	148			6,505.54	962,819.92	
14	Consumable and miscellaneous materials	lot	1		1,150,985		319,199.10	
15	Spare parts	lot	1				205,421.60	
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Total					39,517,145		13,506,552.66	

Item No.	Description of Works	Unit	Quantity	Foreign Cost Component (Yen)		Local Cost Component (China RMB)		Combined Total China RMB	
				Rate	Amount	Rate	Amount		
11. Stop Bar System									
1	STBL surface-type red	pcs	60	16,185	971,100	3,053.24	183,194.40		
2	STBL elevated-type red	pcs	24	16,185	388,440	1,653.30	39,679.20		
3	STBL surface-type red controllable	pcs	70	125,850	8,809,500	261.24	18,286.80		
4	STBL elevated-type red controllable	pcs	24	16,185	388,440	1,653.30	39,679.20		
5	TCLL narrow green/yellow controllable	pcs	6	132,000	792,000	261.24	1,567.44		
6	TCLL narrow green/green controllable	pcs	6	132,000	792,000	261.24	1,567.44		
7	TCLL wide green/yellow controllable	pcs	42	132,000	5,544,000	261.24	10,972.08		
8	TCLL wide green/green controllable	pcs	42	132,000	5,544,000	261.24	10,972.08		
9	Foundation for STBL surface-type	set	130			1,355.93	176,270.90		
10	Foundation for STBL elevated-type with normal bend	set	48			205.06	9,842.88		
11	Foundation for TCLL controllable	set	96			1,355.93	130,169.28		
12	Transformer housing box	pcs	192			2,519.96	483,832.32		
13	Microwave sensor	set	6	included in item 20.		647.40	3,884.40		
14	Foundation for microwave sensor	set	12			743.92	8,927.04		
15	5kv AFL primary cable	meter	32,360	627	20,289,720	6.50	210,340.00		
16	FEP 80	meter	4,760			83.53	397,602.80		
17	600v AFL secondary cable 10m with plug	set	48	24,600	1,180,800	156.18	7,496.64		
18	600v AFL secondary cable 20m with plug	set	72	32,700	2,354,400	175.56	12,640.32		
19	600v AFL secondary cable 30m with plug	set	94	40,800	3,835,200	194.94	18,324.36		
20	600v AFL secondary cable 40m with plug	set	60	48,900	2,934,000	214.32	12,859.20		
21	SGP 50	meter	6,760			85.13	575,478.80		
22	Flexible pipe 50 (stainless)	pcs	452			1,092.31	493,724.12		
23	Auxiliary materials for piping	lot	1				62,926.80		
24	Cable splice kit (5kv AFL Primary Cable)	pcs	40			333.40	13,336.00		
				Sub-Total			53,823,600	2,923,574.50	

Shanghai Pudong International Airport Project (Airfield Lighting System)

Item No.	Description of Works	Unit	Quantity	Foreign Cost Component (Yen)		Local Cost Component (China RMB)		Combined Total China RMB
				Rate	Amount	Rate	Amount	
25	Plug and receptacle	set	274	9,840	2,696,160	136.80	37,483.20	
26	Earthing terminal	set	12			6,505.54	78,066.48	
27	Consumable and miscellaneous materials	lot	1		998,709		81,996.17	
28	Spare parts	lot	1		2,322,948		24,687.84	
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Total					59,841,417		3,145,808.19	

Shanghai Pudong International Airport Project (Airfield Lighting System)

Item No.	Description of Works	Unit	Quantity	Foreign Cost Component (Yen)		Local Cost Component (China RMB)		Combined Total China RMB
				Rate	Amount	Rate	Amount	
12. Runway Guard Lights								
1	Runway Guard Lights	pcs	12	301,650	3,619,800	258.30	3,099.60	
2	Foundation for runway guard lights	set	12			4,741.72	56,900.64	
3	Plug and receptacle	set	12	9,840	118,080	136.80	1,641.60	
4	Consumable and miscellaneous materials	lot	1		3,543		1,756.27	
5	Spare parts	lot	1		361,980			
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Total					4,103,403		63,398.11	

Shanghai Pudong International Airport Project (Airfield Lighting System)

Item No.	Description of Works	Unit	Quantity	Foreign Cost Component (Yen)		Local Cost Component (China RMB)		Combined Total China RMB
				Rate	Amount	Rate	Amount	
13. Taxiway Intersection Lights								
1	TISL yellow (with shallow base)	pcs	315	16,185	5,098,275	3,043.24	958,620.60	
2	TISL yellow (with deep base)	pcs	21	16,185	339,885	3,741.24	78,566.04	
3	Foundation for TISL (typical)	set	315			1,355.93	427,117.95	
4	Foundation for TISL (apron area) with TR housing box	set	21			3,387.22	71,131.62	
5	Transformer housing box	pcs	315			2,519.96	793,787.40	
6	600v AFL secondary cable 30m with plug	set	315	40,800	12,852,000	194.94	61,406.10	
7	SGP 80	meter	2,590			107.36	278,062.40	
8	SGP 50	meter	760			85.13	64,698.80	
9	Flexible pipe 80 (stainless)	pcs	105			2,275.68	238,946.40	
10	Flexible pipe 50 (stainless)	pcs	420			1,092.31	458,770.20	
11	Auxiliary materials for piping	lot	1				39,517.20	
12	Plug and receptacle	set	336	9,840	3,306,240	136.80	45,964.80	
13	Consumable and miscellaneous materials	lot	1		484,748		74,382.09	
14	Spare parts	lot	1		543,816		94,941.00	
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Total					22,624,964		3,685,912.60	

Shanghai Pudong International Airport Project (Airfield Lighting System)

Item No.	Description of Works	Unit	Quantity	Foreign Cost Component (Yen)		Local Cost Component (China RMB)		Combined Total China RMB
				Rate	Amount	Rate	Amount	
14. Taxiing Guidance Signs								
1	TXGS 2-letter	pcs	6			14,002.30	84,013.80	
2	TXGS 3-letter	pcs	21			20,382.30	428,028.30	
3	TXGS 4-letter	pcs	40			21,425.00	857,000.00	
4	TXGS 5-letter	pcs	25			28,355.00	708,875.00	
5	TXGS 6-letter	pcs	21			29,365.00	616,665.00	
6	TXGS 7-letter	pcs	20			30,405.00	608,100.00	
7	TXGS 8-letter	pcs	7			42,935.00	300,545.00	
8	TXGS 9-letter	pcs	16			43,895.00	702,320.00	
9	Foundation for TXGS 2-letter	set	6			1,288.19	7,729.14	
10	Foundation for TXGS 3-letter	set	21			1,761.82	36,998.22	
11	Foundation for TXGS 4-letter	set	40			1,761.82	70,472.80	
12	Foundation for TXGS 5-letter	set	25			2,236.84	55,921.00	
13	Foundation for TXGS 6-letter	set	21			2,236.84	46,973.64	
14	Foundation for TXGS 7-letter	set	20			2,709.46	54,189.20	
15	Foundation for TXGS 8-letter	set	7			2,709.46	18,966.22	
16	Foundation for TXGS 9-letter	set	16			3,183.03	50,928.48	
17	Hand hole 400x400x500	pcs	156			1,268.91	197,949.96	
18	5kv AFL primary cable	meter	34,550			26.00	898,300.00	
19	FEP 80	meter	21,810			83.53	1,821,789.30	
20	FEP 50	meter	2,750			74.28	204,270.00	
21	Auxiliary materials for piping	lot	1				49,596.00	
22	Cable splice kit (5kv AFL Primary Cable)	pcs	6			333.40	2,000.40	
23	Plug and receptacle	set	156	9,840	1,535,040	136.80	21,340.80	
24	Earthing terminal	set	124			6,505.54	806,686.96	
Sub-Total					1,535,040		8,649,659.22	

Shanghai Pudong International Airport Project (Airfield Lighting System)

Item No.	Description of Works	Unit	Quantity	Foreign Cost Component (Yen)		Local Cost Component (China RMB)		Combined Total China RMB
				Rate	Amount	Rate	Amount	
25	Consumable and miscellaneous materials	lot	1		46,052		130,323.37	
26	Spare parts	lot	1				428,069.00	
27	Delivery and installation cost	lot	1				530,400.00	
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Total					1,581,092		9,738,451.59	

Shanghai Pudong International Airport Project (Airfield Lighting System)

Item No.	Description of Works	Unit	Quantity	Foreign Cost Component (Yen)		Local Cost Component (China RMB)		Combined Total China RMB
				Rate	Amount	Rate	Amount	
15. Wind Direction Indicator Lights								
1	WDIL	lot	2	609,150	1,218,300	1,089.00	2,178.00	
2	Foundation for WDIL	set	2			3,233.17	6,466.34	
3	Circular band	lot	2			35,937.67	71,875.34	
4	Hand hole 400x400x500	pcs	2			1,268.91	2,537.82	
5	600v XLPE/PVC 25mm ² -4c	meter	2,210			72.26	159,694.60	
6	FEP 50	meter	180			74.28	13,370.40	
7	Auxiliary materials for piping	lot	1				248.40	
8	Earthing terminal	set	2			6,505.54	13,011.08	
9	Consumable and miscellaneous materials	lot	1				8,016.12	
10	Spare parts	lot	1		121,830			
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Total					1,340,130		277,398.10	

Shanghai Pudong International Airport Project (Airfield Lighting System)

