

Annex



**Annex-1
Detail for Construction Cost**

Description	Qty	Unit	Local materials (RMB)		Foreign materials (J-Yen)		Labour cost and Required labour man-day (M/D)																								
			Rate	Amount	Rate	Amount	Electrician	M/D	Special craftsmen	M/D	Common labour	M/D	Surveyor	M/D	Steel setter	M/D	Form	M/D													
Foundation for PALS Center Line Barrette																															
Reinforcing rod	0.436	t	2,962	1,291.44																											
Concrete	10.200	m3	1,360	13,872.00																											
Lean concrete	0.589	m3	1,040	612.56																											
Gravel	1.178	m3	118	139.01																											
Forms	25.600	m2	3	76.80																											
Excavation	17.089	m3	32	546.85																											
Back filling	5.122	m3	21	107.57																											
Lighting base(deep-type)	5	pcs							0.750	3.750																					
Aluminum conduit pipe	3	m							0.900	2.700																					
Base plate with lighting base	2	pcs	3,780	7,560.00					0.750	1,500																					
Normal bend 50	6	pcs	26.1	156.60																											
SGP 80	4	m	43.2	172.80					0.180	0.720																					
SGP 50	13	m	26.1	339.30					0.135	1.755																					
Frangible coupling	6	pcs																													
Total				24,874.93						10.425					5.179				9.712		1.700					0.210					5.376

**Annex-3
Detail for Construction Cost**

Description	Qty	Unit	Local materials (RMB)		Foreign materials (J-Yen)		Labour cost and Required labour man-day (M/D)												
			Rate	Amount	Rate	Amount	Electrician	M/D	Special craftsmen	M/D	Common labour	M/D	Surveyor	M/D	Steel setter	M/D	Form	M/D	
Foundation for PALS 150m Cross Bar																			
Reinforcing rod	1.440	t	2,962	4,265.28															
Concrete	44.200	m3	1,360	60,112.00															
Lean concrete	2.489	m3	1,040	2,588.56															
Gravel	4.978	m3	118	587.41															
Forms	55.400	m2	3	166.20															
Excavation	68.839	m3	32	2,202.85															
Back filling	17.172	m3	21	360.62															
Lighting base(deep-type)	19	pcs																	
Aluminum conduit pipe	10	m																	
Base plate with lighting base	6	pcs	3,780	22,680.00															
Normal bend 50	20	pcs	26.1	522.00															
SGP 80	4	m	43.2	172.80															
SGP 50	63	m	26.1	1,644.30															
Frangible coupling	20	pcs																	
Total				95,302.02															

Annex-4

Detail for Construction Cost

Description	Qty	Unit	Local materials (RMB)		Foreign materials (J-Yen)		Labour cost and Required labour man-day (M/D)												
			Rate	Amount	Rate	Amount	Electrician	M/D	Special craftsmen	M/D	Common labour	M/D	Surveyor	M/D	Steel setter	M/D	Form	M/D	
Foundation for PALS 300m Cross Bar																			
Reinforcing rod	1.709	t	2,962	5,062.06															
Concrete	52.700	m3	1,360	71,672.00															
Lean concrete	2,964	m3	1,040	3,082.56															
Gravel	5,928	m3	118	699.51															
Forms	65,400	m2	3	196.20															
Excavation	81,777	m3	32	2,616.87															
Back filling	20,185	m3	21	423.89															
Lighting base(deep-type)	21	pcs							0.750	15.750									
Aluminum conduit pipe	11	m							0.900	9.900									
Base plate with lighting base	2	pcs	3,780	7,560.00					0.750	1.500									
Normal bend 50	22	pcs	26.1	574.20															
SGP 80	4	m	43.2	172.80					0.180	0.720									
SGP 50	74	m	26.1	1,931.40					0.135	9.990									
Frangible coupling	22	pcs																	
Total				93,991.49						37,860		26,719		29,881		6,665		0.210	13,734

**Annex-5
Detail for Construction Cost**

Description	Qty	Unit	Local materials (RMB)			Foreign materials (J-Yen)			Labour cost and Required labour man-day (M/D)									
			Rate	Amount	Rate	Amount	Electrician	M/D	Special craftsmen	M/D	Common labour	M/D	Surveyor	M/D	Steel setter	M/D	Form	M/D
Foundation for PALS, REDL, RTHL, RENL, RCLL, RTZL, TCLL, STBL, TISL(surface-type)																		
Reinforcing rod	0.013	t	2,962	38.51														
Concrete	0.270	m3	1,360	367.20					0.480	0.130	0.780	0.010					3.900	0.051
Forms	2.620	m2	3	7.86							0.120	0.629						0.210
Lighting base	1	pcs									0.780	0.780	0.900	0.300				
Normal bend 50	1	pcs	26.1	26.10					0.135	0.135								
Pavement boring	1	pnt	230	230.00														
Packing material	1	lot	300	300.00														
Total				969.67						0.915	0.880	1.539	0.300	0.051	0.210	0.550		

**Annex-7
Detail for Construction Cost**

Description	Qty	Unit	Local materials (RMB)		Foreign materials (J-Yen)		Labour cost and Required labour man-day (M/D)												
			Rate	Amount	Rate	Amount	Electrician	M/D	Special craftsmen	M/D	Common labour	M/D	Surveyor	M/D	Steel setter	M/D	Form	M/D	
FEP 80																			
FEP 80	1	m	21.00	21.00			0.075	0.075											
Grounding wire H-14	1	m	7.50	7.50			0.039	0.039											
Cable Marker Tape	1	m	14.20	14.20			0.012	0.012											
Excavation	0.315	m3	32	10.08															
Back filling	0.275	m3	21	5.78															
Sand	0.040	m3	265	10.60															
Total				69.16				0.126											

Annex-8

Detail for Construction Cost

Description	Qty	Unit	Local materials (RMB)		Foreign materials (J-Yen)		Labour cost and Required labour man-day (M/D)											
			Rate	Amount	Rate	Amount	Electrician	M/D	Special craftsmen	M/D	Common labour	M/D	Surveyor	M/D	Steel setter	M/D	Form	M/D
			FEP 50	1	m	13.8	13.80			0.057	0.057							
FEP 50	1	m	7.5	7.50			0.039	0.039										
Grounding wire H-14	1	m	14.2	14.20			0.012	0.012										
Cable Marker Tape																		
Excavation	0.315	m3	32	10.08														
Back filling	0.275	m3	21	5.78														
Sand	0.040	m3	265	10.60														
Total				61.96					0.108									

**Annex-9
Detail for Construction Cost**

Description	Q'ty	Unit	Local materials (RMB)		Forcain materials (J-Yen)		Labour cost and Required labour man-day (M/D)											
			Rate	Amount	Rate	Amount	Electrician	M/D	Special craftsmen	M/D	Common labour	M/D	Surveyor	M/D	Steel setter	M/D	Form	M/D
SCP 80 (600v AFL Secondary Cable Portion)																		
SGP 80	1	m	43.2	43.20			0.180	0.180										
Grounding wire H-14	1	m	7.5	7.50			0.039	0.039										
Cable Marker Tape	1	m	14.2	14.20			0.012	0.012										
Excavation	0.120	m3	32	3.84														
Back filling	0.080	m3	21	1.68														
Sand	0.040	m3	265	10.60														
Total				81.02				0.231										

**Annex-10
Detail for Construction Cost**

Description	Qty	Unit	Local materials (RMB)			Foreign materials (J-Yen)			Labour cost and Required labour man-day (M/D)								
			Rate	Amount		Rate	Amount		M/D	Special craftsmen	Common labour	Surveyor	M/D	Steel setter	M/D	Form	M/D
SGP 50 (600v AFL Secondary Cable Portion)																	
SGP 50	1	m	26.1	26.10					0.135	0.135							
Grounding wire H-14	1	m	7.5	7.50					0.039	0.039							
Cable Marker Tape	1	m	14.2	14.20					0.012	0.012							
Excavation	0.120	m ³	32	3.84													
Back filling	0.080	m ³	21	1.68													
Sand	0.040	m ³	265	10.60													
Total				63.92						0.186							

**Annex-11
Detail for Construction Cost**

Description	Qty	Unit	Local materials (RMB)		Foreign materials (J-Yen)		Labour cost and Required labour man-day (M/D)											
			Rate	Amount	Rate	Amount	Electrician	M/D	Special craftsmen	M/D	Common labour	M/D	Surveyor	M/D	Steel setter	M/D	Form	M/D
			Earthing terminal															
Copper plate 900x1.5t	1	pcs	1,336.5	1,336.50			4.590	4.590										
Grounding bar 10x1.5m	10	pcs	70.4	704.00			0.861	8.610										
Lead terminal	10	pcs	34.9	349.00														
Grounding marker	1	pcs	135.1	135.10			0.600	0.600										
Grounding wire H-14	100	m	7.5	750.00			0.039	3.900										
Earth reducing materials (56.4 kg)	2	lot	284.4	568.80														
Excavation	1,620	m ³	32	51.84														
Back filling	1,620	m ³	21	34.02														
Total				3,929.26				17.700										10.740

