Sediment Flush Gate (Hoisting System) , Material purchased

(1/1)

No.	Item	Material	Dimensions (mm) Shape	× Length	Quantity	Weight (kg) Unit W	W	Particular
100								
131	Gear Coupling			KSS-280	2	86.0	172	
132	Wire Rope			ϕ 30 (6 × 37) G-Plating × 50 m	2	161.5	323	
133	" Socket			ϕ 30 with Pin	2	16.0	32	
134	Limit Switch			1LS3-J	1	----	----	
135	Spulocket			RS40 NT=30	2	3.0	6	
136	"			RS40 NT=16	2	0.8	4	
137	Roller Chain			RS40 100 Link	2	4.5	2	
138	Chain Coupling			GR-5018-J (With Cover)	2	4.0	9	
139	Bush	OL#500SP	○	ϕ (170 - 150) × 100	2	4.0	8	
140	Rubber Sheet	Synthetic Rubber		t10 × 0.5 m^2	2	7.5	15	
141	Oiling Parts	Synthetic Rubber			30	1.0	30	
142	Distribution Value			3□	2	1.5	3	
143	B, N, SW	SUS304	M	12 × 40	4	0.1	----	
144	B, N, SW	SUS304	M	12 × 50	4	0.1	----	
145	B, N, SW	SS4000	M	30 × 120	8	1.2	10	
146	B, N, SW	SS4000	M	24 × 100	32	0.6	19	
147	B, N	SS4000	M	24 × 120	16	0.7	11	
148	B, SW	SUS304	M	16 × 40	8	0.1	1	
149	B, SW	SUS304	M	20 × 50	6	0.2	1	
150	Anchor B, N	SS4000	M	24 × 150	14	0.8	11	
151	B, SW	SS4000	M	16 × 40	8	0.1	1	
152	Bolt with Hexagonal Hole	SCM435	M	16 × 35	8	0.1	1	
153	Grease Nipple	SCM435		R1/4	2	----	----	
				Sub Total (1 Gate)			**659**	
				Total (2 Gate)			**1,318**	

Sediment Flush Gate (Hoisting System) , Machine single (1/1)

No.	Item	Material	Dimensions (mm) Shape × Length	Quantity	Weight (kg) Unit W	Weight (kg) W	Particular
200	Hoisting Apparatus						
201	Electrical Motor		5.5 KW × 6P with Break	1	119.0	119	
202	Clutch		KG-110	1	70.0	70	
203	Brake		BMS4-1620UPS-6	1	149.0	149	
204	Reduction Gear		HQBG-811 1/520	1	1200.0	1,200	
205	Wire Slackness Detector		GR90	2	79.0	158	
206	Opening Measure		STX-110	1	50.0	50	
207	Geared Switch		4 Points	1	15.0	15	
208	Grease Pump		15 litter	1	20.0	20	
			Sub Total (1 Gate)			**1,781**	
			Total (2 Gate)			**3,562**	

Right Intake Gate (Gate Body) Gate leaf : steel material : (1 / 1)

No.	Item	Material	Dimensions (mm) Shape	× Length	Quantity	Weight (kg) Unit W	W	Painting Area (m^2) Painting	Acid
1	Gate Body								
1-1	Skin Plate	SS400	PL	9 × 2510 × 2050	1	363.5	364	10.3	
1-2	Main Beam	SS400	[	200× 90 × 8 × 2514	4	76.2	305	7.2	
1-3	Diafrum F	SS400	PL	9 × 75 × 710	3	3.8	11	0.3	
1-4	Diafrum W	SS400	PL	9 × 191 × 792	3	10.7	32	0.9	
1-5	Diafrum F	SS400	PL	9 × 75 × 560	3	3	9	0.3	
1-6	Diafrum W	SS400	PL	9 × 191 × 642	3	8.7	26	0.7	
1-7	Diafrum F	SS400	PL	9 × 75 × 355	3	1.9	6	0.2	
1-8	Diafrum W	SS400	PL	9 × 191 × 519	3	7	21	0.6	
1-9	End Beam	SS400	[	200 × 90 × 8 × 2060	2	62.4	125	3.0	
1-10	Support Plate	SUS304	PL	30 × 40 × 2040	2	19.4	39		0.3
1-11	Wedge	SUS304	PL	36 × 40 × 150	2	1.7	3		---
1-12	Side Guide	SUS304TP	P_iP_e	100A Sch40 × 100	4	1.6	6		0.1
1-13	Watertight Rubber	SS400	PL	13 × 60 × 2045	2	12.5	25	0.5	
1-14	Watertight Rubber	SS400	PL	13 × 60 × 2230	1	13.7	14	0.3	
1-15	Rubber Fitting	SUS304	FB	50 × 9 × 2030	2	7.2	14		0.5
1-16	Rubber Fitting	SUS304	FB	50 × 9 × 2230	1	8.0	8		0.3
1-17	Rubber Fitting	SUS304	L	75 × 75 × 9 × 2420	1	24.4	24		0.7
1-18	Fitting Plate	SS400	PL	9 × 80 × 1010	2	5.7	11	0.3	
1-19	"	SS400	PL	9 × 80 × 925	2	5.2	10	0.3	
1-20	Rubber Fitting	SUS304	PL	9 × 75 × 250	2	1.3	3		0.1
1-21	Gate Bottom Plate	SS400	PL	12 × 85 × 200	2	1.6	3	0.1	
1-22	"	SS400	PL	9 × 85 × 150	2	0.9	2	0.1	
1-23	Lifting Hand	SS400	PL	19 × (150 × 200 - ϕ 50)	2	4.2	8	0.1	
2									
2-1	Lifting Hand	SS400	PL	16 × 180 ×200	1	4.5	5	0.1	
2-2	Lifting Hand	SS400	PL	19 × (190 × 200 - ϕ 70)	2	5.1	10	0.1	
2-3	Pin	SUS304	○	ϕ 70 × 180	2	5.5	11		
2-4	Key Plate	SS400	PL	9 × 40 × 130	2	0.4	1	---	
				Sub Total (1 Gate)			**1,096**	**25.4**	**2.0**
				Total (4 Gate)			**4,384**	**101.6**	**8.0**

Right Intake Gate (Gate Body) , Gate leaf material purchased

(1/1)