Item No.	Description of Works	Unit	Quantity	Foreign Cost Component (Yen)		Local Cost Component (China RMB)		Combined Total China RMB
				Rate	Amount	Rate	Amount	
16. Apron Floodlighting								
1	FLO lighting pole (25m) with lighting fixtures and etc.	lot	52			394,977.00	20,538,804.00	
2	FLO lighting pole (20m) with lighting fixtures and etc.	lot	14			366,342.00	5,128,788.00	
3	FLO control and monitoring system for cargo area	lot	1	25,615,350	25,615,350	2,211.00	2,211.00	
4	Remote control panel for cargo area							
5	FLO control and monitoring system for terminal area	lot	1	57,634,500	57,634,500	2,958.00	2,958.00	
6	Remote control panel for general control center							
7	FLO control and monitoring system for maintenance area	lot	1	25,615,350	25,615,350	2,211.00	2,211.00	
8	Remote control panel for maintenance area							
9	Switch box for FLO (outdoor type)	set	66	625,950	41,312,700	292.80	19,324.80	
10	Foundation for FLO	set	66			63,165.49	4,168,922.34	
11	Fence for FLO lighting pole	lot	66			19,120.00	1,261,920.00	
12	Man hole for FLO foundation	pcs	66			11,936.67	787,820.22	
13	Man hole for boundary point (type-B)	pcs	14			16,978.36	237,697.04	
14	600v XLPE/PVC 35mm ² -4c	meter	3,660			96.21	352,128.60	
15	600v XLPE/PVC 25mm ² -4c	meter	16,820			72.26	1,215,413.20	
16	600v XLPE/PVC 16mm ² -4c	meter	37,790			50.31	1,901,214.90	
17	600v XLPE/PVC 10mm ² -4c	meter	13,850			35.97	498,184.50	
18	600v XLPE/PVC 25mm ² -3c	meter	8,290			56.08	464,903.20	
19	600v XLPE/PVC 16mm ² -2c	meter	1,650			29.52	48,708.00	
20	600v XLPE/PVC 10mm ² -2c	meter	1,660			21.37	35,474.20	
21	600v XLPE/PVC 6mm ² -2c	meter	1,050			16.39	17,209.50	
22	600v XLPE/PVC 4mm ² -2c	meter	4,110			12.92	53,101.20	
23	600v PVC 2mm ² -30c	meter	360			84.19	30,308.40	
24	Optical fiber cable	meter	3,410	1,005	3,427,050	6.50	22,165.00	
Sub-Total					153,604,950		36,789,467.10	

Shanghai Pudong International Airport Project (Airfield Lighting System)

Item No.	Description of Works	Unit	Quantity	Foreign Cost Component (Yen)		Local Cost Component (China RMB)		Combined Total China RMB
				Rate	Amount	Rate	Amount	
25	FEP 80	meter	43,140			83.53	3,603,484.20	
26	Auxiliary materials for piping	lot	1				90,594.00	
27	Grounding wire H-14	meter	6,620			11.95	79,109.00	
28	Cable marker tape	meter	6,620			15.57	103,073.40	
29	Earthing terminal	set	104			6,505.54	676,576.16	
30	Excavation	m'	5,820			32.00	186,240.00	
31	Sand	m'	1,830			265.00	484,950.00	
32	Back filling	m'	4,010			21.00	84,210.00	
33	Consumable and miscellaneous materials	lot	1		102,812		492,102.22	
34	Spare parts	lot	1		15,017,790		2,524,966.80	
35	Pole erection cost with heavy equipment hire cost	lot	1				223,000.00	
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Total					168,725,552		45,337,772.88	

Shanghai Pudong International Airport Project (Airfield Lighting System)

Item No.	Description of Works	Unit	Quantity	Foreign Cost Component (Yen)		Local Cost Component (China RMB)		Combined Total China RMB
				Rate	Amount	Rate	Amount	
17.	Visual Docking Guidance System							
1	VDGS	set	28	9,166,500	256,662,000	2,540.00	71,120.00	
2	VDGS control system	lot	1	51,000,000	51,000,000			
3	Supporters for VDGS	lot	28			4,000.00	112,000.00	
4	600v XLPE/PVC 25mm ² -2c	meter	310			41.16	12,759.60	
5	600v XLPE/PVC 16mm ² -2c	meter	1,820			29.52	53,726.40	
6	600v XLPE/PVC 10mm ² -2c	meter	300			21.37	6,411.00	
7	RS485 cable	meter	3,200			13.22	42,304.00	
8	Interface cable	meter	4,740			23.75	112,575.00	
9	SGP 50	meter	2,360			41.49	97,916.40	
10	Flexible pipe 50	pcs	56			1,092.31	61,169.36	
11	Auxiliary materials for piping	lot	1				18,478.80	
12	Consumable and miscellaneous materials	lot	1				15,520.22	
13	Spare parts	lot	1		30,766,200			
14	Delivery and installation cost	lot	1				130,000.00	
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	Total				338,428,200		733,980.78	

Shanghai Pudong International Airport Project (Airfield Lighting System)

Item No.	Description of Works	Unit	Quantity	Foreign Cost Component (Yen)		Local Cost Component (China RMB)		Combined Total China RMB	
				Rate	Amount	Rate	Amount		
18. Aircraft Stand Identification Signs									
1	ASIS wall support type	pcs	28			32,851.60	919,844.80		
2	ASIS self-standing type with switch box	set	11			35,921.92	395,141.12		
3	Supporters for ASIS wall support type	lot	28			4,000.00	112,000.00		
4	Foundation for ASIS self-standing type	set	11			2,436.73	26,804.03		
5	600v XLPE/PVC 50mm ² -2c	meter	270			65.68	17,733.60		
6	600v XLPE/PVC 35mm ² -2c	meter	200			53.10	10,620.00		
7	600v XLPE/PVC 25mm ² -2c	meter	320			41.16	13,171.20		
8	600v XLPE/PVC 16mm ² -2c	meter	1,080			29.52	31,881.60		
9	600v XLPE/PVC 10mm ² -2c	meter	1,990			21.37	42,526.30		
10	Consumable and miscellaneous materials	lot	1				7,642.11		
11	Spare parts	lot	1				130,050.00		
12	Delivery and installation cost	lot	1				170,000.00		
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Total								1,877,414.76	

Shanghai Pudong International Airport Project (Airfield Lighting System)

Item No.	Description of Works	Unit	Quantity	Foreign Cost Component (Yen)		Local Cost Component (China RMB)		Combined Total China RMB
				Rate	Amount	Rate	Amount	
19. Road-Holding Position Lights								
1	Road-holding position lights	pcs	5	301,650	1,508,250	258.30	1,291.50	
2	Foundation for road-holding position lights	set	5			4,741.72	23,708.60	
3	5kv AFL primary cable	meter	2,010	627	1,260,270	6.50	13,065.00	
4	FEP 80	meter	1,380			83.53	115,271.40	
5	SGP 80	meter	630			107.36	67,636.80	
6	Auxiliary materials for piping	lot	1				11,062.80	
7	Plug and receptacle	set	5	9,840	49,200	136.80	684.00	
8	Earthing terminal	set	6			6,505.54	39,033.24	
9	Consumable and miscellaneous materials	lot	1		39,285		8,113.86	
10	Spare parts	lot	1		150,825			
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Total					3,007,830		279,867.20	

Shanghai Pudong International Airport Project (Airfield Lighting System)

Item No.	Description of Works	Unit	Quantity	Foreign Cost Component (Yen)		Local Cost Component (China RMB)		Combined Total China RMB
				Rate	Amount	Rate	Amount	
20. Power Supply, Control and Monitoring System for Airfield Lighting System								
1	Constant current regulator 4 KVA	unit	4	1,281,750	5,127,000	981.00	3,924.00	
2	Constant current regulator 7.5 KVA	unit	6	1,332,000	7,992,000	981.00	5,886.00	
3	Constant current regulator 10 KVA	unit	12	1,396,500	16,758,000	981.00	11,772.00	
4	Constant current regulator 15 KVA	unit	35	1,585,200	55,482,000	1,059.00	37,065.00	
5	Constant current regulator 20 KVA	unit	3	1,773,750	5,321,250	1,137.00	3,411.00	
6	Constant current regulator 25 KVA	unit	6	2,008,650	12,051,900	1,215.00	7,290.00	
7	Constant current regulator 30 KVA	unit	20	2,050,500	41,010,000	1,215.00	24,300.00	
8	Direction change-over switch	unit	62	808,650	50,136,300	654.00	40,548.00	
9	AFL control and monitoring system :	lot	1	634,443,750	634,443,750	47,652.00	47,652.00	
10	AFL remote control panel for ATC (VFR room)							
11	STB remote control panel for ATC (VFR room)							
12	AFL remote control panel for supervisor (VFR room)							
13	STB remote control panel for supervisor (VFR room)							
14	Local control panel (main AFL substation)							
15	Local control console (main AFL substation)							
16	Graphic panel (main AFL substation)							
17	Data processing unit (main AFL substation)							
18	Programmable logical controller (main AFL substation)							
19	Local control panel (secondary AFL substation)							
20	Burnt-out detection or remote unit (1025 units)							
21	Communication interface software and etc.							
22	AFL direct speech phone	pcs	4	included in the above.		66.69	266.76	
23	600v PVC 2mm ² -30c	meter	260			84.19	21,889.40	
24	600v PVC 2mm ² -10c	meter	40			33.57	1,342.80	
Sub-Total:					828,322,200		205,346.96	

Shanghai Pudong International Airport Project (Airfield Lighting System)

Item No.	Description of Works	Unit	Quantity	Foreign Cost Component (Yen)		Local Cost Component (China RMB)		Combined Total China RMB
				Rate	Amount	Rate	Amount	
25	Optical fiber cable	meter	14,740	1,005	14,813,700	6.62	97,578.80	
26	Communication cable for direct speech phone	meter	9,690			8.39	81,299.10	
27	2-pair communication cable	meter	470			19.97	9,385.90	
28	FEP 80	meter	10,170			83.53	849,500.10	
29	Auxiliary materials for piping	lot	1				21,357.00	
30	Consumable and miscellaneous materials	lot	1		444,411		32,470.60	
31	Spare parts	lot	1		82,832,220			
32	Delivery and installation cost	lot	1				149,000.00	
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Total					926,412,531		1,445,938,461	

Item No.	Description of Works	Unit	Quantity	Foreign Cost Component (Yen)		Local Cost Component (China RMB)		Combined Total China RMB	
				Rate	Amount	Rate	Amount		
21. AFL Main Duct									
1	FEP 80	meter	224,700			29.55	6,639,885.00		
2	SGP 100	meter	14,330			88.24	1,264,479.20		
3	SGP 80	meter	63,940			63.72	4,074,256.80		
4	Auxiliary materials for piping	lot	1				1,576,958.10		
5	Man hole type-A	pcs	26			22,257.56	578,696.56		
6	Man hole type-B	pcs	38			16,978.36	645,177.68		
7	Man hole type-D-a	pcs	181			4,950.11	895,969.91		
8	Grounding wire H-14	meter	21,140			11.95	252,623.00		
9	Cable marker tape	meter	21,140			15.57	329,149.80		
10	Earthing terminal	set	93			6,505.54	605,015.22		
11	Excavation	m ³	44,080			32.00	1,410,560.00		
12	Sand	m ³	24,590			265.00	6,516,350.00		
13	Back filling	m ³	19,500			21.00	409,500.00		
14	Consumable and miscellaneous materials	lot	1				755,958.64		
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24									
Total								25,954,579.91	