Annex-12

Detail for Construction Cost

Description	Qty	Unit	Local materials (RMB)		Foreign materials (J-Yen)		Labour cost and Required labour man-day (M/D)												
			Rate	Amount	Rate	Amount	Electrician	M/D	Special craftsmen	M/D	Common labour	M/D	Surveyor	M/D	Steel setter	M/D	Form	M/D	
Foundation for Control Cabinet (SFL)																			
Concrete	0.167	m3	1,360	227.12															
Lean concrete	0.029	m3	1,040	30.16															
Gravel	0.057	m3	118	6.73															
Forms	1.513	m2	3	4.54															
Excavation	0.718	m3	32	22.98															
Back fillings	0.465	m3	21	9.77															
Normal bend 50	2	pcs	26.1	52.20															
Total				353.50													0.094	0.182	0.318

**Annex-13
Detail for Construction Cost**

Description	Qty	Unit	Local materials (RMB)		Foreign materials (J-Yen)		Labour cost and Required labour man-day (M/D)									
			Rate	Amount	Rate	Amount	Electrician	M/D	Special craftsmen	M/D	Common labour	M/D	Surveyor	M/D	Form	M/D
Hand Hole 400x400x500																
Concrete	0.136	m ³	1,360	184.96												
Lean concrete	0.032	m ³	1,040	33.28												
Gravel	0.064	m ³	118	7.56												
Forms	2.760	m ²	3	8.28												
Excavation	0.589	m ³	32	18.85												
Back filling	0.277	m ³	21	5.82												
Hand hole cover 400x400	1	pcs	860	860.00				0.750								
Total				1,118.75				0.750	0.081	0.331						0.580

**Annex-14
Detail for Construction Cost**

Description	Qty	Unit	Local materials (RM/B)		Foreign materials (J-Yen)		Labour cost and Required labour man-day (M/D)														
			Rate	Amount	Rate	Amount	Electrician	M/D	Special craftsmen	M/D	Common labour	M/D	Surveyor	M/D	Steel setter	M/D	Form	M/D			
Foundation for PAPI																					
Reinforcing rod	0.062	t	2,962	183.65																	
Concrete	0.936	m3	1,360	1,272.96																	
Lean concrete	0.102	m3	1,040	106.08																	
Gravel	0.204	m3	118	24.08																	
Forms	4.212	m2	3	12.64																	
Excavation	2.874	m3	32	91.97																	
Back filling	1.632	m3	21	34.28																	
Lighting base	1	pcs																			
SGP 80	1	m	43.2	43.20																	
Base plate	1	pcs																			
Total				1,768.86							0.930		0.498		1.454				0.242		0.885

**Annex-15
Detail for Construction Cost**

Description	Qty	Unit	Local materials (RMB)		Foreign materials (J-Yen)		Labour cost and Required labour man-day (M/D)												
			Rate	Amount	Rate	Amount	Electrician	M/D	Special craftsmen	M/D	Common labour	M/D	Surveyor	M/D	Steel setter	M/D	Form	M/D	
Foundation for REDL(elevated-type), WBAR, Microwave Sensor																			
Reinforcing rod	0.013	t	2,962.0	37.03															
Concrete	0.263	m3	1,360.0	357.68															
Lean concrete	0.037	m3	1,040.0	38.48															
Gravel	0.073	m3	118.0	8.61															
Forms	2.399	m2	3.0	7.20															
Excavation	1.286	m3	32.0	41.15															
Back filling	0.855	m3	21.0	17.96															
Lighting base	1	pcs							0.420										
Base plate	1	pcs							0.180										
SGP 80	1	m	43.2	43.20															
Frangible coupling	1	pcs																	
Total				551.30					0.600		0.144		1.438		0.049		0.504		0.504

Detail for Construction Cost

Description	Qty	Unit	Local materials (RMB)		Foreign materials (J-Yen)		Labour cost and Required labour man-day (M/D)												
			Rate	Amount	Rate	Amount	Electrician	M/D	Special craftsmen	M/D	Common labour	M/D	Surveyor	M/D	Form	M/D	Steel setter	M/D	
Foundation for TCLL (apron area), TISL (apron area) with TR Housing Box																			
Reinforcing rod	0.013	t	2,962	37.03															
Concrete	0.231	m3	1,360	314.16														3.900	0.049
Lean concrete	0.037	m3	1,040	38.48															
Gravel	0.073	m3	118	8.62															
Forms	2.139	m2	3	6.42															0.210
Excavation	1.031	m3	32	33.00															
Back filling	0.642	m3	21	13.49															
Lighting base	1	pcs																	
SGP 80	1	m	43.2	43.20					0.420	0.420	0.750	0.750	1.140	1.140	0.450	0.450			
Flexible pipe 80 (stainless)	1	pcs	2,236	2,236.00					0.180	0.180									
Pavement boring	1	pnt	230	230.00					0.348	0.348									
Total				2,960.40						0.948	0.879	1.406	0.450	0.449	0.450	0.449	0.450	0.449	0.449

**Annex-18
Detail for Construction Cost**

Description	Qty	Unit	Local materials (RMB)		Foreign materials (J-Yen)		Labour cost and Required labour man-day (M/D)												
			Rate	Amount	Rate	Amount	Electrician	M/D	Special craftsmen	M/D	Common labour	M/D	Surveyor	M/D	Steel setter	M/D	Form	M/D	
Foundation for Runway Guard Lights and Holding-position Lights																			
Concrete	0.432	m3	1,360	587.52															
Lean concrete	0.056	m3	1,040	58.24															
Gravel	0.112	m3	118	13.22															
Forms	2.880	m2	3	8.64															
Excavation	1.347	m3	32	43.11															
Back filling	0.747	m3	21	15.69															
Lighting base(deep-type)	1	pcs	3,310	3,310.00					0.750	0.750									
Base plate	1	pcs	470	470.00															
Normal bend 50	1	pcs	26.1	26.10															
Frangible coupling	1	pcs																	
Total				4,532.52						0.750		0.234		0.900		1.246		0.210	0.605

Annex-20
Detail for Construction Cost

Description	Qty	Unit	Local materials (RMB)		Foreign materials (J-Yen)		Labour cost and Required labour man-day (M/D)												
			Rate	Amount	Rate	Amount	Electrician	M/D	Special craftsmen	M/D	Common labour	M/D	Surveyor	M/D	Steel setter	M/D	Form	M/D	
Foundation for TXGS 3 and 4-Letter																			
Concrete	0.804	m3	1,360	1,093.44															
Lean concrete	0.140	m3	1,040	145.60															
Gravel	0.279	m3	118	32.93															
Forms	5.182	m2	3	15.55															
Excavation	3.507	m3	32	112.23															
Back filling	2.284	m3	21	47.97															
Lighting base SCP 50	1	pcs							0.750										
	1	m	26.1	26.10					0.135										
Total				1,473.82					0.885								0.453		1.522
																			1.088

Annex-21
Detail for Construction Cost

Description	Qty	Unit	Local materials (RMB)		Foreign materials (J-Yen)		Labour cost and Required labour man-day (M/D)													
			Rate	Amount	Rate	Amount	Electrician	M/D	Special craftsmen	M/D	Common labour	M/D	Surveyor	M/D	Steel setter	M/D	Form	M/D		
Foundation for TXGS 5 and 6-Letter																				
Concrete	1.041	m3	1,360	1,415.76																
Lean concrete	0.189	m3	1,040	196.56																
Gravel	0.377	m3	118	44.49																
Forms	6.520	m2	3	19.56																
Excavation	4.578	m3	32	146.50																
Back filling	2.971	m3	21	62.40																
Lighting base	1	pcs							0.750											
SGP 50	1	m	26.1	26.10					0.135											
Total				1,911.37					0.885					0.590					1.682	1.369

Annex-23

Detail for Construction Cost

Description	Qty	Unit	Local materials (RMB)		Foreign materials (J-Yen)		Labour cost and Required labour man-day (M/D)												
			Rate	Amount	Rate	Amount	Electrician	M/D	Special craftsmen	M/D	Common labour	M/D	Surveyor	M/D	Steel setter	M/D	Form	M/D	
Foundation for TXGS 9-Letter																			
Concrete	1.513	m3	1,360	2,057.68															
Lean concrete	0.286	m3	1,040	297.44															
Gravel	0.571	m3	118	67.38															
Forms	9.194	m2	3	27.59															
Excavation	6.720	m3	32	215.04															
Back filling	4.350	m3	21	91.35															
Lighting base	1	pcs																	
SGP 50	1	m	26.1	26.10															
Total				2,782.58															