No.	Item	Material	Dimensions (mm) Shape	× Length	Quantity	Weight (kg) Unit W	W	Particular
100	Gate Body							
101	Watertight Rubber	Synthetic Rubber		Pϕ 30 × 85 × 6900	1	14.7	15	
102	Watertight Rubber	Synthetic Rubber		t15 × 85 × 3094	1	5.9	6	
103	Plate Bolt, N	SUS304	M	12 × 70	28	0.1	3	
104	Plate Bolt, N	SUS304	M	12 × 65	34	0.1	3	
105	Plate Bolt, N	SUS304	M	12 × 85	2	0.1	----	
106	Hexagonal Bolt, N	SUS304	M	12 × 55	22	0.1	2	
107	Hexagonal Bolt, N	SUS304	M	16 × 50	8	0.1	1	
				Sub Total (1 Gate)			**30**	
				Total (4 Gate)			**120**	

Right Intake Gate (Gate Sheet) Guide frame, steel material

(1/1)

No.	Item	Material	Dimensions (mm) Shape	× Length	Quantity	Weight (kg) Unit W	W	Painting Area (m^2) Painting	Acid
3	Gate Sheet								
3-1	Side Gate Sheet	SUS304	[	200 × 100 × 10 × 4600	2	139.5	279		5.7
3-2	Side Gate Sheet	SUS304	[	200 × 100 × 10 × 4600	2	139.5	279		5.7
3-3	Liner	SUS304	PL	9 × 170 × 4590	2	55.7	111		3.1
3-4	Fixing Plate	SS400	PL	10 × 90 × 180	4	1.3	5		
3-5	Anchor	SS400	FB	50 × 6 × 180	40	0.4	16		
4									
4-1	Bottom Gate Sheet	SS400	H	148 × 100 × 6/9 ×2444	1	50.6	51	1.6	
4-2	"	SS400	H	148 × 100 × 6/9 ×490	2	10.1	20		
4-3	"	SUS304	PL	9 × 120 × 1940	1	16.6	17		0.5
4-4	"	SUS304	PL	9 × 250 × 510	2	9.1	18		0.5
4-5	Reinforcing Rib	SS400	PL	9 × 110 × 139	4	1.1	4		
4-6	"	SS400	PL	9 × 120 × 139	2	1.2	2		
5									
5-1	Upper Gate Sheet	SUS304	PL	9 × 240 × 1980	1	33.9	34		1.0
5-2	"	SUS304	PL	9 × 90 × 1980	1	12.7	13		0.4
5-3	"	SUS304	PL	9 × 100 × 2030	1	14.5	15		0.4
5-4	Rib	SS400	PL	6 × 80 × 170	4	0.6	2		
5-5	Fitting Plate	SUS304	PL	10 × 110 × 250	2	2.2	4		0.1
5-6	"	SS400	PL	10 × 80 × 170	2	1.1	2		
5-7	Bracket	SUS304	PL	12 × 150 × 165	6	2.4	14		0.3
5-8	" Rib	SUS304	PL	9 × 160 × 228	6	2.6	16		0.4
				Sub Total (1 Gate)			**902**	**1.6**	**18.1**
				Total (4 Gate)			**3,608**	**6.4**	**72.4 0**

Right Intake Gate (Gate Sheet) Guide frame, Material purchased (1/1)

No.	Item	Material	Dimensions (mm)		Quantity	Weight (kg)		Particular
				Shape × Length		Unit W	W	
100	Gate Sheet							
108	Hexagonal Bolt, N	SS400	M	16 × 50	12	0.1	1	
109	Anchor Bolt, N	SUS304	M	16 × 200	24	0.4	10	
110	Regine Anchor			HP-16	24	----	1	
				Sub Total (1 Gate)			**12**	
				Total (4 Gate)			**48**	

Right Intake Gate (Hoisting System) , Steel material

(1/1)

No.	Item	Material	Dimensions (mm) Shape	× Length	Quantity	Weight (kg) Unit W	W	Painting Area (m^2) Painting	Acid
	Hoisting Apparatus								
6	Spindle	SUS304	○	ϕ 90 × 4500	1	227.0	227		1.3
7	Tip Pipe	SUS304	○	ϕ 130 × 320	1	33.7	34		0.2
8									
8-1	Shake Stopper	SS400	PL	12 × 150 × 350	1	5.0	5	0.1	
8-2	"	SUS304TP	P_iP_e	100A Sch40 × 100	1	1.6	2		----
8-3	"	SS400	PL	12 × 75 × 100	4	0.7	3	0.1	
				Sub Total (1 Gate)			**271**	**0.2**	**1.5**
				Total (4 Gate)			**1,084**	**0.8**	**6.0**

Right Intake Gate (Hoisting System) . Material purchased

(1/1)

No.	Item	Material	Dimensions (mm) Shape	× Length	Quantity	Weight (kg) Unit W	W	Particular
100	Hoisting Apparatus							
111	Hexagonal Bolt, SW	SS400	M	24 × 80	8	0.5	4	
112	Linear	SS400		50 × 65 × 100	4	2.6	10	
113	Anchor Bolt, N	SS400	M	30 × 430	4	2.9	12	
114	Regine Anchor			HP-30	4	0.2	1	
115	Hexagonal Bolt, N, SW	SS400	M	16 × 50	4	0.1	---	
116	Anchor Bolt, N	SS400	M	16 × 200	4	0.4	2	
117	Regine Anchor			HP-16	4	---	---	
				Sub Total (1 Gate)			**29**	
				Total (4 Gate)			**116**	

Right Intake Gate (Hoisting System) , Machine single

(1/1)

No.	Item	Material	Dimensions (mm) Shape × Length	Quantity	Weight (kg) Unit W	Weight (kg) W	Particular
200	Hoisting Apparatus						
201	Valve		JMB-3 5.5 KW with Break	1	560.0	560	
202	Stand		JMB-3	1	148.0	148	
203	Spindle Cover		JMB-3 L=2600	1	52.0	52	
			Sub Total (1 Gate)			**760**	
			Total (4 Gate)			**3,040**	