Shanghai Pudong International Airport Project (Airfield Lighting System)

Item No.	Description of Works	Unit	Quantity	Foreign Cost Component (Yen)		Local Cost Component (China RMB)		Combined Total China RMB
				Rate	Amount	Rate	Amount	
1. Power Distribution System (Main AFL Sub-Station)								
1	Transformer 3-phase 10kv/380-220v 1000KVA	set	2	5,332,788	10,665,576	3,937.20	7,874.40	
2	High voltage incoming panel 1, 6	panel	2	3,667,860	7,335,720	2,926.80	5,853.60	
3	High voltage VCB panel 2, 7	panel	2	3,667,860	7,335,720	2,926.80	5,853.60	
4	High voltage PCT panel 3, 8	panel	2	3,667,860	7,335,720	2,926.80	5,853.60	
5	High voltage branch panel 4, 9	panel	2	3,667,860	7,335,720	2,926.80	5,853.60	
6	High voltage VCB panel 5, 10	panel	2	3,667,860	7,335,720	2,926.80	5,853.60	
7	High voltage VCB panel 11	panel	1	3,667,860	3,667,860	2,926.80	2,926.80	
8	Low voltage MCCB panel (power room)	panel	10	1,749,060	17,490,600	1,230.00	12,300.00	
9	Low voltage MCCB panel (CCR room)	panel	20	1,749,060	34,981,200	1,230.00	24,600.00	
10	Bus duct 2000A	meter	15	131,512	1,972,680	530.10	7,951.50	
11	600v XLPE/PVC 240mm ² -3c	meter	300			414.54	124,362.00	
12	600v XLPE/PVC 150mm ² -3c	meter	740			260.46	192,740.40	
13	600v XLPE/PVC 25mm ² -2c	meter	320			41.16	13,171.20	
14	600v XLPE/PVC 16mm ² -2c	meter	190			29.52	5,608.80	
15	600v XLPE/PVC 10mm ² -2c	meter	630			21.37	13,463.10	
16	600v XLPE/PVC 6mm ² -2c	meter	290			16.39	4,753.10	
17	600v XLPE/PVC 4mm ² -2c	meter	70			12.92	904.40	
18	600v XLPE/PVC 400mm ² -1c	meter	1,190			259.98	309,376.20	
19	Earthing terminal	set	2			6,505.54	13,011.08	
20	Cable terminal treatment kit (10kv 3-core Cable)	pcs	4			3,079.70	12,318.80	
21	Consumable and miscellaneous materials	lot	1		59,181			
22	Spare parts	lot	1		10,348,384			
23	Delivery and installation cost	lot	1					
24	Testing cost	lot	1		10,348,384			
Total					126,212,465		913,559.60	

Shanghai Pudong International Airport Project (Airfield Lighting System)

Item No.	Description of Works	Unit	Quantity	Foreign Cost Component (Yen)		Local Cost Component (China RMB)		Combined Total China RMB
				Rate	Amount	Rate	Amount	
2.	Diesel Engine Generator (Main AFL Sub-Station)							
1	D.E.G. 50Hz 380/220v 1100KVA	lot	2	59,934,456	119,868,912			
2	Generator panel, DC source panel and service tank	lot	2	10,830,888	21,661,776			
3	Main tank 20000 liters	lot	1		14,153,069			
4	Spare parts	lot	1					
5	Delivery and installation cost	lot	1					
6	Testing cost	lot	1		11,986,892			234,000.00
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16								
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24								
Total					167,670,649		234,000.00	

Shanghai Pudong International Airport Project (Airfield Lighting System)

Item No.	Description of Works	Unit	Quantity	Foreign Cost Component (Yen)		Local Cost Component (China RMB)		Combined Total China RMB
				Rate	Amount	Rate	Amount	
3. Uninterruptible Power Supply System (Main AFL Sub-Station)								
1	UPS 150KVA x 3	lot	2	62,242,920	124,485,840			
2	Battery bank x3 and static switch module	lot	1		12,448,584			
3	Spare parts	lot	1				89,000.00	
4	Delivery and installation cost	lot	1					
5	Testing cost	lot	1		12,448,584			
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Total					149,383,008		89,000.00	

Shanghai Pudong International Airport Project (Airfield Lighting System)

Item No.	Description of Works	Unit	Quantity	Foreign Cost Component (Yen)		Local Cost Component (China RMB)		Combined Total China RMB
				Rate	Amount	Rate	Amount	
4. Power Distribution System (Secondary AFL Sub-Station)								
1	Transformer 3-phase 10kv/380-220v 800KVA	set	2	4,892,940	9,785,880	3,937.20	7,874.40	
2	High voltage incoming panel 1, 6	panel	2	3,667,860	7,335,720	2,926.80	5,853.60	
3	High voltage VCB panel 2, 7	panel	2	3,667,860	7,335,720	2,926.80	5,853.60	
4	High voltage PCT panel 3, 8	panel	2	3,667,860	7,335,720	2,926.80	5,853.60	
5	High voltage branch panel 4, 9	panel	2	3,667,860	7,335,720	2,926.80	5,853.60	
6	High voltage VCB panel 5, 10	panel	2	3,667,860	7,335,720	2,926.80	5,853.60	
7	High voltage VCB panel 11	panel	1	3,667,860	3,667,860	2,926.80	2,926.80	
8	Low voltage MCCB panel (power room)	panel	10	1,749,060	17,490,600	1,230.00	12,300.00	
9	Low voltage MCCB panel (CCR room)	panel	16	1,749,060	27,984,960	1,230.00	19,680.00	
10	Bus duct 1600A	meter	15	94,464	1,416,960	444.60	6,669.00	
11	600v XLPE/PVC 240mm ² -3c	meter	170			414.54	70,471.80	
12	600v XLPE/PVC 95mm ² -3c	meter	660			171.41	113,130.60	
13	600v XLPE/PVC 25mm ² -2c	meter	300			41.16	12,348.00	
14	600v XLPE/PVC 16mm ² -2c	meter	120			29.52	3,542.40	
15	600v XLPE/PVC 10mm ² -2c	meter	450			21.37	9,616.50	
16	600v XLPE/PVC 6mm ² -2c	meter	240			16.39	3,933.60	
17	600v XLPE/PVC 4mm ² -2c	meter	60			12.92	775.20	
18	600v XLPE/PVC 300mm ² -1c	meter	920			194.76	179,179.20	
19	Earthing terminal	set	4			6,505.54	26,022.16	
20	Cable terminal treatment kit (10kv 3-core Cable)	pcs	2			3,079.70	6,159.40	
21	Consumable and miscellaneous materials	lot	1		42,509			
22	Spare parts	lot	1		9,560,790			
23	Delivery and installation cost	lot	1					
24	Testing cost	lot	1		9,560,790			
Total					116,188,949		634,852.50	

Shanghai Pudong International Airport Project (Airfield Lighting System)

Item No.	Description of Works	Unit	Quantity	Foreign Cost Component (Yen)		Local Cost Component (China RMB)		Combined Total China RMB
				Rate	Amount	Rate	Amount	
5. Diesel Engine Generator (Secondary AFL Sub-Station)								
1	D.E.G. 50Hz 380/220v 880KVA	lot	2	47,950,812	95,901,624			
2	Generator panel, DC source panel and service tank	lot	2	10,830,888	21,661,776			
3	Main tank 20000 liters	lot	1		11,756,340			
4	Spare parts	lot	1					
5	Delivery and installation cost	lot	1					
6	Testing cost	lot	1					234,000.00
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24								
Total					138,909,903			234,000.00

Shanghai Pudong International Airport Project (Airfield Lighting System)

Item No.	Description of Works	Unit	Quantity	Foreign Cost Component (Yen)		Local Cost Component (China RMB)		Combined Total China RMB
				Rate	Amount	Rate	Amount	
6. Uninterruptible Power Supply System (Secondary AFL Sub-Station)								
1	UPS 100KVA x 3	lot	2	41,496,264	82,992,528			
2	Battery bank x3 and static switch module	lot	1		8,299,253		89,000.00	
3	Spare parts	lot	1					
4	Delivery and installation cost	lot	1					
5	Testing cost	lot	1		8,299,253			
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Total					99,591,034		89,000.00	

Shanghai Pudong International Airport Project (Airfield Lighting System)

Item No.	Description of Works	Unit	Quantity	Foreign Cost Component (Yen)		Local Cost Component (China RMB)		Combined Total China RMB	
				Rate	Amount	Rate	Amount		
7. Control and Monitoring System for Power Distribution System									
1	Control and monitoring system :	lot	1	included in Item 20.		4,407.00	4,407.00		
2	Power remote control panel (main AFL substation)								
3	Power graphic panel (main AFL substation)								
4	Data processing unit (main AFL substation)								
5	Power local control panel (main AFL substation)								
6	Power direct speech phone	pcs	4	included in Item 20.		66.69	266.76		
7	600v PVC 2mm ² -30c	meter	720			84.19	60,616.80		
8	600v PVC 2mm ² -20c	meter	280			61.34	17,175.20		
9	Communication cable for direct speech phone	meter	6,260			8.39	52,521.40		
10	FEP 80	meter	6,260			83.53	522,897.80		
11	Auxiliary materials for piping	lot	1				13,146.00		
12	Consumable and miscellaneous materials	lot	1				19,990.72		
13									
14									
15									
16									
17									
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22									
23									
24									
Total									691,021.68

Shanghai Pudong International Airport Project (Airfield Lighting System)

Item No.	Description of Works	Unit	Quantity	Foreign Cost Component (Yen)		Local Cost Component (China RMB)		Combined Total China RMB
				Rate	Amount	Rate	Amount	
8. Maintenance Room Equipment								
1	Light cleaning device	lot	1	45,320,000	45,320,000			
2	Dry type cleaning device	lot	1	17,510,000	17,510,000			
3	Hot water type parts cleaning device	lot	1	9,888,000	9,888,000			
4	Simplified air leakage testing device	lot	1	2,369,000	2,369,000			
5	Supersonic wave cleaning device	lot	1	1,133,000	1,133,000			
6	Light distribution intensity measuring device	lot	1	20,291,000	20,291,000			
7	Air compressor	lot	1	1,854,000	1,854,000			
8	Light Cleaning car	lot	1	72,100,000	72,100,000			
9	Light measurement System	lot	1	92,250,000	92,250,000			
10	Spare parts	lot	1		26,271,500			
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22								
23								
24								
Total					288,986,500			