Annex-24
Detail for Construction Cost

Description	Qty	Unit	Local materials (RMB)		Foreign materials (J-Yen)		Labour cost and Required labour man-day (M/D)												
			Rate	Amount	Rate	Amount	Electrician	M/D	Special craftsmen	M/D	Common labour	M/D	Surveyor	M/D	Steel setter	M/D	Form	M/D	
Foundation for WDIL																			
Reinforcing rod	0.094	t	2,962	278.43															
Concrete	1.728	m3	1,360	2,350.08															
Lean concrete	0.098	m3	1,040	101.92															
Gravel	0.196	m3	118	23.13															
Forms	7.200	m2	3	21.60															
Excavation	4.894	m3	32	156.61															
Back filling	2.872	m3	21	60.32															
Total				2,992.09															

**Annex-25
Detail for Construction Cost**

Description	Qty	Unit	Local materials (RMB)		Foreign materials (J-Yen)		Labour cost and Required labour man-day (M/D)													
			Rate	Amount	Rate	Amount	M/D	Electrician	M/D	Special craftsmen	M/D	Common labour	M/D	Surveyor	M/D	Steel setter	M/D	Form	M/D	
Circular Band																				
Concrete	9.752	m3	1,360	13,262.72									0.480	4.681						
Lean concrete	1.094	m3	1,040	1,137.76									0.480	0.525						
Gravel	31.451	m3	118	3,711.22																
Forms	46.622	m2	3	139.87																
Excavation	66.744	m3	32	2,135.81																
Back filling	9.687	m3	21	203.43																
Asphalt	14.760	m3	775	11,439.00																
Marking	248	m																		
Total				32,029.81										12.291		46.515				9.791

**Annex-27
Detail for Construction Cost**

Description	Q'ty	Unit	Local materials (RMB)		Foreign materials (J-Yen)		Labour cost and Required labour man-day (M/D)												
			Rate	Amount	Rate	Amount	Electrician	M/D	Special craftsmen	M/D	Common labour	M/D	Surveyor	M/D	Steel setter	M/D	Form	M/D	
Man Hole for FLO Foundation																			
Reinforcing rod	0.581	t	2,962	1,720.92															
Concrete	4.887	m ³	1,360	6,646.32															
Lean concrete	0.215	m ³	1,040	223.60															
Gravel	0.644	m ³	118	75.99															
Forms	29.948	m ²	3	89.84															
Excavation	22.670	m ³	32	725.44															
Back filling	13.586	m ³	21	285.31															
Man hole cover 600 φ	1	pcs	1,180	1,180.00															
Total				10,947.42															

Annex-29

Detail for Construction Cost

Description	Q'ty	Unit	Local materials (RMB)		Foreign materials (J-Yen)		Labour cost and Required labour man-day (M/D)													
			Rate	Amount	Rate	Amount	Electrician	M/D	Special craftsmen	M/D	Common labour	M/D	Surveyor	M/D	Steel setter	M/D	Form	M/D		
Man Hole Type-A																				
Reinforcing rod	0.883	t	2,962	2,615.45																
Concrete	7.387	m3	1,360	10,046.32																
Lean concrete	0.352	m3	1,040	366.08																
Gravel	1.056	m3	118	124.61																
Forms	42.198	m2	3	126.60																
Excavation	32.232	m3	32	1,031.43																
Back filling	16.724	m3	21	351.21																
Man hole cover 600 φ	1	pcs	1,180	1,180.00																
Cable tray W=800 (Zn)	10	m	222	2,220.00					1.488	14.880										
Supporter for cable tray H:1.8m	15	m	37	555.00					0.300	4.500										
Total				18,616.70						19,380							5,753		3,444	8,862

Annex-30

Detail for Construction Cost

Description	Qty	Unit	Local materials (RMB)		Foreign materials (J-Yen)		Labour cost and Required labour man-day (M/D)											
			Rate	Amount	Rate	Amount	Electrician	M/D	Special craftsmen	M/D	Common labour	M/D	Surveyor	M/D	Steel setter	M/D	Form	M/D
Man Hole Type-B																		
Reinforcing rod	0.698	t	2,962	2,067.48														
Concrete	5.887	m3	1,360	8,006.32					0.480	2.826								
Lean concrete	0.270	m3	1,040	280.80					0.480	0.130								
Gravel	0.809	m3	118	95.47														
Forms	34.848	m2	3	104.55														
Excavation	26.495	m3	32	847.84														
Back filling	14.841	m3	21	311.67														
Man hole cover 600 φ	1	pcs	1,180	1,180.00														
Cable tray W=800 (Zn)	6	m	222	1,332.00					1.488	8.928								
Supporter for cable tray H:1.8m	8	m	37	296.00					0.300	2.400								
Total				14,522.13						11,328								2,955
																		4,726
																		2,722
																		7,318

**Annex-31
Detail for Construction Cost**

Description	Qty	Unit	Local materials (RMB)		Foreign materials (J-Yen)		Labour cost and Required labour man-day (M/D)													
			Rate	Amount	Rate	Amount	Electrician	M/D	Special craftsmen	M/D	Common labour	M/D	Surveyor	M/D	Steel setter	M/D	Form	M/D		
Man Hole Type-D-a																				
Reinforcing rod	0.199	t	2,962	588.85																
Concrete	1.606	m3	1,360	2,184.16																
Lean concrete	0.126	m3	1,040	131.04																
Gravel	0.378	m3	118	44.61																
Forms	13.648	m2	3	40.95																
Excavation	8.305	m3	32	265.76																
Back filling	4.921	m3	21	103.35																
Man hole cover 600 φ	1	pcs	1,180	1,180.00																
Total				4,538.72																

100

100

100

B-4 Cost Estimate for AFL Building Works



ESTIMATION FOR CONSTRUCTION COST OF EQUIPMENT FACILITIES

SHANGHAI PUDONG INTERNATIONAL AIRPORT (AIRFIELD LIGHTING SYSTEM)
PROJECT Name : MAIN AFL SUB-STATION PLOT PLAN

A	NOMINAL DIRECT EXPENSE	288,781
B	OTHER DIRECT EXPENSE = A *4.87%	14,064
C	DIRECT EXPENSE SUM = A+B	302,845
D	COMBINED INDIRECT EXPENSE = C*7.9%	23,925
E	C+D	326,770
F	PROFIT = E*9%	16,338
G	INITIAL EXPENSE = C*3%	9,085
H	MATERIAL AGIO	84,743
I	TOTAL = E+F+G+H	436,936
J	OTHER COST	1,583
	ESTABLISHMENT CHARGE OF NORM COMPILATION = C*0.09%	273
	ENGINEERING QUALITY SUPERVISION = I*0.15%	655
	OPERATIONS MANAGEMENT = I*0.15%	655
K	TAX AND DUTIES =(I+J)*3.41%	14,954
L	CONSTRUCTION COST = I+J+K	453,473

ESTIMATION FOR CONSTRUCTION COST OF EQUIPMENT FACILITIES

SHANGHAI PUDONG INTERNATIONAL AIRPORT (AIRFIELD LIGHTING SYSTEM)
PROJECT Name : SECONDRY AFL SUB-STATION PLOT PLAN

A	NOMINAL DIRECT EXPENSE	247,662
B	OTHER DIRECT EXPENSE = A*4.87%	12,061
C	DIRECT EXPENSE SUM = A+B	259,724
D	COMBINED INDIRECT EXPENSE = C*7.9%	20,518
E	C+D	280,242
F	PROFIT = E*5%	14,012
G	INITIAL EXPENSE = C*3%	7,792
H	MATERIAL AGIO	84,768
I	TOTAL = E+F+G+H	386,814
J	OTHER COST	1,394
	ESTABLISHMENT CHARGE OF NORM COMPILATION = C*0.09%	234
	ENGINEERING QUALITY SUPERVISION = I*0.15%	580
	OPERATIONS MANAGEMENT = I*0.15%	580
K	TAX AND DUTIES =(I+J)*3.41%	13,238
L	CONSTRUCTION COST = I+J+K	401,446

ESTIMATED TOTAL QUANTITY

SHANGHAI PUDONG INTERNATIONAL AIRPORT PROJECT (AIRFIELD LIGHTING SYSTEM)

MAIN AFL SUBSTATION (BUILDING WORKS)

UNIT: RMB YUAN

NO.	ITEM	FORMULA	COST
(1)	DIRECT EXPENSE (BUILDING WORKS)		1,578,410
(2)	OUT-OF-POCKET EXPENSE (BUILDING WORKS)	(1)X5%	78,921
(3)	OTHER DIRECT EXPENSE (BUILDING WORKS)	((1)+(2))X3.5%	58,007
(4)	SUB-TOTAL OF DIRECT EXPENSE	(1)+(2)+(3)	1,715,337
(5)	COMBINED INDIRECT EXPENSE	((1)+(2)+(3))X 12%	205,840
(6)	TOTAL (BUILDING WORKS)	(1)+(2)+(3)+(5)	1,921,178
(6)	PROFIT	(6)X9%	172,906
(8)	INITIAL EXPENSE	(6)X3%	51,460
(9)	ADJUSTMENT EXPENSE OF LABOR	LABOR-DAY X2.4	30,926
(10)	SUBSIDY FOR CHARGE OF CONSTRUCTION SITE	LABOR-DAY X2.5	32,215
(11)	COMPENSATION FOR MAIN MATERIAL	TOTAL CONTRACT PRICE FOR MAIN MATERIAL -TOTAL BUDGETARY PRICE FOR MAIN MATERIAL	442,209
(12)	COMPENSATION FOR MACHINE-TEAM	TOTAL BUDGETARY PRICE (66) -TOTAL BUDGETARY PRICE (93)	18,526
(13)	COMPENSATION FOR MINOR MATERIAL	MATERIAL EXPENSE FOR BUILDING WORKS 1.18%+FOR HOISTING X4.81%+ FOR PILING X 17.25%	16,035
(14)	TOTAL	(6)+(7)+(8)+(9)+(10)+(11)+(12)+(13)	2,685,455
(15)	OTHER EXPENSE	(4)X0.5%+(14)X3%	8,914
(16)	TAX AND DUTIES	((14)+(15))X3.41%	91,878
(17)	CONSTRUCTION COST	(14)+(15)+(16)	2,796,247