Left Intake Gate (Gate Body) Gate leaf, steel material

No.	Item	Material	Dimensions (mm) Shape	Dimensions (mm) Shape × Length	Quantity	Weight (kg) Unit W	Weight (kg) W	Painting Area (m^2) Painting	Painting Area (m^2) Acid
1	Gate Body								
1-1	Skin Plate	SS400	PL	9 × 2260 × 2050	1	327.3	327	9.3	
1-2	Main Beam	SS400	[	180 × 75 × 7 × 2266	4	48.5	194	5.6	
1-3	Diafrum F	SS400	PL	9 × 75 × 710	3	3.8	11	0.3	
1-4	Diafrum W	SS400	PL	9 × 171 × 793	3	9.6	29	0.8	
1-5	Diafrum F	SS400	PL	9 × 75 × 560	3	3.0	9	0.3	
1-6	Diafrum W	SS400	PL	9 × 171 × 643	3	7.8	23	0.7	
1-7	Diafrum F	SS400	PL	9 × 75 × 355	3	1.9	6	0.2	
1-8	Diafrum W	SS400	PL	9 × 171 × 521	3	6.3	19	0.5	
1-9	End Beam	SS400	[	180 × 75 × 7 × 2060	2	44.1	88	2.6	
1-10	Support Plate	SUS304	PL	30 × 40 × 2040	2	19.4	39		0.3
1-11	Wedge	SUS304	PL	36 × 40 × 150	2	1.7	3		—
1-12	Side Guide	SUS304TP	P_iP_e	100A Sch40 × 100	4	1.6	6		0.1
1-13	Watertight Rubber	SS400	PL	13 × 60 × 2045	2	12.5	25	0.5	
1-14	Watertight Rubber	SS400	PL	13 × 60 × 1980	1	12.1	12	0.2	
1-15	Rubber Fitting	SUS304	FB	50 × 9 × 2030	2	7.2	14		0.5
1-16	Rubber Fitting	SUS304	FB	50 × 9 × 1980	1	7.1	7		0.2
1-17	Rubber Fitting	SUS304	L	75 × 75 × 9 × 2170	1	21.9	22		
1-18	Fitting Plate	SS400	PL	9 × 80 × 1010	2	5.7	11	0.3	
1-19	"	SS400	PL	9 × 80 × 925	2	5.2	10	0.3	
1-20	Rubber Fitting	SUS304	PL	9 × 75 × 250	2	1.3	3		0.1
1-21	Gate Bottom Plate	SS400	PL	12 × 85 × 200	2	1.6	3	0.1	
1-22	"	SS400	PL	9 × 85 × 150	2	0.9	2	0.1	
1-23	Lifting Hand	SS400	PL	19 × (150 × 200 - ϕ 50)	2	4.2	8	0.1	
2									
2-1	Lifting Hand	SS400	PL	16 × 180 × 200	1	4.5	5	0.1	
2-2	Lifting Hand	SS400	PL	19 × (190 × 200 - ϕ 70)	2	5.1	10	0.1	
2-3	Pin	SUS304	O	ϕ 70 × 180	2	5.5	11		
2-4	Key Plate	SS400	PL	9 × 40 × 130	2	0.4	1	—	
				Sub Total (1 Gate)			**898**	**22.1**	**1.2**
				Total (2 Gate)			**1,796**	**44.2**	**2.4**

Left Intake Gate (Gate Body) Gate leaf, Material purchased (1/1)

No.	Item	Material	Dimensions (mm) Shape	× Length	Quantity	Weight (kg) Unit W	W	Particular
100	Gate Body							
101	Watertight Rubber	Synthetic Rubber		Pϕ 30 × 85 × 6650	1	14.2	14	
102	Watertight Rubber	Synthetic Rubber		t15 × 85 × 2844	1	5.4	5	
103	Plate Bolt, N	SUS304	M	12 × 70	26	0.1	3	
104	Plate Bolt, N	SUS304	M	12 × 65	34	0.1	3	
105	Plate Bolt, N	SUS304	M	12 × 85	2	0.1	----	
106	Hexagonal Bolt, N	SUS304	M	12 × 55	20	0.1	2	
107	Hexagonal Bolt, N	SUS304	M	16 × 50	8	0.1	1	
				Sub Total (1 Gate)			**28**	
				Total (2 Gate)			**56**	

Left Intake Gate (Gate Sheet) Guide frame, steel material

(1/1)

No.	Item	Material	Dimensions (mm) Shape	× Length	Quantity	Weight (kg) Unit W	W	Painting Area (m^2) Painting	Acid
3	Gate Sheet								
3-1	Side Gate Sheet	SUS304	[	200 × 100 × 10 × 4600	2	139.5	279		5.7
3-3	Side Gate Sheet	SUS304	[	200 × 100 × 10 × 4600	2	139.5	279		5.7
3-4	Linear	SUS304	PL	9 × 170 × 4590	2	55.7	111		3.1
3-5	Fixing Plate	SS400	PL	10 × 90 × 180	4	1.3	5		
3-6	Anchor	SS400	FB	50 × 6 × 180	40	0.4	16		
4									
4-1	Bottom Gate Sheet	SS400	H	148 × 100 × 6/9 ×2194	1	45.4	45		
4-2	"	SS400	H	148 × 100 × 6/9 ×490	2	10.1	20		
4-3	"	SUS304	PL	9 × 120 × 1940	1	16.6	17		0.5
4-4	"	SUS304	PL	9 × 250 × 510	2	9.1	18		0.5
4-5	Reinforcing Rib	SS400	PL	9 × 110 × 139	4	1.1	4		
4-6	"	SS400	PL	9 × 120 × 139	2	1.2	2		
5									
5-1	Upper Gate Sheet	SUS304	PL	9 × 240 × 1980	1	33.9	34		1.0
5-2	"	SUS304	PL	9 × 90 × 1980	1	12.7	13		0.4
5-4	"	SUS304	PL	9 × 100 × 2030	1	14.5	15		0.4
5-5	Rib	SS400	PL	6 × 80 × 170	4	0.6	2		
5-6	Fitting Plate	SUS304	PL	10 × 110 × 250	2	2.2	4		0.1
5-7	"	SS400	PL	10 × 80 × 170	2	1.1	2		
5-8	Bracket	SUS304	PL	12 × 150 × 165	6	2.4	14		0.3
5-9	" Rib	SUS304	PL	9 × 160 × 228	6	2.6	16		0.4
				Sub Total (1 Gate)			**896**		**18.1**
				Total (2 Gate)			**1,792**		**36.2 0**

Left Intake Gate (Gate Sheet) Guide frame, Material purchased (1/1)