Table of Complex Construction
Cost-Unit Rate Estimate



Complex Construction Cost - Unit Rate Estimate

PROJECT Name : Shanghai Pudong International Airport (Airfield Lighting System)

Item No. : 1

Description : Precision Approach Lighting System

No.	Description	Complex Unit Cost (Chinese RMB)	Local Component Amount	Total M/D Amount	Type Unit cost M/D	Electri- cian	Special craftsmen	Common labour	Surveyor	Steel setter	Form	Remark
1	PALS surface-type white	261.24		261.24		0.990	0.600	1.140	0.150			
2	PALS surface-type red	261.24		261.24		0.990	0.600	1.140	0.150			
3	PALS elevated-type white	2,768.30	2,510.00	258.30		0.750		1.350	0.300			
4	PALS elevated-type red	2,768.30	2,510.00	258.30		0.750		1.350	0.300			
5	Foundation for PALS center line barrette	27,411.23	24,874.93	2,536.30		10.425	5.179	9.712		1.700	5.376	Annex-1
6	Foundation for PALS side row barrette	23,498.36	21,632.56	1,865.80		6.900	4.317	7.370		1.209	4.599	Annex-2
7	Foundation for PALS 150m cross bar	103,762.41	95,302.02	8,460.39		36.975	22.411	30.271		5.616	11.634	Annex-3
8	Foundation for PALS 300m cross bar	103,033.77	93,991.49	9,042.28		37.860	26.719	29.881		6.665	13.734	Annex-4
9	Foundation for PALS surface-type	1,355.93	969.67	386.26		0.915	0.880	1.539	0.300	0.051	0.550	Annex-5
10	Transformer housing box	2,519.96	2,331.50	188.46		0.600	0.143	1.428			0.504	Annex-6
11	5kv AFL primary cable	6.50		6.50		0.057						
12	FEP 80	83.53	69.16	14.37		0.126						
13	FEP 50	74.28	61.96	12.32		0.108						
14	600v AFL secondary cable 30m with plug	194.94		194.94		1.710						
15	600v AFL secondary cable 40m with plug	214.32		214.32		1.880						
16	SGP 50	85.13	63.92	21.21		0.186						
17	Flexible pipe 50 (stainless)	1,092.31	1,067.00	25.31		0.222						
18	Auxiliary materials for piping											
19	Cable splice kit (5kv AFL primary cable)	333.40	265.00	68.40		0.600						
20	Plug and receptacle	136.80		136.80		1.200						
21	Earthing terminal	6,505.54	3,929.26	2,576.28		17.700		10.740				Annex-11
22	Consumable and miscellaneous materials											
23	Spare parts											
24												

Complex Construction Cost - Unit Rate Estimate

PROJECT Name : Shanghai Pudong International Airport (Airfield Lighting System)

Item No. : 2

Description : Sequence Flashing Lights

No.	Description	Complex Unit Cost (Chinese RMB)	Local Component		Total M/D		Type	Electrician	Special craftsmen	Common labour	Surveyor	Steel setter	Form	Remark
			Amount	Amount	Amount	Amount								
1	SFL elevated-type with control cabinet	323.70			323.70			1.050		1.950	0.300			
2	Central control cabinet	570.00			570.00		5.000							
3	Foundation for control cabinet	392.10	353.50		38.60			0.094		0.182			0.318	Annex-12
4	Hand hole 400x400x500	1,268.91	1,118.75		150.16			0.750		0.331			0.580	Annex-13
5	600v XLPE/PVC 35mm2-4c	96.21	70.90		25.31			0.222						
6	600v XLPE/PVC 25mm2-4c	72.26	53.10		19.16			0.168						
7	600v XLPE/PVC 16mm2-4c	50.31	35.60		14.71			0.129						
8	600v XLPE/PVC 10mm2-4c	35.97	24.00		11.97			0.105						
9	600v PVC 4mm2-30c	108.13	77.00		31.13			0.273						
10	600v PVC 4mm2-20c	78.14	51.80		26.34			0.231						
11	Special 6-core cable	10.26			10.26			0.090						
12	FEP 80	83.53	69.16		14.37			0.126						Annex-7
13	FEP 50	74.28	61.96		12.32			0.108						Annex-8
14	Auxiliary materials for piping													
15	Earthing terminal													
16	Consumable and miscellaneous materials	6,505.54	3,929.26		2,576.28			17.700		10.740				Annex-11
17	Spare parts													
18														
19														
20														
21														
22														
23														
24														

Complex Construction Cost - Unit Rate Estimate

PROJECT Name : Shanghai Pudong International Airport (Airfield Lighting System)

Item No. : 3

Description : Precision Approach Path Indicator

No.	Description	Complex Unit Cost (Chinese RMB)		Local Component		Total M/D		Type		Electrician	Special craftsmen	Common labour	Surveyor	Steel setter	Form	Remark
		Amount	Amount	Amount	Amount	Unit cost	M/D	Unit cost	M/D							
1	PAPI	1,067.40				1,067.40										
2	Foundation for PAPI	2,064.14	1,768.86			295.28								0.242	0.885	Annex-14
3	5kv AFL primary cable	6.50				6.50				0.930						
4	FEP 80	83.53	69.16			14.37				0.057						Annex-7
5	Auxiliary materials for piping									0.126						
6	Cable splice kit (5kv AFL primary cable)	333.40	265.00			68.40				0.600						
7	Plug and receptacle	136.80				136.80				1.200						
8	Earthing terminal	6,505.54	3,929.26			2,576.28				17.700		10.740				Annex-11
9	Consumable and miscellaneous materials															
10	Spare parts															
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PROJECT Name : Shanghai Pudong International Airport (Airfield Lighting System)

Item No. : 4

Description : Runway Edge Lights

No.	Description	Complex Unit Cost		Local Component		Total M/D		Type		Electrician	Special craftsmen	Common labour	Surveyor	Steel setter	Form	Remark
		(Chinese RMB)	Amount	Amount	Amount	Unit cost	M/D									
1	REDL elevated-type white/white	2,135.30	1,877.00	258.30												
2	REDL elevated-type white/yellow	2,135.30	1,877.00	258.30					0.750		1.350	0.300				
3	REDL surface-type white/white	261.24		261.24					0.750		1.350	0.300				
4	REDL surface-type white/yellow	261.24		261.24					0.990	0.600	1.140	0.150				
5	Foundation for REDL elevated-type	743.92	551.30	192.62					0.990	0.600	1.140	0.150				
6	Foundation for REDL surface-type	1,355.93	969.67	386.26					0.600	0.144	1.438			0.049		0.504/Annex-15
7	Transformer housing box	2,519.96	2,331.50	188.46					0.915	0.880	1.539	0.300		0.051		0.550/Annex-5
8	5kv AFL primary cable	26.00	19.50	6.50					0.600	0.143	1.428					0.504/Annex-6
9	FEP 50	74.28	61.96	12.32					0.057							
10	600v AFL secondary cable 10m with plug	156.18		156.18					0.108							Annex-8
11	600v AFL secondary cable 20m with plug	175.56		175.56					1.370							
12	SGP 50	85.13	63.92	21.21					1.540							
13	Flexible pipe 50 (stainless)	1,092.31	1,067.00	25.31					0.186							
14	Auxiliary materials for piping								0.222							
15	Cable splice kit (5kv AFL primary cable)	333.40	265.00	68.40					0.600							
16	Plug and receptacle	136.80		136.80					1.200							
17	Earthing terminal	6,505.54	3,929.26	2,576.28					17.700		10.740					Annex-11
18	Consumable and miscellaneous materials															
19	Spare parts															
21																
22																
23																
24																

Complex Construction Cost - Unit Rate Estimate

PROJECT Name : Shanghai Pudong International Airport (Airfield Lighting System)

Item No. : 5

Description : Runway Threshold Lights

No.	Description	Complex Unit Cost (Chinese RMB)	Local Component		Total M/D Amount	Type Unit cost M/D	Electri- cian	Special craftsmen	Common labour	Surveyor	Steel setter	Form	Remark
			Amount	Amount									
1	RTHL surface-type green	261.24			261.24		0.990	0.600	1.140	0.150			
2	WBAR elevated-type green	3,028.30	2,770.00		258.30		0.750		1.350	0.300			
3	Foundation for RTHL	1,355.93	969.67		386.26		0.915	0.880	1.539	0.300	0.051	0.550	Annex-5
4	Foundation for WBAR	743.92	551.30		192.62		0.600	0.144	1.438		0.049	0.504	Annex-15
5	Transformer housing box	2,519.96	2,331.50		188.46		0.600	0.143	1.428			0.504	Annex-6
6	5kv AFL primary cable	6.50			6.50		0.057						
7	FEP 80	83.53	69.16		14.37		0.126						Annex-7
8	600v AFL secondary cable 10m with plug	156.18			156.18		1.370						
9	600v AFL secondary cable 20m with plug	175.56			175.56		1.540						
10	600v AFL secondary cable 30m with plug	194.94			194.94		1.710						
11	600v AFL secondary cable 40m with plug	214.32			214.32		1.880						
12	600v AFL secondary cable 50m with plug	233.70			233.70		2.050						
13	SGP 80	107.36	81.02		26.34		0.231						Annex-9
14	SGP 50	85.13	63.92		21.21		0.186						Annex-10
15	Flexible pipe 80 (stainless)	2,275.68	2,236.00		39.68		0.348						
16	Flexible pipe 50 (stainless)	1,092.31	1,067.00		25.31		0.222						
17	Auxiliary materials for piping												
18	Cable splice kit (5kv AFL Primary Cable)	333.40	265.00		68.40		0.600						
19	Plug and receptacle	136.80			136.80		1.200						
20	Earthing terminal	6,505.54	3,929.26		2,576.28		17.700		10.740				Annex-11
21	Consumable and miscellaneous materials												
22	Spare parts												
23													
24													

Complex Construction Cost - Unit Rate Estimate

PROJECT Name : Shanghai Pudong International Airport (Airfield Lighting System)