ESTIMATED TOTAL QUANTITY

SHANGHAI PUDONG INTERNATIONAL AIRPORT PROJECT (AIRFIELD LIGHTING SYSTEM)
MAIN AFL SUBSTATION (BUILDINGWORKS)

PAGE 1

编号	名称	工程类别	单位	单价	总价	人工数	材料费	主材费	备注
基础、打桩工程									
1027	素混凝土垫层厚1.5m以内C20		立方米	431.2100	58,510	973.99	71,542.15	51,355.17	
1041	钢筋混凝土垫层厚1.5m以内C20		立方米	435,9400	1,300	21.23	985.96	804.00	
	小计			89,899	89,899	894.82	72,528.09	52,159.17	
柱梁工程									
3009	钢筋混凝土(矩形)柱长2.5m以内C30		立方米	658,9100	1,482	15.10	1,229.37	724.20	
3020	钢筋混凝土(矩形)柱长C30		立方米	615,8100	35,070	357.65	38,916.93	17,701.18	
3112	钢筋混凝土梁C30		立方米	570,4100	20,107	181.63	17,077.92	10,911.54	
3113	钢筋混凝土梁3m以内方柱		立方米	15,7700	42	2.39	11.39	2.40	
3114	钢筋混凝土梁3m以内方梁		立方米	21,8500	1,244	56.72	583.17	170.55	
	小计			57,945	613.64	47,829.36	29,109.95		
墙体工程									
3002	砖混结构外墙1层		平方米	62,6000	127,415	1,912.54	90,321.25	48,499.45	
3077	内墙标准砖1层		平方米	55,8500	112,191	1,630.14	87,945.26	51,961.03	
3135	钢管双排外脚手架高20m内		平方米	6,5300	15,895	236.22	12,440.34	4,612.77	
3152	钢管满堂脚手架高3.61-5.80m		平方米	2,2200	4,700	264.01	1,609.07	615.68	
	小计			2,40,111	4,042.91	182,315.99	105,678.53		
楼、地、屋面工程									
4001	平整场地		平方米	4,2900	9,084	325.25	5,336.10	3,541.31	
4002	室内回填土室内外高差45cm内		平方米	1,8400	3,896	366.38			
4009	垫层透气管深1cm厚		平方米	0,8900	1,847	18.47	1,497.78	1,106.62	
4011	垫层砼(1cm厚)C15		平方米	1,4800	463	3.91	413.19	293.24	
4098	找平层屋面高铺砖水泥砂浆结合层		平方米	60,8500	146,814	957.61	133,930.09	141,327.75	
4020	地面垫层细砂垫层二毡三油		平方米	10,1900	257	1.70	233.60	153.14	
4066	找平层细砂垫层3cm厚无面		平方米	6,1800	46	0.79	35.00	23.95	
4010	垫层砼(1cm厚)C10		平方米	1,4100	34	0.30	30.01	20.66	
4064	找平层水泥砂浆2cm厚		平方米	3,6600	8,361	150.31	6,281.94	4,380.91	
4009	垫层透气管1cm厚		平方米	0,8900	301	3.01	260.01	180.08	
4065	找平层水泥砂浆每层0.5cm厚		平方米	0,8900	301	4.76	233.00	163.30	
4020	地面垫层细砂垫层二毡三油		平方米	10,1900	532	3.53	483.89	317.22	
4071	整体面层水泥砂浆抗压强度2cm		平方米	6,2500	11,665	368.71	7,764.31	5,713.48	
4325	花岗岩天棚板面石膏不上人		平方米	44,2800	35,110	280.69	31,470.20	2,132.90	

ESTIMATED TOTAL QUANTITY

SHANGHAI PUDONG INTERNATIONAL AIRPORT PROJECT (AIRFIELD LIGHTING SYSTEM)
MAIN AFL SUBSTATION (BUILDINGWORKS)

编号	名称	工程量	单位	单价	合价	人工数	材料费	主材费	备注
4033	环氧防腐漆防腐漆面二布三油	2,232.2400	平米	10.2300	22,817.12	188.18	20,715.19	11,565.55	
4069	环氧防腐漆三元乙丙丁基橡胶1mm厚	2,232.2400	平米	31.0700	70,052.77	112.73	74,512.17	2,124.65	
4111	环氧防腐漆环氧板厚10mmC20	2,039.7600	平米	61.1600	124,752.96	1,510.01	99,275.12	58,882.72	
4239	环氧防腐漆环氧板厚C20同质地坪面	46,800.00	平米	229.0600	10,720,080.00	199.53	7,844.62	6,708.27	
4271	镀锌钢板扶手	23,100.00	米	116.7800	2,698,134.00	19.06	2,447.45	587.23	
4283	镀锌板C15	210,000.00	平米	26.7900	5,626,200.00	70.81	4,237.60	3,317.90	
4284	镀锌板C15	24,000.00	平米	40.0700	961,680.00	12.11	899.57	567.12	
4293	环氧防腐漆环氧板厚C20同质地坪面	30,290.00	平米	163.4900	4,951,311.00	59.80	4,291.49	4,113.52	
4129	环氧防腐漆环氧板厚3mm厚C20	2,039.7600	平米	21.3000	43,448.76	164.61	2,427.31	986.22	
耗1-86	防腐电柜油漆防腐	821,160.00	平米	515.7200	423,492,720.00	628.65	415,993.84		
小计					895,542,880.00	5,380.94	6,272,543.25	2,895,177.74	
门窗工程									
5087	铝合金安全玻璃门单扇	572.40	平米	377.5800	214,612.32	49.80	29,237.58		
5040	铝合金三玻门	99.7500	平米	152.3100	15,193.93	123.93	13,661.76	381.45	
5103	铝合金合金窗框	105,800.00	平米	296.9500	31,417,400.00	80.10	30,057.78		
小计					68,223,626.25	253.83	64,517.12	381.45	
装饰工程									
6049	无油油漆(清油)木饰面95*45墙面	1,876.4900	平米	64.7300	121,465.87	1,113.32	107,072.52	3,416.53	
6044	无油油漆(清油)木饰面150*150墙面	322.5600	平米	27.4800	8,864.37	127.06	7,209.22	15,987.53	
6148	多彩涂料清漆面饰面	3,426.9900	平米	11.1700	38,279.98	232.57	34,167.09	1,556.20	
耗5-252	多彩涂料天棚饰面	1,307.1000	平米	11.5800	15,143.58	115.55	13,331.90	593.55	
小计					163,753,746.72	1,663.50	161,780.73	21,593.81	
油漆、防腐、保温隔热工程									
7138	油漆木饰面	100,450.00	平米	103.5200	10,400,000.00	91.71	9,178.12	2,333.50	
小计					10,400,000.00	91.71	9,178.12	2,333.50	
合计					1,545,587,146.72	12,886.37	1,308,872.82	460,724.45	
土方机械进出场费									
	履带式挖掘机(柴油斗容量)	1,000.00	台次	859.0000	859,000.00				
小计					859,000.00				
土方及泥浆外运									
	土方运费(运水及运西内环线外)	1,056,000.00	立米	30.0000	31,680,000.00				

ESTIMATED TOTAL QUANTITY

PORT PROJECT (AIRFIELD LIGHTING SYSTEM)

PAGE 3

SHANGHAI PUDONG INTERNATIONAL
MAIN AFL SUBSTATION (BUILDINGWORKS)

编号	名称	工程号	单位	单价	总价	人工数	材料费	主材费	备注
					31,630				

ESTIMATED TOTAL QUANTITY

SHANGHAI PUDONG INTERNATIONAL AIRPORT PROJECT (AIRFIELD LIGHTING SYSTEM)

MAIN AFL SUBSTATION GARAGE (BUILDING WORKS)