No.	Item	Material	Dimensions (mm) Shape	× Length	Quantity	Weight (kg) Unit W	W	Particular
100	Gate Sheet							
108	Hexagonal Bolt, N	SS400	M	16 × 50	12	0.1	1	
109	Anchor Bolt, N	SUS304	M	16 × 200	24	0.4	10	
110	Regin Anchor			HP-16	24	----	1	
				Sub Total (1 Gate)			**12**	
				Total (2 Gate)			**24**	

Left Intake Gate (Hoisting System) steel material

No.	Item	Material	Dimensions (mm) Shape	Dimensions (mm) × Length	Quantity	Weight (kg) Unit W	Weight (kg) W	Painting Area (m^2) Painting	Painting Area (m^2) Acid
	Hoisting Apparatus								
6	Spindle	SUS304	○	ϕ 90 × 4300	1	216.9	217		1.2
7	Tip Pipe	SUS304	○	ϕ 130 × 320	1	33.7	34		0.2
8									
8-1	Shake Stopper	SS400	PL	12 × 150 × 350	1	5.0	5	0.1	
8-2	"	SUS304TP	P_iP_e	100A Sch40 × 100	1	1.6	2		----
8-3	"	SS400	PL	12 × 75 × 100	4	0.7	3	0.1	
				Sub Total (1 Gate)			**261**	**0.2**	**1.4**
				Total (2 Gate)			**522**	**0.4**	**2.8**

Left Intake Gate (Hoisting System) Material Purchased

(1/1)

No.	Item	Material	Dimensions (mm) Shape	× Length	Quantity	Weight (kg) Unit W	W	Particular
100	Hoisting Apparatus							
111	Hexagonal Bolt, SW	SS400	M	24 × 80	8	0.5	4	
112	Linear	SS400		50 × 65 × 100	4	2.6	10	
113	Anchor Bolt, N	SS400	M	30 × 430	4	2.9	12	
114	Regin Anchor			HP-30	4	0.2	1	
115	Hexagonal Bolt, N, SW	SS400	M	16 × 50	4	0.1	---	
116	Anchor Bolt, N	SS400	M	16 × 200	4	0.4	2	
117	Regin Anchor			HP-16	4	---	---	
				Sub Total (1 Gate)			**29**	
				Total (2 Gate)			**58**	

Left Intake Gate (Hoisting System) Machine single

(1/1)

No.	Item	Material	Dimensions (mm) Shape × Length	Quantity	Weight (kg) Unit W	Weight (kg) W	Particular
200	Hoisting Apparatus						
201	Valve Control		JMB-3 5.5 KW with Break	1	560.0	560	
202	Stand		JMB-3	1	148.0	148	
203	Spindle Cover		JMB-3 L=2600	1	52.0	52	
			Sub Total (1 Gate)			**760**	
			Total (2 Gate)			**1,520**	

Temporary Gate (Gate Body 1)

No.	Item	Material	Dimensions (mm) Shape	Dimensions (mm) Length	Quantity	Weight (kg) Unit W	Weight (kg) W	Painting Area (m^2) Painting	Painting Area (m^2) Acid
1	Stop Log			4 Parts × 2 Gates					
1-1	Skin Plate	SS400	PL	9 × 2474 × 3064	1	1079.1	536	15.30	
1-2	Main Beam F	SS400	[	250× 90 × 9/13 × 3084	4	34.6	427	6.00	
1-3									
1-4	End Beam	SS400	[	250 × 90 × 9/13 × 2494	2	154.6	173	2.75	
1-5	Vertical Beam F	SS400	PL	12 × 100 × 700	2	6.6	13	0.35	
1-6	" W	SS400	PL	9 × 238 × 809	2	21.0	42	1.50	
1-7	" F	SS400	PL	12 × 100 × 675	2	6.4	13	0.35	
1-8	" W	SS400	PL	9 × 238 × 784	2	20.4	41	1.45	
1-9	" F	SS400	PL	12 × 100 × 550	2	5.2	10	0.30	
1-10	" W	SS400	PL	9 × 238 × 768	2	20.0	40	1.40	
1-11	Support Plate	SUS304	PL	65 × 70 × 2474	2	89.3	179		0.35
1-12	Side Shoe	SUS304	PL	9 × 50 × 100	4	0.4	2		----
1-13	Bottom Rubber	SS400	L	75 × 75 × 12 × 3110	1	80.9	40	0.90	
1-14	Top Rubber	SUS304	PL	6 × 50 × 3110	1	14.8	7		0.30
1-15	Pin	SUS304	O	ϕ 30 × 150	2	0.8	2		----
1-16	" Reinforcing	SUS304	PL	6 × ϕ (100-30)	2	0.3	1		----
1-17	Boss	SUS304	O	ϕ (80-32) × 75	2	2.5	5		0.05
1-18	Reinforcing Plate	SS400	PL	16 × (180 × 500 - 120 × 340)	2	6.2	12	0.10	
1-19	"	SS400	PL	16 × (200 × 400 - 120 × 320)	2	5.2	10	0.10	
1-20	"	SS400	RB	ϕ 50 × 200	2	3.1	6	0.05	
1-21	Weep Hole Reinforcing Plate	SS400	PL	12 × ϕ (100-50)	9	0.6	5	0.15	
1-22	Side Rubber Fitting	SUS304	PL	9 × 65 × 2480	2	11.5	23		0.30
1-23	Lower Rubber Fitting	SUS304	PL	9 × 75 × 2965	1	32.5	16		
				Sub Total (1 set)			**1,603**	**30.7**	**1.0**
				Total (8 sets)			**12,824**	**245.6**	**8.0**

Temporary Gate (Gate Body 1) (2/9)

No.	Item	Material	Dimensions (mm) Shape	× Length	Quantity	Weight (kg) Unit W	W	Particular
100	Stop Log							
101	Side Watertight Rubber	Synthetic Rubber		L Type 2000L	2	6.9	14	
102	Lower Watertight Rubber	Synthetic Rubber		T15 × 80 × 2965	1	10.9	5	
103	Plate Bolt, N	SUS304	M	12 × 50	50	0.1	5	
104	Hexagonal Bolt, N	SUS304	M	16 × 50	31	0.1	3	
				Sub Total (1 set)			**27**	
				Total (8 sets)			**216**	

Temporary Gate (Gate Body 2/2)