Item No. : 6

Description : Runway End Lights

No.	Description	Complex Unit Cost		Local Component		Total M/D		Type		Electrician	Special craftsmen	Common labour	Surveyor	Steel setter	Form	Remark
		(Chinese RMB)	Amount	Amount	Amount	Unit cost	M/D									
1	RENL surface-type red	6,873.24	6,612.00	261.24	0.990	0.600	1.140	0.150	0.990	63	52	342	73	73		
2	Foundation for RENL	1,355.93	969.67	386.26	0.915	0.880	1.539	0.300	0.915						0.550 Annex-5	
3	Transformer housing box	2,519.96	2,331.50	188.46	0.600	0.143	1.428		0.600						0.504 Annex-6	
4	600v AFL secondary cable 20m with plug	175.56		175.56	1.540				1.540							
5	600v AFL secondary cable 30m with plug	194.94		194.94	1.710				1.710							
6	600v AFL secondary cable 40m with plug	214.32		214.32	1.880				1.880							
7	600v AFL secondary cable 50m with plug	233.70		233.70	2.050				2.050							
8	SGP 80	107.36		107.36	0.231				0.231							Annex-9
9	SGP 50	85.13		85.13	0.186				0.186							Annex-10
10	Flexible pipe 80 (stainless)	2,275.68		2,275.68	0.348				0.348							
11	Flexible pipe 50 (stainless)	1,092.31		1,092.31	0.222				0.222							
12	Auxiliary materials for piping															
13	Plug and receptacle															
14	Consumable and miscellaneous materials	136.80		136.80	1.200				1.200							
15	Spare parts															
16																
17																
18																
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Complex Construction Cost - Unit Rate Estimate

PROJECT Name : Shanghai Pudong International Airport (Airfield Lighting System)

Item No. : 7

Description : Runway Center Line Lights

No.	Description	Complex Unit Cost (Chinese RMB)	Local Component		Total M/D		Type Unit cost M/D	Electri- cian	Special craftsmen	Common labour	Surveyor	Steel setter	Form	Remark
			Amount	Amount	Amount	Amount								
1	RCLL white/white	261.24			261.24									
2	RCLL white/yellow	261.24			261.24									
3	Foundation for RCLL	1,355.93	969.67		386.26									
4	Transformer housing box	2,519.96	2,331.50		188.46									
5	5kv AFL primary cable	6.50			6.50			0.990	0.600	1.140	0.150			
6	FEP 80	83.53	69.16		14.37			0.990	0.600	1.140	0.150			
7	600v AFL secondary cable 40m with plug	214.32			214.32			0.915	0.880	1.539	0.300	0.051		Annex-5
8	SGP 50	85.13	63.92		21.21			0.600	0.143	1.428				Annex-6
9	Flexible pipe 50 (stainless)	1,092.31	1,067.00		25.31			0.057						Annex-7
10	Auxiliary materials for piping							0.126						Annex-10
11	Cable splice kit (5kv AFL Primary Cable)	333.40	265.00		68.40			1.880						
12	Plug and receptacle	136.80			136.80			0.186						
13	Earthing terminal	6,505.54	3,929.26		2,576.28			0.222						Annex-11
14	Consumable and miscellaneous materials							0.600						
15	Spare parts							1.200						
16								17.700		10.740				
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PROJECT Name : Shanghai Pudong International Airport (Airfield Lighting System)

Item No. : 8

Description : Runway Touchdown Zone Lights

No.	Description	Complex Unit Cost		Local Component		Total M/D		Type		Electrician	Special craftsmen	Common labour	Surveyor	Steel setter	Form	Remark
		(Chinese RMB)	Amount	Amount	Amount	Unit cost	M/D									
1	RTZL white	261.24				261.24										
2	Foundation for RTZL	1,355.93	969.67			386.26										
3	Transformer housing box	2,519.96	2,331.50			188.46										
4	5kv AFL primary cable	6.50				6.50										
5	FEP 50	74.28	61.96			12.32										
6	600v AFL secondary cable 30m with plug	194.94				194.94										
7	SGP 50	85.13	63.92			21.21										
8	Flexible pipe 50 (stainless)	1,092.31	1,067.00			25.31										
9	Auxiliary materials for piping															
10	Cable splice kit (5kv AFL Primary Cable)	333.40	265.00			68.40										
11	Plug and receptacle	136.80				136.80										
12	Earthing terminal	6,505.54	3,929.26			2,576.28										
13	Consumable and miscellaneous materials															
14	Spare parts															
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Complex Construction Cost - Unit Rate Estimate

PROJECT Name : Shanghai Pudong International Airport (Airfield Lighting System)

Item No. : 9

Description : Taxiway Center Line Lights

No.	Description	Complex Unit Cost (Chinese RMB)	Local Component Amount	Total M/D Amount	Type		Electrician	Special craftsmen	Common labour	Surveyor	Steel setter	Form	Remark
					Unit cost	M/D							
1	TCLL narrow green/yellow (with shallow base)	3,043.24	2,782.00	261.24	0.990	0.600	1.140	0.150					
2	TCLL narrow green/green (with shallow base)	3,043.24	2,782.00	261.24	0.990	0.600	1.140	0.150					
3	TCLL wide green/green (with shallow base)	3,043.24	2,782.00	261.24	0.990	0.600	1.140	0.150					
4	TCLL narrow green/green (with deep base)	3,741.24	3,480.00	261.24	0.990	0.600	1.140	0.150					
5	TCLL wide green/green (with shallow base)	3,741.24	3,480.00	261.24	0.990	0.600	1.140	0.150					
6	HSTCLL narrow green (with shallow base)	3,043.24	2,782.00	261.24	0.990	0.600	1.140	0.150					
7	HSTCLL wide green (with shallow base)	3,043.24	2,782.00	261.24	0.990	0.600	1.140	0.150					
8	HSTCLL narrow yellow (stb-R/W) (with shallow base)	261.24		261.24	0.990	0.600	1.140	0.150					
9	HSTCLL narrow green (stb-R/W) (with shallow base)	261.24		261.24	0.990	0.600	1.140	0.150					
10	HSTCLL wide yellow (stb-R/W) (with shallow base)	261.24		261.24	0.990	0.600	1.140	0.150					
11	HSTCLL wide green (stb-R/W) (with shallow base)	261.24		261.24	0.990	0.600	1.140	0.150					
12	Foundation for TCLL (typical)	1,355.93	969.67	386.26	0.915	0.880	1.539	0.300			0.051		0.550 Annex-5
13	Foundation for TCLL (apron area) with TR housing box	3,387.22	2,960.40	426.82	0.948	0.879	1.406	0.450			0.049		0.449 Annex-16
14	Foundation for HSTCLL (typical)	1,355.93	969.67	386.26	0.915	0.880	1.539	0.300			0.051		0.550 Annex-5
15	Transformer housing box	2,519.96	2,331.50	188.46	0.600	0.143	1.428						0.504 Annex-6
16	Hand hole 400x400x500	1,268.91	1,118.75	150.16	0.750	0.081	0.331						0.580 Annex-13
17	5kv AFL primary cable	6.50		6.50	0.057								
18	FEP 80	83.53	69.16	14.37	0.126								Annex-7
19	FEP 50	74.28	61.96	12.32	0.108								Annex-8
20	600v AFL secondary cable 50m with plug	194.94		194.94	1.710								
21	600v AFL secondary cable 40m with plug	214.32		214.32	1.880								
22	600v AFL secondary cable 50m with plug	233.70		233.70	2.050								
23	600v AFL secondary cable 60m with plug	253.08		253.08	2.220								
24	600v AFL secondary cable 70m with plug	272.46		272.46	2.390								

PROJECT Name : Shanghai Pudong International Airport (Airfield Lighting System)

Item No. : 9

Description : Taxiway Center Line Lights

No.	Description	Complex Unit Cost (Chinese RMB)	Local Component		Total M/D Amount	Type Unit cost M/D	Electrician	Special craftsmen	Common labour	Surveyor	Steel setter	Form	Remark
			Amount	Amount									
25	SGP 80	107.36	81.02	26.34									
26	SGP 50	85.13	63.92	21.21		0.231							Annex-9
27	Flexible pipe 50 (stainless)	1,092.31	1,067.00	25.31		0.186							Annex-10
28	Auxiliary materials for piping					0.222							
29	Cable splice kit (5kv AFL Primary Cable)	333.40	265.00	68.40		0.600							
30	Plug and receptacle	136.80		136.80		1.200							
31	Earthing terminal	6,505.54	3,929.26	2,576.28		17.700		10.740					Annex-11
32	Consumable and miscellaneous materials												
33	Spare parts												
34													
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Complex Construction Cost - Unit Rate Estimate

PROJECT Name : Shanghai Pudong International Airport (Airfield Lighting System)

Item No. : 10

Description : Taxiway Edge Lights

No.	Description	Complex Unit Cost	Local Component	Total M/D	Type	Electrician	Special craftsmen	Common labour	Surveyor	Steel setter	Form	Remark
		(Chinese RMB)	Amount	Amount	Unit cost	M/D						
1	TWYL elevated-type blue	2,102.30	1,844.00	258.30				1.350	0.300			
2	Foundation for TWYL with normal bend	205.06	181.37	23.69			0.047	0.115			0.202	Annex-17
3	Transformer housing box	2,519.96	2,331.50	188.46		0.600	0.143	1.428			0.504	Annex-6
4	5kv AFL primary cable	26.00	19.50	6.50		0.057						
5	FEP 80	83.53	69.16	14.37		0.126						Annex-7
6	FEP 50	74.28	61.96	12.32		0.108						Annex-8
7	600v AFL secondary cable 10m with plug	156.18		156.18		1.370						Annex-10
8	SGP 50	85.13	63.92	21.21		0.186						
9	Flexible pipe 50 (stainless)	1,092.31	1,067.00	25.31		0.222						
10	Auxiliary materials for piping											
11	Cable splice kit (5kv AFL Primary Cable)	333.40	265.00	68.40		0.600						
12	Plug and receptacle	136.80		136.80		1.200						
13	Earthing terminal	6,505.54	3,929.26	2,576.28		17.700		10.740				Annex-11
14	Consumable and miscellaneous materials											
15	Spare parts											
16												
17												
18												
19												
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Item No. : 11