UNIT: RMB YUAN

NO.	ITEM	FORMULA	COST
(1)	DIRECT EXPENSE (BUILDING WORKS)		85,702
(2)	OUT-OF-POCKET EXPENSE (BUILDING WORKS)	(1)X5%	4,285
(3)	OTHER DIRECT EXPENSE (BUILDING WORKS)	((1)+(2))X3.5%	3,150
(4)	SUB-TOTAL OF DIRECT EXPENSE	(1)+(2)+(3)	93,137
(5)	COMBINED INDIRECT EXPENSE	((1)+(2)+(3))X 12%	11,176
(6)	TOTAL (BUILDING WORKS)	(1)+(2)+(3)+(5)	104,313
(8)	PROFIT	(6)X 9%	9,388
(9)	INITIAL EXPENSE	(4)X 3%	2,794
(9)	ADJUSTMENT EXPENSE OF LABOR	LABOR-DAY X 2.4	2,143
(10)	SUBSIDY FOR CHARGE OF CONSTRUCTION SITE	LABOR-DAY X 2.5	2,233
(11)	COMPENSATION FOR MAIN MATERIAL	TOTAL CONTRACT PRICE FOR MAIN MATERIAL -TOTAL BUDGETARY PRICE FOR MAIN MATERIAL	23,007
(12)	COMPENSATION FOR MACHINE-TEAM	TOTAL BUDGETARY PRICE (96) -TOTAL BUDGETARY PRICE (93)	1,616
(13)	COMPENSATION FOR MINOR MATERIAL	MATERIAL EXPENSE FOR BUILDING WORKS 1.18%+FOR HOISTING X4.81%+ FOR PILING X 17.25%	816
(14)	TOTAL	(6)+(7)+(8)+(9)+(10)+(11)+(12)+(13)	146,310
(15)	OTHER EXPENSE	(4)X 0.5%+(14)X 3%	485
(16)	TAX AND DUTIES	((14)+(15))X 3.41%	5,006
(17)	CONSTRUCTION COST	(14)+(15)+(16)	151,802

ESTIMATED TOTAL QUANTITY

SHANGHAI PUJONG INTERNATIONAL SPORT PROJECT (AIRFIELD LIGHTING SYSTEM)
MAIN AFL SUBSTATION GARAGE (BUILDING WORKS)

PAGE 1

编号	名称	工程量	单位	单价	总价	人工数	材料费	主材差	备注
基础、打桩工程									
1003	砖基础标准砖光面砌块水带	16.499	立方米	139.5700	2,302	20.10	2,064.38	1,247.94	
1027	有梁式钢筋混凝土基础埋深1.5m以内C20	21.510	立方米	431.2100	9,278	91.53	7,496.45	5,381.22	
	小计				11,577	111.64	9,560.83	6,729.16	
柱梁工程									
2020	现浇钢筋混凝土柱C30	1.560	立方米	613.8100	961	9.80	792.11	473.92	
2111	构造柱(抗震)现浇C20	1.670	立方米	580.2300	891	8.33	752.17	472.06	
2114	现浇钢筋混凝土梁3m以内梁	1.860	立方米	21.8900	36	1.55	15.97	4.67	
	小计				1,886	19.70	1,560.25	950.65	
墙身工程									
3002	标准砖外墙1砖	182.320	平方米	62.6000	11,428	203.44	8,443.76	5,157.81	
3027	内墙标准砖1砖	94.770	平方米	58.8500	5,293	76.91	4,149.03	2,451.39	
3117	现浇水泥管45cm	8.500	延长米	14.3200	122	1.55	103.96	174.75	
3126	女儿墙砖砌出水管管径φ100	2.090	个	39.5200	79	0.65	71.62		
3134	钢管架在外脚手架高12m内	255.960	平方米	4.4900	1,139	22.24	813.95	314.27	
3147	现浇钢筋混凝土梁3.6m以上钢管	94.770	平方米	1.1900	113	6.49	19.90	19.74	
3152	钢管架在外脚手架高3.61-5.80m	126.360	平方米	2.2200	281	15.76	96.03	36.75	
	小计				18,433	327.04	13,798.23	8,154.71	
楼、地、屋面工程									
4001	平整场地	132.110	平方米	4.2900	567	20.29	332.92	270.94	
4002	室内回填土室内外高差45cm内	132.110	平方米	1.8400	243	22.23			
4011	垫层砼(1cm厚)C15	132.110	平方米	1.4300	196	1.65	174.39	123.76	
4020	地面垫层现浇细石砼二毡三油	132.110	平方米	10.1900	1,346	9.01	1,224.66	809.85	
4111	现浇钢筋混凝土板厚10cmC30	126.360	平方米	61.1600	7,728	94.10	6,149.94	3,620.11	
4129	现浇钢筋混凝土板厚3.6m管沟3m	126.360	平方米	2.1300	269	10.20	150.37	36.94	
4283	现浇水C15	29.490	平方米	26.7900	790	9.94	665.07	465.77	
4284	现浇道C15	56.160	平方米	40.0700	2,250	28.33	1,894.28	1,327.07	
425-232	多形涂料天棚抹灰面	132.110	平方米	11.5850	1,530	11.68	1,347.47	59.99	
4083	整体面层细石砼垫层1cm厚	132.110	平方米	1.8400	243	2.43	208.73	142.52	
4064	找平层水泥砂浆2cm厚	396.330	平方米	3.6600	1,451	26.08	1,089.91	760.02	
4060	屋面防水三元乙丙防水卷材1mm厚	132.110	平方米	34.0700	4,501	6.67	4,409.83	125.74	
4262	现制现浇雨蓬,水平遮阳板	12.600	平方米	74.0600	933	15.50	661.37	453.50	

ESTIMATED TOTAL QUANTITY

SHANGHAI PUDONG INTERNATIONAL SPORT PROJECT (AIRFIELD LIGHTING SYSTEM)
 MAIN AFL SUBSTATION GARGAE(BUILDINGWORKS)

编号	名称	工程量	单位	单价	合价	人工数	材料费	土方量
小计					22,011	258.12	12,302.91	8,182.07
门窗工程								
6103	塑白色铝合金窗	5.4000	平米	306.9500	1,661	1.00	1,534.14	
3073	铝合金塑钢窗	1.8400	平米	35,2700	65	2.08	30.92	18.34
3095	铝合金塑钢门	39.6000	平米	249.0900	10,260	25.11	9,920.99	16.03
小计					11,929	32.31	11,925.06	34.39
装饰工程								
6148	多彩涂料(柱面抹灰面)	185.4000	平米	11.1700	2,071	13.66	1,842.44	84.19
6049	无釉面砖(贴价)水泥砂浆95*45墙面	210.9600	平米	64.7300	13,655	125.16	12,037.38	304.09
小计					15,726	136.82	13,885.82	468.28
防腐、防锈、保温隔热工程								
7136	环氧水泥砂浆层	5.9400	立米	103.5300	615	5.42	542.74	137.99
小计					615	5.42	542.74	137.99
合计					82,233	803.05	69,151.89	24,623.45
土方机械进出场费								
	履带式电夯挖土机(履带式)	1.0000	台次	859.0000	859			
小计					859			
土方及运浆外运								
	土方运费(浦东及浦东内环线外)	87.0000	立米	30.0000	2,610			
小计					2,610			

ESTIMATED TOTAL QUANTITY

SHANGHAI PUDONG INTERNATIONAL AIRPORT PROJECT (AIRFIELD LIGHTING SYSTEM)

SECONDARY AFL SUBSTATION (BUILDING WORKS)

UNIT: RMB YUAN

NO.	ITEM	FORMULA	COST
(1)	DIRECT EXPENSE (BUILDING WORKS)		332,650
(2)	OUT-OF-POCKET EXPENSE (BUILDING WORKS)	(1) x 5%	16,633
(3)	OTHER DIRECT EXPENSE (BUILDING WORKS)	((1)+(2)) x 3.5%	12,225
(4)	SUB-TOTAL OF DIRECT EXPENSE	(1)+(2)+(3)	361,507
(5)	COMBINED INDIRECT EXPENSE	((1)+(2)+(3)) x 12%	43,381
(6)	TOTAL (BUILDING WORKS)	(1)+(2)+(3)+(5)	404,888
(6)	PROFIT	(6) x 9%	36,440
(8)	INITIAL EXPENSE	(4) x 3%	10,845
(9)	ADJUSTMENT EXPENSE OF LABOR	LABOR-DAY X 2.4	9,043
(10)	SUBSIDY FOR CHARGE OF CONSTRUCTION SITE	LABOR-DAY X 2.5	9,420
(11)	COMPENSATION FOR MAIN MATERIAL	TOTAL CONTRACT PRICE FOR MAIN MATERIAL -TOTAL BUDGETARY PRICE FOR MAIN MATERIAL	101,292
(12)	COMPENSATION FOR MACHINE-TEAM	TOTAL BUDGETARY PRICE (66) -TOTAL BUDGETARY PRICE (93)	7,172
(13)	COMPENSATION FOR MINOR MATERIAL	MATERIAL EXPENSE FOR BUILDING WORKS 1.18%+FOR HOISTING X 4.81%+ FOR PILING X 17.25%	3,157
(14)	TOTAL	(6)+(7)+(8)+(9)+(10)+(11)+(12)+(13)	582,257
(15)	OTHER EXPENSE	(4) x 0.5% + (14) x 3%	1,928
(16)	TAX AND DUTIES	((14)+(15)) x 3.41%	19,921
(17)	CONSTRUCTION COST	(14)+(15)+(16)	604,106