No.	Item	Material	Dimensions (mm) Shape	× Length	Quantity	Weight (kg) Unit W	W	Painting Area (m^2) Painting	Acid
2	Stop Log			2 Parts × 2 Gates					
2-1	Skin Plate	SS400	PL	9 × 2474 × 2784	1	1030.2	1,030	14.60	
2-2	Main Beam F	SS400	[	250 × 90 × 9/13 × 2804	4	140.8	388	5.75	
2-3									
2-4	Edge Beam	SS400	[	250 × 90 × 9/13 × 2494	2	154.6	173	2.75	
2-5	Vertical Beam F	SS400	PL	12 × 100 × 700	2	6.6	13	0.35	
2-6	" W	SS400	PL	9 × 238 × 809	2	21.0	42	1.50	
2-7	Vertical Beam F	SS400	PL	12 × 100 × 675	2	6.4	13	0.35	
2-8	" W	SS400	PL	9 × 238 × 784	2	20.4	41	1.45	
2-9	Vertical Beam F	SS400	PL	12 × 100 × 550	2	5.2	10	0.30	
2-10	" W	SS400	PL	9 × 238 × 768	2	20.0	40	1.40	
2-11	Support Plate	SUS304	PL	65 × 70 × 2474	2	89.3	179		0.35
2-12	Side Shoe	SUS304	PL	9 × 50 × 100	4	0.4	2		---
2-13	Bottom Rubber	SS400	L	75 × 75 × 12 × 2830	1	77.2	37	0.85	
2-14	Top Rubber	SUS304	PL	6 × 50 × 2830	1	14.1	7		0.30
2-15	Positioning Pin	SUS304	O	ϕ 30 × 150	2	0.8	2		---
2-16	" Reinforcing	SUS304	PL	6 × ϕ (100-30)	2	0.3	1		---
2-17	Positioning Boss	SUS304	O	ϕ (80-32) × 75	2	2.5	5		0.05
2-18	Reinforcing Plate	SS400	PL	16 × (180 × 500 - 120 × 340)	2	6.2	12	0.10	
2-19	"	SS400	PL	16 × (200 × 400 - 120 × 320)	2	5.2	10	0.10	
2-20	"	SS400	RB	ϕ 50 × 200	2	3.1	6	0.05	
2-21	Weep Hole Reinforcing Plate	SS400	PL	12 × ϕ (100-50)	9	0.6	5	0.15	
2-22	Side Rubber Fitting	SUS304	PL	9 × 65 × 2480	2	11.5	23		0.30
2-23	Lower Rubber Fitting	SUS304	PL	9 × 75 × 2685	1	31.0	14		
				Sub Total (1 set)			**2,053**	**29.7**	**1.0**
				Total (4sets)			**8,212**	**118.8**	**4.0**

Temporary Gate (Gate Body 2/2) (4/9)

No.	Item	Material	Dimensions (mm) Shape	× Length	Quantity	Weight (kg) Unit W	W	Particular
100	Stop Log							
105	Side Watertight Rubber	Synthetic Rubber		L Type 2000L	2	6.9	14	
106	Lower Watertight Rubber	Synthetic Rubber		T12 × 80 × 2685	1	10.4	5	
107	Plate Bolt, N	SUS304	M	12 × 50	40	0.1	5	
108	Hexagonal Bolt, N	SUS304	M	16 × 50	30	0.1	3	
				Sub Total (1 set)			**27**	
				Total (4 sets)			**108**	

Temporary Gate (Gate Sheet), Flood Discharge Section (5/9)

No.	Item	Material	Dimensions (mm) Shape	× Length	Quantity	Weight (kg) Unit W	W	Painting Area (m^2) Painting	Acid
7	Gate Sheet								
7-1	Rear Gate Sheet	SS400	H	194 × 150 × 6/9 × 8100	2	242.2	484		
7-2	" Sopport Sheet	SUS304	PL	9 × 390 × 8100	2	225.5	451		6.30
7-3	" Fixing Plate	SS400	PL	9 × 280 × 210	2	4.2	8		
7-4	" Anchor	SS400	PL	6 × 50 × 115	34	0.3	10		
8									
8-1	Fore Gate Sheet	SS400	H	150 × 150 × 7/10 × 8100	2	251.9	504		
8-2	" Watertight Plate	SUS304	PL	9 × 370 × 8100	2	213.9	428		6.00
8-4	" Fixing Plate	SS400	PL	9 × 160 × 280	2	3.2	6		
8-5	" Anchor	SS400	PL	6 × 50 × 100	34	0.2	7		
8-6	" Guide Plate	SUS304	PL	9 × 100 × 8100	2	57.8	116		1.60
9									
9-1	Gate Floor Plate (Side)	SUS304	PL	9 × 300 × 900	2	19.3	39		0.55
9-2	Floor Beam	SS400	H	194 × 150 × 6/9 × 880	2	26.3	53		
9-3	Floor Rib	SS400	PL	9 × 176 × 180	2	2.2	4		
9-4	"	SS400	PL	9 × 72 × 176	4	0.9	4		
10									
10-1	Gate Floor Plate (Center)	SUS304	PL	9 × 225 × 18460	1	296.4	296		4.15
10-2	Floor Beeam (Center)	SS400	H	194 × 150 × 6/9 × 18840	2	563.3	1,127		
10-3	" Compacting Plate	SS400	PL	12 × 72 × 176	8	1.2	10		
10-4	" Joint	SS400	[	250 × 90 × 9 × 150	4	5.2	21		
10-5	"	SS400	PL	16 × 125 × 300	4	4.7	19		
10-6	" Bottom Plate	SUS304	PL	9 × □200	6	2.9	17		0.25
10-7	Rib	SS400	PL	9 × 176 × 272	12	3.4	41		
11	(Center Post)								
11-1	Steel Post (F)	SM400A	PL	12 × 600 × 10084	2	1187.4	1,140	12.10	
11-2	"	SM400A	PL	12 × 600 × 9600	2	1130.4	1,085	11.50	
11-3	Steel Post (W)	SS400	PL	9 × 645 × 9600	4	934.5	1,750	29.75	
11-4	Flange	SM400A	PL	12 × 196 × 10084	4	248.2	745	7.90	
11-5	"	SM400A	PL	12 × 184 × 10084	2	222.9	350	3.55	
11-6	" Stiffner	SS400	PL	9 × 180 × 247	84	4.2	264	3.75	
11-7	Diafrum	SS400	PL	9 × 184 × 247	20	4.1	64	0.85	
11-8	"	SS400	PL	9 × 184 × 382	20	8.5	99	1.80	