Description : Stop Bar System

No.	Description	Complex Unit Cost		Local Component		Total M/D		Type		Electrician	Special craftsmen	Common labour	Surveyor	Steel setter	Form	Remark
		(Chinese RMB)	Amount	Amount	Amount	Unit cost	M/D									
1	STBL surface-type red	3,053.24	2,792.00	261.24	0.990	0.600	1.140	0.150								
2	STBL elevated-type red	1,653.30	1,395.00	258.30	0.750	0.300	1.350	0.300								
3	STBL surface-type red controllable	261.24		261.24	0.990	0.600	1.140	0.150								
4	STBL elevated-type red controllable	1,653.30	1,395.00	258.30	0.750	0.300	1.350	0.300								
5	TCLL narrow green/yellow controllable	261.24		261.24	0.990	0.600	1.140	0.150								
6	TCLL narrow green/green controllable	261.24		261.24	0.990	0.600	1.140	0.150								
7	TCLL wide green/yellow controllable	261.24		261.24	0.990	0.600	1.140	0.150								
8	TCLL wide green/green controllable	261.24		261.24	0.990	0.600	1.140	0.150								
9	Foundation for STBL surface-type	1,355.93	969.67	386.26	0.915	0.880	1.539	0.300					0.051		0.550	Annex-5
10	Foundation for STBL elevated-type with normal bend	205.06	181.37	23.69	0.047	0.047	0.115								0.202	Annex-17
11	Foundation for TCLL controllable	1,355.93	969.67	386.26	0.915	0.880	1.539	0.300					0.051		0.550	Annex-5
12	Transformer housing box	2,519.96	2,331.50	188.46	0.600	0.143	1.428	0.600							0.504	Annex-6
13	Microwave sensor	647.40		647.40	2.100		3.900	0.600						0.049	0.504	Annex-15
14	Foundation for microwave sensor	743.92	551.30	192.62	0.600	0.144	1.438									
15	5kv AFL primary cable	6.50		6.50	0.057											
16	FEP 80	83.53	69.16	14.37	0.126											
17	600v AFL secondary cable 10m with plug	156.18		156.18	1.370											
18	600v AFL secondary cable 20m with plug	175.56		175.56	1.540											
19	600v AFL secondary cable 30m with plug	194.94		194.94	1.710											
20	600v AFL secondary cable 40m with plug	214.32		214.32	1.880											
21	SGP 50	85.13	63.92	21.21	0.186											
22	Flexible pipe 50 (stainless)	1,092.31	1,067.00	25.31	0.222											
23	Auxiliary materials for piping															
24	Cable splice kit (5kv AFL Primary Cable)	333.40	265.00	68.40	0.600											Annex-10

Complex Construction Cost - Unit Rate Estimate

PROJECT Name : Shanghai Pudong International Airport (Airfield Lighting System)

Item No. : 11

Description : Stop Bar System

No.	Description	Complex Unit Cost (Chinese RMB)		Local Component		Total M/D		Type	Electri- cian	Special craftsmen	Common labour	Surveyor	Steel setter	Form	Remark
		Amount	Amount	Amount	Amount	Unit cost	M/D								
25	Plug and receptacle	136.80			136.80										
26	Earthing terminal	6,505.54		3,929.26	2,576.28				1,200	63	52	342	73	73	Annex-11
27	Consumable and miscellaneous materials							17,700							
28	Spare parts														
29															
30															
31															
32															
33															
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Complex Construction Cost - Unit Rate Estimate

PROJECT Name : Shanghai Pudong International Airport (Airfield Lighting System)

Item No. : 12

Description : Runway Guard Lights

No.	Description	Complex Unit Cost		Local Component		Total M/D		Type	Electrician	Special craftsmen	Common labour	Surveyor	Steel setter	Form	Remark	
		(Chinese RMB)	Amount	Amount	Amount	Unit cost	M/D									
1	Runway Guard Lights	258.30				258.30										
2	Foundation for runway guard lights	4,741.72	4,532.52			209.20		0.750		0.234	1.350	342	73	73		
3	Plug and receptacle	136.80				136.80		0.750			1.246					
4	Consumable and miscellaneous materials							1.200								
5	Spare parts															
6																
7																
8																
9																
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Complex Construction Cost - Unit Rate Estimate

PROJECT Name : Shanghai Pudong International Airport (Airfield Lighting System)

Item No. : 13

Description : Taxiway Intersection Lights

No.	Description	Complex Unit Cost (Chinese RMB)	Local Component		Total M/D	Type Unit cost M/D	Electri- cian	Special craftsmen	Common labour	Surveyor	Steel setter	Form	Remark
			Amount	Amount									
1	TISL yellow (with shallow base)	3,043.24	2,782.00	261.24	0.990	0.600	1.140	0.150	0.150	0.051	0.550	Annex-5	
2	TISL yellow (with deep base)	3,741.24	3,480.00	261.24	0.990	0.600	1.140	0.150	0.150	0.051	0.550	Annex-5	
3	Foundation for TISL (typical)	1,355.93	969.67	386.26	0.915	0.880	1.539	0.300	0.450	0.049	0.449	Annex-16	
4	Foundation for TISL (apron area) with TR housing box	3,387.22	2,960.40	426.82	0.948	0.879	1.406	0.450	0.504	0.049	0.504	Annex-6	
5	Transformer housing box	2,519.96	2,331.50	188.46	0.600	0.143	1.428					Annex-9	
6	600v AFL secondary cable 30m with plug	194.94	81.02	194.94	1.710							Annex-10	
7	SGP 80	107.36	63.92	26.34	0.231								
8	SGP 50	85.13	63.92	21.21	0.186								
9	Flexible pipe 80 (stainless)	2,275.68	2,236.00	39.68	0.348								
10	Flexible pipe 50 (stainless)	1,092.31	1,067.00	25.31	0.222								
11	Auxiliary materials for piping												
12	Plug and receptacle	136.80		136.80	1.200								
13	Consumable and miscellaneous materials												
14	Spare parts												
15													
16													
17													
18													
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Complex Construction Cost - Unit Rate Estimate

PROJECT Name : Shanghai Pudong International Airport (Airfield Lighting System)

Item No. : 14

Description : Taxiing Guidance Signs

No.	Description	Complex Unit Cost (Chinese RMB)	Local Component Amount	Total M/D Amount	Type		Electrician	Special craftsmen	Common labour	Surveyor	Steel setter	Form	Remark
					Unit cost	M/D							
1	TXGS 2-letter	14,002.30	13,870.00	132.30			0.900		0.900				
2	TXGS 3-letter	20,382.30	20,250.00	132.30			0.900		0.900				
3	TXGS 4-letter	21,425.00	21,260.00	165.00			0.900		1.200				
4	TXGS 5-letter	28,355.00	28,190.00	165.00			0.900		1.200				
5	TXGS 6-letter	29,365.00	29,200.00	165.00			0.900		1.200				
6	TXGS 7-letter	30,405.00	30,240.00	165.00			0.900		1.200				
7	TXGS 8-letter	42,935.00	42,770.00	165.00			0.900		1.200				
8	TXGS 9-letter	43,895.00	43,730.00	165.00			0.900		1.200				
9	Foundation for TXGS 2-letter	1,288.19	1,037.70	250.49			0.885	0.316	1.361				0.807 Annex-19
10	Foundation for TXGS 3-letter	1,761.82	1,473.82	288.00			0.885	0.453	1.522				1.088 Annex-20
11	Foundation for TXGS 4-letter	1,761.82	1,473.82	288.00			0.885	0.453	1.522				1.088 Annex-20
12	Foundation for TXGS 5-letter	2,236.84	1,911.37	325.47			0.885	0.590	1.682				1.369 Annex-21
13	Foundation for TXGS 6-letter	2,236.84	1,911.37	325.47			0.885	0.590	1.682				1.369 Annex-21
14	Foundation for TXGS 7-letter	2,709.46	2,346.48	362.98			0.885	0.727	1.843				1.650 Annex-22
15	Foundation for TXGS 8-letter	2,709.46	2,346.48	362.98			0.885	0.727	1.843				1.650 Annex-22
16	Foundation for TXGS 9-letter	3,183.03	2,782.58	400.45			0.885	0.864	2.003				1.931 Annex-23
17	Hand hole 400x400x500	1,268.91	1,118.75	150.16			0.750	0.081	0.331				0.580 Annex-13
18	5kv AFL primary cable	26.00	19.50	6.50			0.057						
19	FEP 80	83.53	69.16	14.37			0.126						Annex-7
20	FEP 50	74.28	61.96	12.32			0.108						Annex-8
21	Auxiliary materials for piping												
22	Cable splice kit (5kv AFL Primary Cable)	333.40	265.00	68.40			0.600						
23	Plug and receptacle	136.80		136.80			1.200						
24	Earthing terminal	6,505.54	3,929.26	2,576.28			17.700		10.740				Annex-11

Complex Construction Cost - Unit Rate Estimate

PROJECT Name : Shanghai Pudong International Airport (Airfield Lighting System)

Item No. : 14

Description : Taxiing Guidance Signs

No.	Description	Complex Unit Cost (Chinese RMB)	Local Component		Total M/D	Type	Electrician	Special craftsmen	Common labour	Surveyor	Steel setter	Form	Remark
			Amount	Amount									
25	Consumable and miscellaneous materials												
26	Spare parts												
27	Delivery and installation cost												
28													
29													
30													
31													
32													
33													
34													
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Complex Construction Cost - Unit Rate Estimate

PROJECT Name : Shanghai Pudong International Airport (Airfield Lighting System)

Item No. : 15

Description : Wind Direction Indicator Lights

No.	Description	Complex Unit Cost (Chinese RMB)		Local Component		Total M/D		Type		Electri- cian	Special craftsmen	Common labour	Surveyor	Steel setter	Form	Remark
		Amount	Amount	Amount	Amount	Unit cost	M/D									
1	WDIL	1,089.00				1,089.00										
2	Foundation for WDIL	3,233.17	2,992.09	241.08						7.500	0.876	4.500		0.367	1.512	Annex-24
3	Circular band	35,937.67	32,029.81	3,907.86							12.291	46.515			9.791	Annex-25
4	Hand hole 400x400x500	1,268.91	1,118.75	150.16						0.750	0.081	0.331			0.580	Annex-13
5	600v XLPE/PVC 25mm2-4c	72.26	53.10	19.16						0.168						
6	FEP 50	74.28	61.96	12.32						0.108						
7	Auxiliary materials for piping															
8	Earthing terminal									17.700		10.740				
9	Consumable and miscellaneous materials	6,505.54	3,929.26	2,576.28												
10	Spare parts															
11																
12																
13																
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Complex Construction Cost - Unit Rate Estimate