ESTIMATED TOTAL QUANTITY

SHANGHAI PUDONG INTERNATIONAL AIRPORT PROJECT (AIRFIELD LIGHTING SYSTEM)
SECONDARY AFL SUBSTATION (BUILDINGWORKS)

编号	名称	工程量	单位	单价	合价	人工数	材料费	主材费
PAGE 1								
基础、打桩工程								
1003	挖基础土方(普通土)	76.000	立方米	139.5700	10,601	92.51	9,514.01	6,212.45
1027	埋设式钢管电杆(埋设式)C20	40	2500	331.2100	13,248	383.89	31,435.40	22,565.50
	小计				49,501	476.50	40,950.01	28,778.01
柱梁工程								
2020	砼柱(矩形)C30	17.9700	立方米	615.8100	11,066	112.85	9,124.45	5,459.21
2111	砼梁(矩形)C20	16.8300	立方米	550.2300	9,260	86.72	7,814.17	4,904.22
2114	砌3.6m高砖墙以内实	17.9700	立方米	21.8900	393	17.90	184.01	33.81
	小计				20,719	217.47	17,122.63	10,417.24
场务工程								
3002	挖填土方(普通土)	55.6800	平方米	62.6900	3,484	37.07	25,755.18	15,377.75
3027	内墙粉刷(抹灰)	597.2500	平方米	55.8900	33,356	454.67	26,147.61	15,448.89
3103	挖填土方(普通土)回填至原	1.0000	平方米	158.2300	158	3.12	116.65	202.17
3117	安装水管45cm	30.9000	延长米	14.3200	442	5.3	377.91	635.27
3126	女儿墙抹灰(普通土)	6.0000	平方米	30.5200	183	1.96	214.86	
3134	砌墙(普通土)高1.2m以内	631.0000	平方米	4.4500	2,800	56.62	2,072.09	800.03
3147	砌墙(普通土)高1.2m以上	619.2000	平方米	1.1900	737	42.42	130.03	178.98
3152	埋设式钢管电杆(埋设式)C20	699.2500	平方米	2.2200	1,552	87.20	531.43	203.34
	小计				72,916	1,278.69	54,665.76	32,556.41
楼、地、屋面工程								
4001	平整场地	699.2500	平方米	4.2900	3,000	107.40	1,762.11	1,169.43
4002	室内地坪(普通土)高差45cm以内	699.2500	平方米	1.8400	1,287	117.68		
4009	普通抹灰(普通土)	629.2500	平方米	0.8300	523	6.22	538.42	372.91
4011	垫层(10cm厚)C15	7.2000	平方米	1.4800	11	0.09	9.50	6.74
4071	室内地坪(普通土)高差2cm	7.2000	平方米	6.2500	45	1.19	39.93	22.01
4111	埋设式钢管电杆(埋设式)C20	699.2500	平方米	61.1600	42,766	520.73	34,032.50	20,032.74
4283	砼散水C15	79.3700	平方米	26.7900	2,132	26.83	1,795.10	1,257.17
4284	砼散水C15	47.5200	平方米	40.0700	1,904	23.97	1,602.85	1,122.90
4325-252	多彩釉料(普通土)抹灰	692.0500	平方米	11.5850	8,017	61.18	7,038.63	314.25
4325	普通抹灰(普通土)抹灰不上人	7.2000	平方米	41.2800	319	2.55	285.77	19.37
4064	找平层(普通土)高差2cm厚	716.5300	平方米	3.6600	2,622	47.13	1,970.46	1,374.16
4060	屋面防水(普通土)高差1mm厚	716.5300	平方米	34.0700	24,412	36.18	23,917.77	681.99

ESTIMATED TOTAL QUANTITY

SHANGHAI PUDONG INTERNATIONAL AIRPORT PROJECT (AIRFIELD LIGHTING SYSTEM)
SECONDARY AFL SUBSTATION (BUILDING WORKS)

编号	名称	工程量	单位	单价	合价	人工数	材料费	主材差	备注
4285	地面砼垫层C20水泥面	14.3100	平米	59.3400	856	12.80	666.95	489.07	
4081	整体面层细石砼光面4cm厚	692.0500	平米	11.0900	7,675	157.23	5,628.37	3,948.21	
4262	预制细粒沥青水平透层板	11.3400	平米	74.0600	840	14.00	59.524	408.15	
4129	现浇板厚高越3.6m专项3m	699.2500	平米	2.1300	1,489	56.43	832.11	204.39	
	小计				97,997	1,191,666	80,723.63	31,473.55	
门窗工程									
5103	白色铝合金窗框	16.2000	平米	295.9500	4,811	12.27	4,602.42		
5040	铝合金三夹玻璃门	22.0500	平米	152.3100	3,358	27.39	1,019.97	84.32	
5073	白色铝塑板窗石	5.2500	平米	33.2700	185	5.93	113.93	52.38	
5089	白色铝合金平开门	34.5900	平米	325.5700	11,261	25.60	10,674.59		
	小计				12,615	71.19	16,522.91	136.70	
装饰工程									
6044	花岗岩(总价)水泥砂浆150*150块面	49.9500	平米	27.4800	1,373	19.68	1,116.38	2,473.75	
6148	多彩涂料墙柱面块灰面	1,723.3200	平米	11.1700	19,249	127.01	17,181.50	782.56	
6049	无机面漆(总价)水泥砂浆95*45块面	600.8400	平米	64.7300	38,892	356.48	34,283.93	1,093.95	
	小计				59,514	503.17	52,581.81	4,352.26	
耐酸、防腐、保温隔热工程									
7138	现浇水泥珍珠岩	32.2400	立方米	103.5300	3,338	29.44	2,945.77	748.95	
	小计				3,338	29.44	2,945.77	748.95	
	合计				323,601	3,768.12	267,550.55	108,463.13	
土方机械进出场费									
	履带式电动挖土机(带斗挖土机)	1.0000	台次	859.0000	859				
	小计				859				
土方及泥浆外运									
	土方运距(桶车及桶车内环境外)	273.0000	立方米	30.0000	8,190				
	小计				8,190				

ESTIMATION FOR CONSTRUCTION COST OF EQUIPMENT FACILITIES

SHANGHAI PUDONG INTERNATIONAL AIRPORT (AIRFIELD LIGHTING SYSTEM)
 MAIN AFL SUB-STATION WATER SUPPLY AND SEWAGE

	RMB YUAN
A. NOMINAL DIRECT EXPENSE	11,558
B. EXPENSE OF LABOR	740
C. OTHER DIRECT EXPENSE	170
D. SUB-TOTAL OF DIRECT EXPENSE	11,728
E. COMBINED INDIRECT EXPENSE	1,333
F. PROFIT	481
G. INITIAL EXPENSE	352
H. ADJUSTMENT FOR EXPENSE OF LABOR	150
I. SUBSIDY FOR CHANGE OF CONSTRUCTION SITE	156
J. MATERIAL AGIO	1,713
K. MECHANICAL AGIO	35
L. EQUIPMENT COST	688,630
M. EQUIPMENT TRANSPORTATION COST	20,659
N. TOTAL	725,238
O. ESTABLISHMENT CHARGE OF NORM COMPILATION	6
P. ENGINEERING QUALITY SUPERVISION COST	1,088
Q. MANAGEMENT COST	1,088
R. TAX AND DUTIES	22,841
S. CONSTRUCTION COST	750,260

(B) X 23%

(A) + (C)

(B) X 180%

(B) X 65%

(D) X 3%

(B) ÷ 1.83 X 2.4

(B) ÷ 1.83 X 2.5

MATERIAL COST SUM X 80%

MECHANICAL COST SUM X 116%

(L) X 3%

(D) + (E) + ... + (L) + (M)

(D) X 0.5%

(D) X 1.5%

(N) X 1.5%

[(N) + (O) + (P) + (Q)] X 3.41%

(N) + (O) + (P) + (Q) + (R)

ESTIMATION FOR CONSTRUCTION COST OF EQUIPMENT FACILITIES

SHANGHAI PUDONG INTERNATIONAL AIRPORT (AIRFIELD LIGHTING SYSTEM)
MAIN AFL SUB-STATION WATER SUPPLY AND SEWAGE

PAGE 1

序 号	定 额 编 号	设备 及 安 装 工 程 名 称	单 位	数 量	设 备 费 (元)		安 装 费 (元)		其 他 费 (元)		中 间 费 (元)		未 完 工 费 (元)		材 料 总 价		
					单 价	合 价	单 价	合 价	单 价	合 价	单 价	合 价	单 价	合 价		单 价	合 价
1	24-88	蹲式大便器	10组	0.8			1318.8	1055.0	108.2	86.6	362.7	290.2			8.0	36.6	293.1
2	24-91	挂式小便器	10组	0.4			427.7	171.1	37.0	14.8	390.7	156.3			4.0	45.0	179.8
3	24-72	洗脸盆	10组	0.4			855.7	342.3	58.4	23.4	797.3	318.9			4.0	52.3	209.1
4	24-32	镀锌钢管	10米	6.0			137.8	826.7	54.9	329.5	77.9	467.1	5.0	30.2	60.0	37.8	2267.4
5	24-38	排水铸铁管	10米	5.0			238.9	1194.7	57.3	286.3	181.7	908.4			50.0	64.5	3224.0
6		7kgCO ₂ 灭火器	个	30.0	225.0	6750.0											
7		推车式干粉灭火器(55kg)	个	1.0	560.0	560.0											
8		4kg干粉灭火器	个	20.0	66.0	1320.0											
9		火灾报警及控制系统	套	1.0	200000.0	200000.0											
10		组合分配式CO ₂ 灭火系统	套	2.0	240000.0	480000.0											
11																	
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	
25																	
26																	
27																	
28																	
29		合 计				688.630.0		3.589.8		740.5		2.140.9		30.2			6.173.4
30		零星工程费 5%						1.794.9									