Temporary Gate (Gate Sheet), Flood Discharge Section (6/9)

No.	Item	Material	Dimensions (mm) Shape	Dimensions (mm) Shape × Length	Quantity	Weight (kg) Unit W	Weight (kg) W	Painting Area (m^2) Painting	Painting Area (m^2) Acid
11-9	Positioning Plate	SUS304	PL	20 × 247 × 600	2	23.5	47		0.30
11-10	Liner (for Support)	SUS304	PL	6 × 120 × 9600	4	54.8	219		4.60
11-11	Liner (for Watertigtness)	SUS304	PL	6 × 150 × 9600	4	68.5	274		5.75
11-12	Liner (for Side)	SUS304	PL	6 × 50 × 9600	4	22.8	91		1.90
11-13	Rubber Fixing	SS400	SB	25 × 600	2	2.9	6	0.05	
11-14	Wedge	SUS304	PL	36 × 220 × 250	4	15.7	63		0.20
11-15	Rubber Fixing	SUS304	PL	9 × 50 × 600	2	2.1	4		0.05
11-16	Roller Bracket	SS400	PL	16 × (500 × 500 - ϕ 85)	8	30.7	246	1.95	
11-17	Hole Fotting	SS400	PL	32 × (160 × 160 - ϕ 65)	4	5.6	22	0.10	
11-18	Roller	SUS304	O	ϕ (350 - 80) × 70	4	50.6	202		0.55
11-19	Roller Axis	SUS304	O	ϕ 65 × 300	4	7.9	32		0.15
11-20	Key Plate	SS400	PL	9 × 40 × 110	8	0.3	2	0.05	
11-21	Hanging Plate	SS400	PL	19 × 200 × 250	6	7.5	45	0.30	
12	(Upper Post Support)								
12-1	Support Beam (F)	SM400A	PL	25 × 250 × 2000	4	98.1	392	2.00	
12-2	" (W)	SM400A	PL	25 × 381 × 200	2	149.5	299	1.55	
12-3	Fixing Plate	SS400	PL	22 × 400 × 2000	2	138.2	276	1.60	
12-4	" Web	SS400	PL	19 × 178 × 2000	2	53.1	106	0.70	
12-5	" Rib	SS400	PL	12 × 178 × 190	16	3.2	51	0.55	
13	(Lower Post Support)								
13-1	Side Plate	SUS304	PL	12 × 500 × 600	4	28.6	114		1.20
13-2	"	SUS304	PL	12 × 500 × 380	4	18.1	72		0.75
13-3	Bottom Plate	SUS304	PL	12 × 400 × 620	2	23.6	47		0.50
13-4	Reinforcing Rib	SS400	PL	12 × 75 × 590	8	4.2	34		
13-5	"	SS400	PL	12 × 75 × 364	4	2.6	10		
13-6	" Flange	SUS304	PL	12 × (620 × 900 - 440 × 620)	2	27.1	54		0.55
13-7	Positioning Pin	SUS304	O	ϕ 50 × 215	2	3.4	7		0.05
13-8	" Plate	SUS304	PL	12 × ϕ (120 - 50)	2	0.9	2		0.05
				Sub Total (1 Gate)			**11,859**	**80.1**	**35.5**
				Total (5 Gate)			59,295	400.3	177.3

Temporary Gate (Gate Sheet), Flood Discharge Section

No.	Item	Material	Dimensions (mm) Shape	Dimensions (mm) Shape × Length	Quantity	Weight (kg) Unit W	Weight (kg) W	Particular
100	Gate Sheet							
111	Shaft Bearing	OL#500SP	○	ϕ (80 - 65) × 80	4	1.1	4	
112	Joint Rubber	Synthetic Rubber		120 × 200 × 310	2	9.0	18	
113	(Lower End) B, N, SW	SS400	M	20 × 70	18	0.3	5	
114	(Bottom) B, N, SW	SS400	M	20 × 75	16	0.3	5	
115	(Joint) B, N, SW	SS400	M	20 × 60	32	0.3	10	
116	"	SS400	M	20 × 140	8	0.5	4	
117	(Upper Post) B, N, SW	SUS304	M	20 × 70	16	0.3	5	
118	(Key Plate) B, N, SW	SS400	M	16 × 45	16	0.1	2	
				Sub Total (1 Gate)			**53**	
				Total (3 Gate)			**159**	

Temporary Gate (Gate Sheet), Sediment Flush Section

No.	Item	Material	Dimensions (mm) Shape	Dimensions (mm) Length	Quantity	Weight (kg) Unit W	Weight (kg) W	Painting Area (m^2) Painting	Painting Area (m^2) Acid
3	Gate Sheet								
3-1	Rear Gate Sheet	SS400	H	194 × 150 × 6/9 × 8100	2	242.2	484		
3-2	" Support Plate	SUS304	PL	9 × 390 × 8100	2	225.5	451		12.6
3-3	" Fixing Plate	SS400	PL	9 × 280 × 210	2	4.2	8		
3-4	" Anchor	SS400	PL	6 × 50 × 115	34	0.3	10		
4									
4-1	Fore Gate Sheet	SS400	H	150 × 150 × 7/10 × 8100	2	251.9	504		
4-2	" Watertight Plate	SUS304	PL	9 × 370 × 8100	2	213.9	428		12.0
4-3	" Fixing Plate	SS400	PL	9 × 160 × 280	2	3.2	6		
4-4	" Anchor	SS400	PL	9 × 50 × 100	34	0.2	7		
4-5	" Guide Plate	SUS304	PL	9 × 100 × 8100	2	57.8	116		3.2
5									
5-1	Gate Floor Plate (Side)	SUS304	PL	9 × 300 × 900	2	19.3	39		1.1
5-2	Floor Beam (Side)	SS400	H	194 × 150 × 6/9 × 880	2	26.3	53		
5-3	Floor Rib	SS400	PL	9 × 176 × 180	2	2.2	4		
5-4	"	SS400	PL	9 × 72 × 176	4	0.9	4		
6									
6-1	Gate Floor Plate (Center)	SUS304	PL	9 × 225 × 5460	1	87.7	88		2.5
6-2	Floor Beam (Center)	SS400	H	194 × 150 × 6/9 × 5840	1	174.6	175		
				Sub Total (1 Gate)			**2,377**		**31.4**
				Total (2 Gate)			**4,754**		**62.8 0**