Item No. : 16
Description : Apron Floodlighting

No.	Description	Complex Unit Cost (Chinese RMB)		Local Component		Total M/D		Type		Electr- cian	Special craftsmen	Common labour	Surveyor	Steel setter	Form	Remark
		Amount	Amount	Amount	Amount	Unit cost	M/D									
1	FLO lighting pole (2.5m) with lighting fixtures and etc.	394,977.00	386,940.00	8,037.00				51.000								
2	FLO lighting pole (20m) with lighting fixtures and etc.	366,342.00	358,305.00	8,037.00				51.000								
3	FLO control and monitoring system for cargo area	2,211.00		2,211.00				10.500								
4	Remote control panel for cargo area							15.000								
5	FLO control and monitoring system for terminal area	2,958.00		2,958.00				10.500								
6	Remote control panel for general control center	2,211.00		2,211.00				1.200								
7	FLO control and monitoring system for maintenance area							1.200								
8	Remote control panel for maintenance area	292.80		292.80				15.975								
9	Switch box for FLO (outdoor type)	63,165.49	60,127.45	3,038.04				3.000								
10	Foundation for FLO	19,120.00	17,560.00	1,560.00				7.563						14.165	8.278	Annex-26
11	Fence for FLO lighting pole	11,936.67	10,947.42	989.25				30.000						2.266	6.289	Annex-27
12	Man hole for FLO foundation	16,978.36	14,522.13	2,456.23				4.047						2.722	7.318	Annex-30
13	Man hole for boundary point (type-B)							11.328								
14	600v XLPE/PVC 35mm2-4c	96.21	70.90	25.31				0.222								
15	600v XLPE/PVC 25mm2-4c	72.26	53.10	19.16				0.168								
16	600v XLPE/PVC 16mm2-4c	50.31	35.60	14.71				0.129								
17	600v XLPE/PVC 10mm2-4c	35.97	24.00	11.97				0.105								
18	600v XLPE/PVC 25mm2-3c	56.08	40.00	16.08				0.141								
19	600v XLPE/PVC 16mm2-2c	29.52	19.60	9.92				0.087								
20	600v XLPE/PVC 10mm2-2c	21.37	13.50	7.87				0.069								
21	600v XLPE/PVC 6mm2-2c	16.39	9.20	7.19				0.063								
22	600v XLPE/PVC 4mm2-2c	12.92	7.10	5.82				0.051								
23	600v PVC 2mm2-30c	84.19	55.80	28.39				0.249								
24	Optical fiber cable	6.50		6.50				0.057								

Complex Construction Cost - Unit Rate Estimate

PROJECT Name : Shanghai Pudong International Airport (Airfield Lighting System)

Item No. : 16

Description : Apron Floodlighting

No.	Description	Complex Unit Cost		Local Component		Total M/D		Type		Electrician	Special craftsmen	Common labour	Surveyor	Steel setter	Form	Remark
		(Chinese RMB)	Amount	Amount	Amount	Unit cost	M/D	M/D	M/D							
25	FEP 80	83.53	69.16	14.37						0.126						Annex-7
26	Auxiliary materials for piping															
27	Grounding wire H-14	11.95	7.50	4.45						0.039						
28	Cable marker tape	15.57	14.20	1.37						0.012						
29	Earthing terminal	6,505.54	3,929.26	2,576.28						17.700		10.740				Annex-11
30	Excavation	32.00	32.00													
31	Sand	265.00	265.00													
32	Back filling	21.00	21.00													
33	Consumable and miscellaneous materials															
34	Spare parts															
35	Pole erection cost with heavy equipment hire cost															
36																
37																
38																
39																
40																
41																
42																
43																
44																
45																
46																
47																
48																

Complex Construction Cost - Unit Rate Estimate

PROJECT Name : Shanghai Pudong International Airport (Airfield Lighting System)

Item No. : 17

Description : Visual Docking Guidance System

No.	Description	Complex Unit Cost (Chinese RMB)	Local Component		Total M/D Amount	Type Unit cost M/D	Electri- cian	Special craftsmen	Common labour	Surveyor	Steel setter	Fonn	Remark
			Amount	Amount									
1	VDGS	2,540.00			2,540.00		20.000		5.000				
2	VDGS control system	4,000.00	4,000.00										
3	Supporters for VDGS	41.16	28.50		12.66		0.111						
4	600v XLPE/PVC 25mm2-2c	29.52	19.60		9.92		0.087						
5	600v XLPE/PVC 16mm2-2c	21.37	13.50		7.87		0.069						
6	600v XLPE/PVC 10mm2-2c	13.22	7.40		5.82		0.051						
7	RS485 cable	23.75	15.20		8.55		0.075						
8	Interface cable	41.49	26.10		15.39		0.135						
9	SCP 50	1,092.31	1,067.00		25.31		0.222						
10	Flexible pipe 50												
11	Auxiliary materials for piping												
12	Consumable and miscellaneous materials												
13	Spare parts												
14	Delivery and installation cost												
15													
16													
17													
18													
19													
20													
21													
22													
23													
24													

PROJECT Name : Shanghai Pudong International Airport (Airfield Lighting System)

Item No. : 18

Description : Aircraft Stand Identification Signs

No.	Description	Complex Unit Cost (Chinese RMB)		Local Component		Total M/D		Type	Electrician	Special craftsmen	Common labour	Surveyor	Steel setter	Form	Remark	
		Amount	Amount	Amount	Amount	Unit cost	M/D									
1	ASIS wall support type	32,851.60	32,500.00	351.60												
2	ASIS self-standing type with switch box	35,921.92	35,500.00	421.92				2.400			1.500					
3	Supporters for ASIS wall support type	4,000.00	4,000.00					2.880			1.800					
4	Foundation for ASIS self-standing type	2,436.73	2,227.56	209.17						0.718	0.912					1.596/Annex-28
5	600v XLPE/PVC 50mm2-2c	65.68	45.50	20.18				0.177								
6	600v XLPE/PVC 35mm2-2c	53.10	36.00	17.10				0.150								
7	600v XLPE/PVC 25mm2-2c	41.16	28.50	12.66				0.111								
8	600v XLPE/PVC 16mm2-2c	29.52	19.60	9.92				0.087								
9	600v XLPE/PVC 10mm2-2c	21.37	13.50	7.87				0.069								
10	Consumable and miscellaneous materials															
11	Spare parts															
12	Delivery and installation cost															
13																
14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																

Complex Construction Cost - Unit Rate Estimate

PROJECT Name : Shanghai Pudong International Airport (Airfield Lighting System)

Item No. : 19

Description : Road-Holding Position Lights

No.	Description	Complex Unit Cost (Chinese RMB)	Local Component Amount	Total M/D Amount	Type		Electri- cian	Special craftsmen	Common labour	Surveyor	Steel setter	Form	Remark
					Unit cost	M/D							
1	Road-holding position lights	258.30		258.30			0.750		1.350				
2	Foundation for road-holding position lights	4,741.72	4,532.52	209.20			0.750	0.234	1.246			0.605	Annex-18
3	5kv AFL primary cable	6.50		6.50			0.057						
4	FEP 80	83.53	69.16	14.37			0.126						Annex-7
5	SGP 80	107.36	81.02	26.34			0.231						Annex-9
6	Auxiliary materials for piping												
7	Plug and receptacle	136.80		136.80			1.200						
8	Earthing terminal	6,505.54	3,929.26	2,576.28			17.700		10,740				Annex-11
9	Consumable and miscellaneous materials												
10	Spare parts												
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													
23													
24													

PROJECT Name : Shanghai Pudong International Airport (Airfield Lighting System)

Item No. : 20

Description : Power Supply, Control and Monitoring System for Airfield Lighting System

No.	Description	Complex Unit Cost		Local Component Amount	Total M/D Amount	Type		Special craftsmen	Common labour	Surveyor	Steel setter	Form	Remark
		(Chinese RMB)	Amount			Unit cost	M/D						
1	Constant current regulator 4 KVA	981.00			981.00								
2	Constant current regulator 7.5 KVA	981.00			981.00		4.500	9.000					
3	Constant current regulator 10 KVA	981.00			981.00		4.500	9.000					
4	Constant current regulator 15 KVA	1,059.00			1,059.00		4.500	10.500					
5	Constant current regulator 20 KVA	1,137.00			1,137.00		4.500	12.000					
6	Constant current regulator 25 KVA	1,215.00			1,215.00		4.500	13.500					
7	Constant current regulator 30 KVA	1,215.00			1,215.00		4.500	13.500					
8	Direction change-over switch	654.00			654.00		3.000	6.000					
9	AFL control and monitoring system :	47,652.00			47,652.00		366.000	114.000					
10	AFL remote control panel for ATC (VFR room)												
11	STB remote control panel for ATC (VFR room)												
12	AFL remote control panel for supervisor (VFR room)												
13	STB remote control panel for supervisor (VFR room)												
14	Local control panel (main AFL substation)												
15	Local control console (main AFL substation)												
16	Graphic panel (main AFL substation)												
17	Data processing unit (main AFL substation)												
18	Programmable logical controller (main AFL substation)												
19	Local control panel (secondary AFL substation)												
20	Burnt-out detection or remote unit (1025 units)												
21	Communication interface, software and etc.												
22	AFL direct speech phone	66.69			66.69		0.585						
23	600v PVC 2mm2-30c	84.19		55.80	28.39		0.249						
24	600v PVC 2mm2-10c	33.57		19.20	14.37		0.126						

Complex Construction Cost - Unit Rate Estimate

PROJECT Name : Shanghai Pudong International Airport (Airfield Lighting System)

Item No. : 20

Description : Power Supply, Control and Monitoring System for Airfield Lighting System

No.	Description	Unit Cost		Component		Type	Electri-	Special	Common	Remark
		(Chinese RMB)	Amount	Amount	Unit cost					
25	Optical fiber cable	6.62	6.62		M/D					
26	Communication cable for direct speech phone	8.39	3.60			114		63	52	73
27	2-pair communication cable	19.97	12.10							
28	FEP 80	83.53	69.16							
29	Auxiliary materials for piping						0.058			
30	Consumable and miscellaneous materials						0.042			
31	Spare parts						0.069			
32	Delivery and installation cost						0.126			
33										
34										
35										
36										
37										
38										
39										
40										
41										
42										
43										
44										
45										
46										
47										
48										Annex-7

PROJECT Name : Shanghai Pudong International Airport (Airfield Lighting System)