ESTIMATION CONSTRUCTION COST OF EQUIPMENT FACILITIES

SHANGHAI PUDONG INTERNATIONAL AIRPORT (AIRFIELD LIGHTING SYSTEM)
SECONDARY AFL SUB-STATION WATER SUPPLY AND SEWAGE

	RMB YUAN
A. NOMINAL DIRECT EXPENSE	5,288
B. EXPENSE OF LABOR	357
C. OTHER DIRECT EXPENSE	82
D. SUB-TOTAL OF DIRECT EXPENSE	5,370
E. COMBINED INDIRECT EXPENSE	642
F. PROFIT	232
G. INITIAL EXPENSE	161
H. ADJUSTMENT FOR EXPENSE OF LABOUR	72
I. SUBSIDY FOR CHANGE OF CONSTRUCTION SITE	75
J. MATERIAL AGIO	747
K. MECHANICAL AGIO	18
L. EQUIPMENT COST	427,970
M. EQUIPMENT TRANSPORTION COST	12,839
N. TOTAL	448,126
O. ESTABLISHMENT CHARGE OF NORM COMPILATION	3
P. ENGINEERING QUALITY SUPERVISION COST	672
Q. MANAGEMENT COST	672
R. TAX AND DUTIES	14,113
S. CONSTRUCTION COST	463,587

$(B) \times 23\%$

$(A) + (C)$

$(B) \times 180\%$

$(B) \times 65\%$

$(D) \times 3\%$

$(B) \div 1.83 \times 2.4$

$(B) \div 1.83 \times 2.5$

MATERIAL COST SUM $\times 80\%$

MECHANICAL COST SUM $\times 116\%$

$(L) \times 3\%$

$(D) + (E) + \dots + (L) + (M)$

$(D) \times 0.5\%$

$(D) \times 1.5\%$

$(N) \times 1.5\%$

$[(N) + (O) + (P) + (Q)] \times 3.41\%$

$(N) + (O) + (P) + (Q) + (R)$

ESTIMATION FOR CONSTRUCTION COST OF EQUIPMENT FACILITIES

SHANGHAI PUDONG INTERNATIONAL AIRPORT (AIRFIELD LIGHTING SYSTEM)
SECONDARY AFL SUB-STATION WATER SUPPLY AND SEWAGE

PAGE 1

序 号	定 额 编 号	设备及安装工程名称	单 位	数 量	设备费 (元)		安装费 (元)		人工费 (元)		材料费 (元)		机械费 (元)		未 名 称	单 位	总 基 价	材 料 价	单 价	总 价
					单 价	合 价	单 价	合 价	单 价	合 价	单 价	合 价	单 价	合 价						
1	24-88	蹲式大便器	10组	0.1			1318.8	131.9	108.2	10.8	362.7	36.3			瓷人便器	个	1.0	36.6	36.6	36.6
2	24-91	挂式小便器	10组	0.1			427.7	42.8	37.0	3.7	390.7	39.1			小便器	个	1.0	45.0	45.0	45.0
3	24-72	洗脸盆	10组	0.1			855.7	85.6	58.4	5.8	797.3	79.7			洗脸盆	个	1.0	52.3	52.3	52.3
4	24-32	镀锌钢管	10米	3.0			137.8	413.4	54.9	164.7	77.9	233.6	5.0	15.1	镀锌钢管	米	30.0	37.8	1133.7	1133.7
5	24-38	排水铸铁管	10米	3.0			238.9	716.8	57.3	171.8	181.7	545.0			排水铸铁管	米	30.0	64.5	1934.4	1934.4
6		7KGCO2灭火器	个	30.0			225.0	6750.0												
7		推车式干粉灭火器(35K)	个	1.0			560.0	560.0												
8		4KG干粉灭火器	个	10.0			66.0	660.0												
9		火灾报警及控制系统	套	1.0			180000.0	180000.0												
10		组各式CO2灭火系统	套	1.0			240000.0	240000.0												
11																				
12																				
13																				
14																				
15																				
16																				
17																				
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20																				
21																				
22																				
23																				
24																				
25																				
26																				
27																				
28																				
29		合 计						1,390.4	356.9	933.7	15.1									3,202.0
30		零星工程费 5%						695.2												

ESTIMATION FOR CONSTRUCTION COST OF EQUIPMENT FACILITIES

SHANGHAI PUDONG INTERNATIONAL AIRPORT (AIRFIELD LIGHTING SYSTEM)
AFL SUB-STATION AIR-CONDITIONOR

序 号	设备名称	单 位	设备费 (元)		安 装 费 (元)		其 他 (元)		材 料 费 (元)		机 械 费 (元)		人 工 费 (元)		合 价 (元)		单 价	总 量	单 价	总 价	
			单 价	合 价	单 价	合 价	单 价	合 价	单 价	合 价	单 价	合 价	单 价	合 价	单 价	合 价					
1	分体式空调机RY4S3V2C	台	10500.0	31500.0	43.4	130.1	19.8	59.5	22.2	66.6	1.3	4.0									
2	分体式空调机BRY125PV1	台	23000.0	46000.0	51.1	102.2	22.2	44.4	27.2	54.3	1.8	3.5									
3	分体式VRV变频空调机10HP	台	76100.0	380500.0	51.1	255.6	22.2	111.0	27.2	135.8	1.8	8.9									
4	分体式壁挂式空调器	台		0.0	20.1	60.3	12.8	38.3	7.3	22.0		0.0									
5	室内机FXYC20KV	台	13400.0	67000.0	62.1	310.7	17.1	85.3	40.5	202.6	4.6	22.9									
6	室内机FXYC32KV	台	13950.0	83700.0	62.1	372.8	17.1	102.3	40.5	243.1	4.6	27.4									
7	室内机FXYP40KV	台	15690.0	31380.0	62.1	124.3	17.1	34.1	40.5	81.0	4.6	9.1									
8	室内机FXYC50KV	台	16290.0	97740.0	62.1	372.8	17.1	102.3	40.5	243.1	4.6	27.4									
9	室内机FXYC63KV	台	17390.0	156510.0	62.1	559.3	17.1	153.5	40.5	364.7	4.6	41.1									
10	室内机FXYC125KV	台	22480.0	44960.0	62.1	124.3	17.1	34.1	40.5	81.0	4.6	9.1									
11	室内落地式空调机	台		0.0	201.5	403.1	199.0	398.0	2.6	5.1											
12	玻璃顶防爆轴流风机安装	台	5440.0	21760.0	118.0	472.1	46.7	186.8	66.6	266.4	4.7	18.9									
13	分体式VRV变频空调机配件			94530.0																	
14	室内机FXYC25KV	台	13660.0	27320.0	62.1	124.3	17.1	34.1	40.5	81.0	4.6	9.1									
15																					
16																					
17																					
18																					
19																					
20																					
21																					
22																					
23																					
24																					
25																					
26																					
27																					
28																					
29	合 计			1,082,900.0		3,411.8		1,383.6		1,846.8		181.5									0
30	零星工程费 5%					170.6															

B-5 調達予定表



Table of Planing of Procurement for Main Equipment
(調達予定表)

I. Airfield Lighting Facility

<u>Item</u>	<u>Specification</u>	<u>Planing of Procurement</u>	
		<u>Abroad</u>	<u>China</u>
1	Precision Approach Lighting System (PALS)		
	PALS surface type, white	O	-
	PALS elevated type, white	-	O
	PALS surface type, red	O	-
	PALS elevated type, red	-	O
2	Sequence Flashing Lights (SFL)		
	SFL elevated type	O	-
	Power Unit	O	-
	Control unit	O	-
3	Precision Approach Path Indicator (PAPI)		
	PAPI	O	-
4	Runway Edge Lights (REDL)		
	REDL surface type, white/white	O	-
	REDL surface type, white/yellow	O	-
	REDL elevated type, white/white	-	O
	REDL elevated type, white/yellow	-	O
5	Runway Threshold Lights (RTHL) and Wing Bar Lights (WBAR)		
	RTHL surface type, green	O	-
	Runway End Light (RENL) surface type, red	-	O
	WBAR elevated type, green	-	O
6	Runway Center Line Lights (RCLL)		
	RCLL surface type, white/white	O	-
	RCLL surface type, white/red	O	-
7	Runway Touchdown Lights (RTZL)		
	RTZL surface type, white	O	-