Temporary Gate (Gate Sheet), Sediment Flush Section

(9/9)

No.	Item	Material	Dimensions (mm) Shape	× Length	Quantity	Weight (kg) Unit W	W	Particular
100	Gate Sheet							
109	Hexagonal Bolt, N	SS400	M	16 × 50	16	0.1	2	
				Sub Total (1 Gate)			**2**	
				Total (2 Gate)			**4**	

Electrical Equipment (Flood Discharge Gate) 3 gates

	Item	Specification		Quantity (unit)		Weight (kg) unit weight	Weight	Remarks
1	Name of Equipment							
	Local Control Panel		Outdoor closed independent type	3	face	310.00	930.0	
2	Electrical Works							
	Cable	CV	3-5. 5sq	30	m	0.28	8.4	
	Cable	CVV	2-2sq	180	m	0.13	23.4	
	Cable	CVVS	3-2sq	30	m	0.15	4.5	
	Cable	IV	5. 5sq	30	m	0.07	2.1	
	End Sealing Material		Crimp type terminal, Mark tube, etc.	3	L.S	2.40	7.2	
	Thick Steel Conduit Tube	G	36	9	nos.	8.89	80.0	
	Thick Steel Conduit Tube	G	28	9	nos.	6.95	62.6	
	Metal Flexible Cunduit Tube	PV	38	9	m	1.12	10.1	
	Metal Flexible Cunduit Tube	PV	30	12	m	0.87	10.4	
	Cable Pipe Accessories		Coupling, Normal bend, etc.	3	L.S	15.05	45.1	
	Cable Pipe Support		World duct, Saddle, etc.	3	L.S	7.00	21.0	
	Pull Box	SUS	200×200×200	12	piece	2.60	31.2	
			Electrical Equipment			Total	1236.0	

Electrical Equipment (Sediment Flush Gate) 2 gates

	Item		Specification	Quantity (unit)		Weight (kg) unit weight	Weight	Remarks
1	Name of Equipment							
	Local Control Panel		Outdoor closed independent type	2	face	210.00	420.0	
2	Electrical Works							
	Cable	CV	3-3. 5sq	20	m	0.20	4.0	
	Cable	CVV	2-2sq	120	m	0.13	15.6	
	Cable	CVVS	3-2sq	20	m	0.15	3.0	
	Cable	IV	3. 5sq	20	m	0.05	1.0	
	End Sealing Material		Crimp type terminal, Mark tube, etc.	2	L.S	2.30	4.6	
	Thick Steel Conduit Tube	G	36	6	nos.	8.89	53.3	
	Thick Steel Conduit Tube	G	28	6	nos.	6.95	41.7	
	Metal Flexible Cunduit Tube	PV	38	2	m	1.12	2.2	
	Metal Flexible Cunduit Tube	PV	30	4	m	0.87	3.5	
	Cable Pipe Accessories		Coupling, Normal bend, etc.	2	L.S	12.05	24.1	
	Cable Pipe Support		World duct, Saddle, etc.	2	L.S	5.00	10.0	
	Pull Box	SUS	200×200×100	4	piece	2.60	10.4	
			Electrical Equipment			Total	593.4	

Electrical Equipment (Intake Gate) 6 gates

	Item	Specification		Quantity (unit)		Weight (kg) unit weight	Weight	Remarks
1	Name of Equipment							
	Local Control Panel		Outdoor closed independent type	6	face	210.00	1260.0	
2	Electrical Works							
	Cable	CV	3-3. 5sq	60	m	0.20	12.0	
	Cable	CVV	2-2sq	60	m	0.39	23.4	
	Cable	CVVS	3-2sq	60	m	0.15	9.0	
	Cable	IV	3. 5sq	60	m	0.05	3.0	
	End Sealing Material		Crimp type terminal, Mark tube, etc.	6	L.S	2.30	13.8	
	Thick Steel Conduit Tube	G	36	18	nos.	8.89	160.0	
	Thick Steel Conduit Tube	G	28	18	nos.	6.95	125.1	
	Metal Flexible Cunduit Tube	PV	38	6	m	1.12	6.7	
	Metal Flexible Conduit Tube	PV	30	12	m	0.87	10.4	
	Cable Pipe Accessories		Coupling, Normal bend, etc.	6	L.S	10.05	60.3	
	Cable Pipe Support		World duct, Saddle, etc.	6	L.S	4.00	24.0	
	Pull Box	SUS	200×200×100	12	piece	2.60	31.2	
			Electrical Equipment			Total	1738.9	

Electrical Equipment (Remote Control)

	Item	Specification		Quantity (unit)		Weight (kg) unit weight	Weight	Remarks
1	Name of Equipment							
	Remote Control Panel		Outdoor closed independent type	1	face	400.00	400.0	
2	Electrical Works							
	Cable	CVV	3-3. 5sq	1630	m	0.23	374.9	
	Cable	CV	3-8sq	1210	m	0.37	447.7	
	Cable	IV	8sq	1210	m	0.11	133.1	
	Cable	CV	3-14sq	420	m	0.56	235.2	
	Cable	CVV	30-2sq	1630	m	1.02	1662.6	
	Cable	CVVS	3-2sq	1630	m	0.23	374.9	
	Cable	IV	14sq	420	m	0.17	71.4	
	End Sealing Material		Crimp type terminal, Mark tube, etc.	1	L.S		87.7	
	Thick Steel Conduit Tube	G	36	44	nos.	8.89	391.2	
	Thick Steel Conduit Tube	G	28	44	nos.	6.95	305.8	
	Metal Flexible Conduit Tube	PV	38	22	m	1.12	24.6	
	Metal Flexible Conduit Tube	PV	30	22	m	0.87	19.1	
	Cable Pipe Accessories		Coupling, Normal bend, etc.	1	L.S		148.1	
	Cable Pipe Support		World duct, Saddle, etc.	1	L.S		300.0	
	Pull Box	SUS	500×500×500	6	piece	20.00	120.0	
	Handhole		1000×1000×1000	7	piece	1645.00	11515.0	
	FEP Pipe		FEP150	400	m	2.00	800.0	
	FEP Pipe		FEP150	400	m	1.10	440.0	
			Electrical Equipment			Total	17851.3	