Item No. : 21

Description : AFL Main Duct

No.	Description	Unit Cost		Component		Type	Electri.	Special	Common	Remark
		(Chinese RMB)	Amount	Amount	Amount					
1	FEP 80	29.55	21.00	8.55						
2	SGP 100	88.24	64.30	23.94						
3	SGP 80	63.72	43.20	20.52						
4	Auxiliary materials for piping									
5	Man hole type-A	22,257.56	18,616.70	3,640.86			19.380	3.715	5.753	3.444
6	Man hole type-B	16,978.36	14,522.13	2,456.23			11.328	2.955	4.726	2.722
7	Man hole type-D-a	4,950.11	4,538.72	411.39				0.831	1.793	0.775
8	Grounding wire H-14	11.95	7.50	4.45			0.039			
9	Cable marker tape	15.57	14.20	1.37			0.012			
10	Earthing terminal	6,505.54	3,929.26	2,576.28			17.700		10.740	
11	Excavation	32.00	32.00							
12	Sand	265.00	265.00							
13	Back filling	21.00	21.00							
14	Consumable and miscellaneous materials									
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										

Complex Construction Cost - Unit Rate Estimate

PROJECT Name : Shanghai Pudong International Airport (Airfield Lighting System)

Item No. :

Description : Power Distribution System (Main AFL Sub-Station)

No.	Description	Complex Unit Cost		Local Component		Total M/D		Type		Electri- cian	Special craftsmen	Common labour	Surveyor	Steel setter	Form	Remark
		(Chinese RMB)	Amount	Amount	Amount	Unit cost	M/D									
1	Transformer 3-phase 10kv/380-220v 1000KVA	3,937.20			3,937.20			22.440		114	63	52	342	73	73	
2	High voltage incoming panel 1, 6	2,926.80			2,926.80			15.000				23.400				
3	High voltage VCB panel 2, 7	2,926.80			2,926.80			15.000				23.400				
4	High voltage PCT panel 3, 8	2,926.80			2,926.80			15.000				23.400				
5	High voltage branch panel 4, 9	2,926.80			2,926.80			15.000				23.400				
6	High voltage VCB panel 5, 10	2,926.80			2,926.80			15.000				23.400				
7	High voltage VCB panel 11	2,926.80			2,926.80			15.000				23.400				
8	Low voltage MCCB panel (power room)	1,230.00			1,230.00			6.000				10.500				
9	Low voltage MCCB panel (CCR room)	1,230.00			1,230.00			6.000				10.500				
10	Bus duct 2000A	530.10			530.10			4.650								
11	600v XLPE/PVC 240mm2-3c	414.54	347.50		67.04			0.588								
12	600v XLPE/PVC 150mm2-3c	260.46	213.60		46.86			0.411								
13	600v XLPE/PVC 25mm2-2c	41.16	28.50		12.66			0.111								
14	600v XLPE/PVC 16mm2-2c	29.52	19.60		9.92			0.087								
15	600v XLPE/PVC 10mm2-2c	21.37	13.50		7.87			0.069								
16	600v XLPE/PVC 6mm2-2c	16.39	9.20		7.19			0.063								
17	600v XLPE/PVC 4mm2-2c	12.92	7.10		5.82			0.051								
18	600v XLPE/PVC 400mm2-1c	259.98	177.90		82.08			0.720								
19	Earthing terminal	6,505.54	3,929.26		2,576.28			17.700				10.740				Annex-11
20	Cable terminal treatment kit (10kv 3-core Cable)	3,079.70	2,960.00		119.70			1.050								
21	Consumable and miscellaneous materials															
22	Spare parts															
23	Delivery and installation cost															
24	Testing cost															

PROJECT Name : Shanghai Pudong International Airport (Airfield Lighting System)

Item No. :

Description : Diesel Engine Generator (Main AFL Sub-Station)

No.	Description	Complex Unit Cost (Chinese RMB)	Local Component Amount	Total M/D Amount	Type Unit cost M/D	Electrician 114	Special craftsmen 63	Common labour 52	Surveyor 342	Steel setter 73	Form 73	Remark
1	D.E.G. 50Hz 380/220v 1100KVA											
2	Generator panel, DC source panel and service tank											
3	Main tank 20000 liters											
4	Spare parts											
5	Delivery and installation cost											
6	Testing cost											
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												

Complex Construction Cost - Unit Rate Estimate

PROJECT Name : Shanghai Pudong International Airport (Airfield Lighting System)

Item No. :

Description : Uninterruptible Power Supply System (Main AFL Sub-Station)

No.	Description	Complex Unit Cost (Chinese RMB)	Local Component Amount	Total M/D Amount	Type	Electri- cian	Special craftsmen	Common labour	Surveyor	Steel setter	Form	Remark
1	UPS 150KVA x 3					114	63	52	342	73	73	
2	Battery bank x3 and static switch module											
3	Spare parts											
4	Delivery and installation cost											
5	Testing cost											
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												

Complex Construction Cost - Unit Rate Estimate

PROJECT Name : Shanghai Pudong International Airport (Airfield Lighting System)

Item No. :

Description : Power Distribution System (Secondary AFL Sub-Station)

No.	Description	Complex Unit Cost (Chinese RMB)	Local Component Amount	Total M/D Amount	Type Unit cost M/D	Electrician 114	Special craftsmen 63	Common labour 52	Surveyor 342	Steel setter 73	Form 73	Remark
1	Transformer 3-phase 10kv/380-220v 800KVA	3,937.20		3,937.20		22.440		26.520				
2	High voltage incoming panel 1, 6	2,926.80		2,926.80		15.000		23.400				
3	High voltage VCB panel 2, 7	2,926.80		2,926.80		15.000		23.400				
4	High voltage PCT panel 3, 8	2,926.80		2,926.80		15.000		23.400				
5	High voltage branch panel 4, 9	2,926.80		2,926.80		15.000		23.400				
6	High voltage VCB panel 5, 10	2,926.80		2,926.80		15.000		23.400				
7	High voltage VCB panel 11	2,926.80		2,926.80		15.000		23.400				
8	Low voltage MCCB panel (power room)	1,230.00		1,230.00		6.000		10.500				
9	Low voltage MCCB panel (CCR room)	1,230.00		1,230.00		6.000		10.500				
10	Bus duct 1600A	444.60		444.60		3.900						
11	600v XLPE/PVC 240mm2-3c	414.54	347.50	67.04		0.588						
12	600v XLPE/PVC 95mm2-3c	171.41	133.10	38.31		0.336						
13	600v XLPE/PVC 25mm2-2c	41.16	28.50	12.66		0.111						
14	600v XLPE/PVC 16mm2-2c	29.52	19.60	9.92		0.087						
15	600v XLPE/PVC 10mm2-2c	21.37	13.50	7.87		0.069						
16	600v XLPE/PVC 6mm2-2c	16.39	9.20	7.19		0.063						
17	600v XLPE/PVC 4mm2-2c	12.92	7.10	5.82		0.051						
18	600v XLPE/PVC 300mm2-1c	194.76	143.80	50.96		0.447						
19	Earthing terminal	6,505.54	3,929.26	2,576.28		17.700		10.740				Annex-11
20	Cable terminal treatment kit (10kv 3-core Cable)	3,079.70	2,960.00	119.70		1.050						
21	Consumable and miscellaneous materials											
22	Spare parts											
23	Delivery and installation cost											
24	Testing cost											

Complex Construction Cost - Unit Rate Estimate

PROJECT Name : Shanghai Pudong International Airport (Airfield Lighting System)

Item No. :

Description : Diesel Engine Generator (Secondary AFL Sub-Station)

No.	Description	Complex Unit Cost (Chinese RMB)	Local Component Amount	Total M/D Amount	Type		Electrician	Special craftsmen	Common labour	Surveyor	Steel setter	Form	Remark
					Unit cost	M/D							
1	D.E.G. 50Hz 380/220v 880KVA						114	63	52	342	73	73	
2	Generator panel, DC source panel and service tank												
3	Main tank 20000 liters												
4	Spare parts												
5	Delivery and installation cost												
6	Testing cost												
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													
24													

Complex Construction Cost - Unit Rate Estimate

PROJECT Name : Shanghai Pudong International Airport (Airfield Lighting System)

Item No. :

Description : Uninterruptible Power Supply System (Secondary AFL Sub-Station)

No.	Description	Complex Unit Cost (Chinese RMB)	Local Component Amount	Total M/D Amount	Type	Electri- cian	Special craftsmen	Common labour	Surveyor	Steel setter	Form	Remark
1	UPS 100KVA x 3											
2	Battery bank x3 and static switch module											
3	Spare parts											
4	Delivery and installation cost											
5	Testing cost											
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												

Complex Construction Cost - Unit Rate Estimate

PROJECT Name : Shanghai Pudong International Airport (Airfield Lighting System)

Item No. :

Description : Control and Monitoring System for Power Distribution System

No.	Description	Complex Unit Cost (Chinese RMB)	Local Component		Total M/D	Type Unit cost M/D	Electrician	Special craftsmen	Common labour	Surveyor	Steel setter	Form	Remark
			Amount	Amount									
1	Control and monitoring system :	4,407.00			4,407.00		19,500		42,000				
2	Power remote control panel (main AFL substation)												
3	Power graphic panel (main AFL substation)												
4	Data processing unit (main AFL substation)												
5	Power local control panel (main AFL substation)												
6	Power direct speech phone	66.69			66.69		0.585						
7	600v PVC 2mm ² -30c	84.19	55.80		28.39		0.249						
8	600v PVC 2mm ² -20c	61.34	37.40		23.94		0.210						
9	Communication cable for direct speech phone	8.39	3.60		4.79		0.042						
10	FEP 80	83.53	69.16		14.37		0.126						
11	Auxiliary materials for piping												
12	Consumable and miscellaneous materials												
13													
14													
15													
16													
17													
18													
19													
21													
22													
23													
24	Total												

Complex Construction Cost - Unit Rate Estimate

PROJECT Name : Shanghai Pudong International Airport (Airfield Lighting System)

Item No. :

Description : Maintenance Center Equipment

No.	Description	Complex Unit Cost (Chinese RMB)	Local Component Amount	Total M/D Amount	Type	Electri- cian	Special craftsmen	Common labour	Surveyor	Steel setter	Form	Remark
1	Light cleaning device				M/D							
2	Dry type cleaning device											
3	Hot water type parts cleaning device											
4	Simplified air leakage testing device											
5	Supersonic wave cleaning device											
6	Light distribution intensity measuring device											
7	Air compressor											
8	Light Cleaning car											
9	Light measurement System											
10	Spare parts											
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												