Item	Specification	Planing of Procurement	
		Abroad	China
8	Taxiway Center Line Lights (TCLL)		
	TCLL surface, wide, green/green with shallow base	-	0
	TCLL surface, narrow, green/green with deep base	-	0
	TCLL surface, narrow, green/yellow with shallow base	-	0
	TCLL surface, wide, green/green with shallow base	-	0
	TCLL surface, narrow, green/green with shallow base	-	0
	TCLL surface, wide, green/green, 2 lamps	0	-
	TCLL surface, narrow, green/green, 2 lamps	0	-
	TCLL surface, wide, green/yellow, 2 lamps	0	-
	TCLL surface, narrow, green/yellow, 2 lamps	0	-
	HSTCLL surface, wide, green with shallow	-	0
	HSTCLL surface, narrow, green with shallow	-	0
	HSTCLL surface, wide, green (stb~R/with shallow base)	0	-
	HSTCLL surface, narrow, green (stb~R/with shallow base)	0	-
	HSTCLL surface, wide, yellow (stb~R/with shallow base)	0	-
	HSTCLL surface, narrow, yellow (stb~R/with shallow base)	0	-
9	Taxiway Edge Light (TWYL)		
	TWYL elevated type, blue	-	0
10	Stop Bar Lights (STBL)		
	STBL surface type, red	-	0
	STBL elevated type, red	-	0
	STBL surface type, red, controllable	0	-
	STBL elevated type, red, controllable	-	0
11	Runway Guard Lights (RGL)		
	RGL elevated type, yellow	0	-
12	Taxiway Intersection Lights (TISL)		
	TISL surface type, yellow	-	0
	TISL surface type, yellow with deep base	-	0
13	Taxiing Guidance Signs (TXGS)		
	TXGS 2 letter	-	0
	TXGS 3 letter	-	0

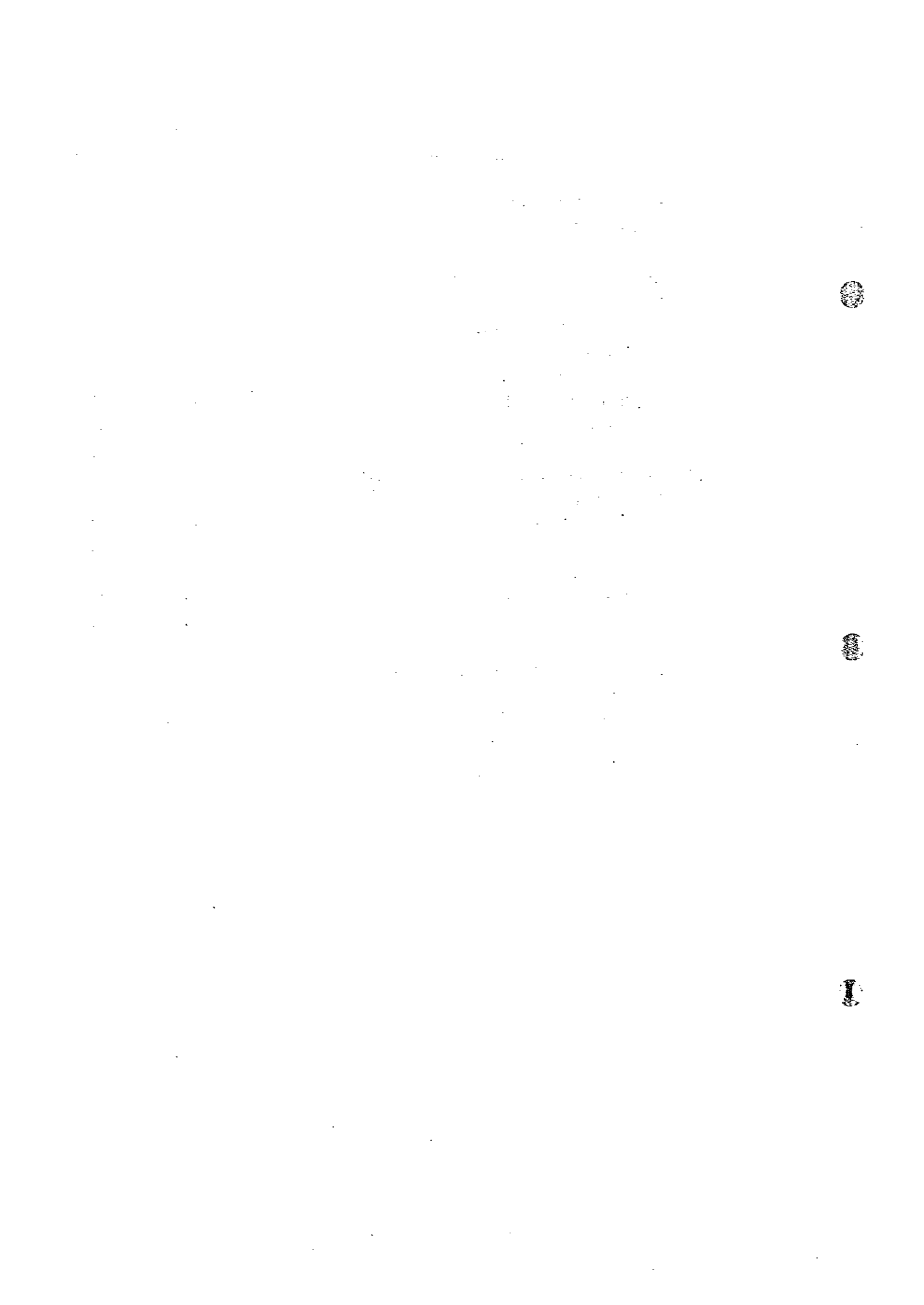
Item	Specification	Planing of Procurement	
		Abroad	China
	TXGS 4 letter	--	0
	TXGS 5 letter	--	0
	TXGS 6 letter	--	0
	TXGS 7 letter	--	0
	TXGS 8 letter	--	0
	TXGS 9 letter	--	0
14	Road-Holding Position Lights Lights	--	0
15	Aircraft Stand Identification Signs (ASIS) ASIS light Control unit	-- 0	0 --
16	Apron Flood Lighting (FLO) FLO with 25 m pole FLO with 20 m pole Control unit	-- -- 0	0 0 --
17	Wind Direction Indicating Lights Lights	0	--
18	Power Supply System CCR, 4 kVA CCR, 7.5 kVA CCR, 10 kVA CCR, 15 kVA CCR, 20 kVA CCR, 25 kVA CCR, 30 kVA Direction change-over switch	0 0 0 0 0 0 0 0	-- -- -- -- -- -- -- --
19	Power Supply, Control and Monitoring System For VFR room For main AFL substation For secondary substation For stop bar system For burnout detecting system Communication system	0 0 0 0 0 0	-- -- -- -- -- --

Item	Specification	Planing of Procurement	
		Abroad	China
20	AFL Main Duct	-	0
21	Common Materials		
	Transformer box	-	0
	Insulating transformer	0	0
	5 kV primary cable	0	0
	Plug and receptacle	0	0
	Burnout detecting unit at remote side	0	-
	SUS flexible	0	0
22	Maintenance Room Equipment		
	Light cleaning device	0	-
	Dry type cleaning device	0	-
	Hot water type parts cleaning device	0	-
	Supersonic wave cleaning device	0	-
	Simplified air leakage testing device	0	-
	Light distribution intensity measuring device	0	-
	Air compressor	0	-
	Air gun	0	-

II. Power Facility

Item	Specification	Planing of Procurement	
		Abroad	China
23	Power Distribution System		
	Main AFL substation		
	10 kV panels	-	0
	10 kV/380 V transformer, 1000 kVA	-	0
	Power exchange panel	-	0
	Secondary AFL substation		
	10 kV panels	-	0
	10 kV/380 V transformer, 800 kVA	-	0
	Power exchange panel	-	0
24	Low Voltage (LV) Distribution System		
	Main AFL substation		
	LV panels	-	0

<u>Item</u>	<u>Specification</u>	<u>Planing of Procurement</u>	
		<u>Abroad</u>	<u>China</u>
	Secondary AFL substation LV panels	-	0
25	Diesel Engine Generator (DEG)		
	Main AFL substation		
	DEG 380 V, 1100 kVA	0	0
	Oil tank	-	0
	Secondary AFL substation		
	DEG 380 V, 880 kVA	0	0
	Oil tank	-	0
26	Un-interruptible Power Supply (UPS) System		
	Main AFL substation		
	UPS 150 kVA x 3	0	0
	Battery	0	0
	Secondary AFL substation		
	UPS 100 kVA x 3	0	0
	Battery	0	0
27	Control and Monitoring System for Power Distribution System		
	For Main AFL substation	0	-
	For Secondary AFL substation	0	-
	Communication system	0	-







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