Electrical Equipment (Switching Panel)

	Item		Specification	Quantity (unit)		Weight (kg) unit weight	Weight	Remarks
1	Name of Equipment							
	Generator		250KVA low noise radiator cubicle type	1	set	4700.00	4700.0	
	Power Switching Panel		Outdoor closed independent type	1	face	250.00	250.0	
	分電機		Outdoor closed independent type	1	face	200.00	200.0	
2	Electrical Works							
	Cable	CVV	30-2sq	30	m	1.02	30.6	
	Cable	CV	3-250sq	30	m	8.00	240.0	
	Cable	IV	38sq	30	m	0.43	12.9	
	End Sealing Material		Crimp type terminal, Mark tube, etc.	1	L.S		8.7	
	Thick Steel Conduit Tube	G	104	8	nos.	34.70	277.6	
	Thick Steel Conduit Tube	G	54	8	nos.	14.30	114.4	
	Metal Flexible Conduit Tube	PV	101	10	m	4.64	46.4	
	Metal Flexible Conduit Tube	PV	63	10	m	2.38	23.8	
	Cable Pipe Accessories		Coupling, Normal bend, etc.	1	L.S		92.4	
	Cable Pipe Support		World duct, Saddle, etc.	1	L.S		140.0	
		SUS	500×500×500	2	piece	20.00	40.0	
			Electrical Equipment			Total	6176.8	

3.6 Maintenance Bridge

SUMMARY OF QUANTITIES
SIMONGAN BRIDGE

ITEM NO	DESCRIPTION	UNIT	SUPER STRUCTURE	SUB STRUCTURE	TOTAL	REMARKS
I.	EART WORK					
1.1. a.	Structure Exavation 0 - 2 m	Cu m		119.00	119.00	
b.	Structure Exavation 2 - 4 m	Cu m		77.20	77.20	
c.	Structure Exavation 4 - 6 m	Cu m		-		
d.	Additional Price if GW Present	Cu m		-	-	
e.	Blinding Stone	Cu m		13.10	13.10	
1.2. 1	Granuler back fill	Cu m		48.60	48.60	
1.2. 2	Permeable Backfill	Cu m				
1.3.	Embankment for Approach Road	Cu m		-	-	
II.	PILLING					
2.1.1.	Furnishing PC Pile Dia 50 Cm	m		96.00	96.00	
2.1.2	Driving PC Pile Dia 50 Cm	m		96.00	96.00	
2.2.	Test Pilling	m		6.00	-	
III.	CONCRETE					
	FOR SUBSTRUCTURE					
3.1	Structure Concrete (C1)	Cu m		121.60	121.60	
3.2.	Plain Concrete (E)	Cu m		6.54	6.54	
3.3	Reinforcing Bar	Kg		7,998.00	7,998.00	
3.4	form work Type 1 (< 4 m hight)	Sq m		230.40	230.40	
3.5	form work Type 2 (> 4 m hight)	Sq m		-	-	
	FOR SUPER STRUCTURE					
3.5.	PC Bridge Span 20.97 m (3 spans) = 12 .					
3.5.1.	Concrete K 400	Cu m	131.34		131.34	
3.5.2.	Concrete k 250 for Slab	Cu m	132.72		132.72	
3.5.3.	Reinforcing Bar	Kg	40,636.00		40,636.00	
3.5.4.	PC Cable (7 T 12.7)	Kg	5,412.00		5,412.00	
3.5.5.	PC Cable (1 T 12.5)	Kg	350.00		350.00	
3.5.6	Anchore Head type 7 Sc	Set	36.00		36.00	
3.5.7	Dead End Anchore type H 5 - 7	Set	36.00		36.00	
3.5.8	Duct / Sheat dia 66 mm	m	528.00		528.00	
3.5.9	Duct / Sheat dia 84 mm	m	264.00		264.00	
3.5.10	Duct / Sheat dia 29 mm	m	54.00		54.00	
3.5.6.	Form Work	Sq m	1,736.40		1,736.40	
3.6	**RC Bridge, Span 9.00 m (1 Span)**					
3.6.1.	Concrete k 250 for Slab	Cu m	27.11		27.11	
3.6.2.	Reinforcing Bar	Kg	5,673.00		5,673.00	
3.6.3.	Form Work	Sq m	175.00		175.00	
3.7	**RC Bridge, Span 13.00 m (1 span)**					
3.7.1.	Concrete k 250 for Slab	Cu m	46.25		46.25	
3.7.2.	Reinforcing Bar	Kg	8,645.00		8,645.00	
3.7.3.	Form Work	Sq m	292.50		292.50	
3.8	**RC Bridge, Spans 8.3 m (2 spans)**					
3.8.1.	Concrete k 250 for Slab	Cu m	48.19		48.19	
3.8.2.	Reinforcing Bar	Kg	10,224.00		10,224.00	
3.8.3.	Form Work	Sq m	298.00		298.00	

IV.	MISCELLANEOUS WORK					
4.1.	Expansion Joint	EA	63.00		63.00	
4.2.	Bearing Shoe Type 35 x 28 x 7.3	EA	24.00		24.00	
4.3	Bearing Shoe Type 31.2 x 21.2 x 2.4	EA	48.00		48.00	
4.4	Rubber sheet 40 x 10 x 3	EA	-		-	
4.5.	Hand Rail	EA	204.00		204.00	
4.6	Drain Pipe PVC Dia 10 Cm	m	100.00		100.00	
4.7	Utility Pipe PVC Dia 15 Cm	m	306.00		306.00	
V.	PAVEMENT and APPROACH ROAD					
5.1.	Aggregate Class A (t = 15 Cm)	Cu m	-		-	
5.2.	Aggregate Class B (t = 20 Cm)	Cu m	-		-	
5.3.	Asphalt Trated Base (ATB) (t = 4 Cm)	Cu m	-		-	
5.4.	Asphalt Concrete (AC) (t = 5 Cm)	Cu m	38.40		38.40	
5.5.	Wet Stone masonry	Cu m	-		-	
5.6.	PVC Weep hole	Cu m	-		-	
5.7.	Palm fibre	Cu m	-		-	

JICA-1.XSL,Sheet9