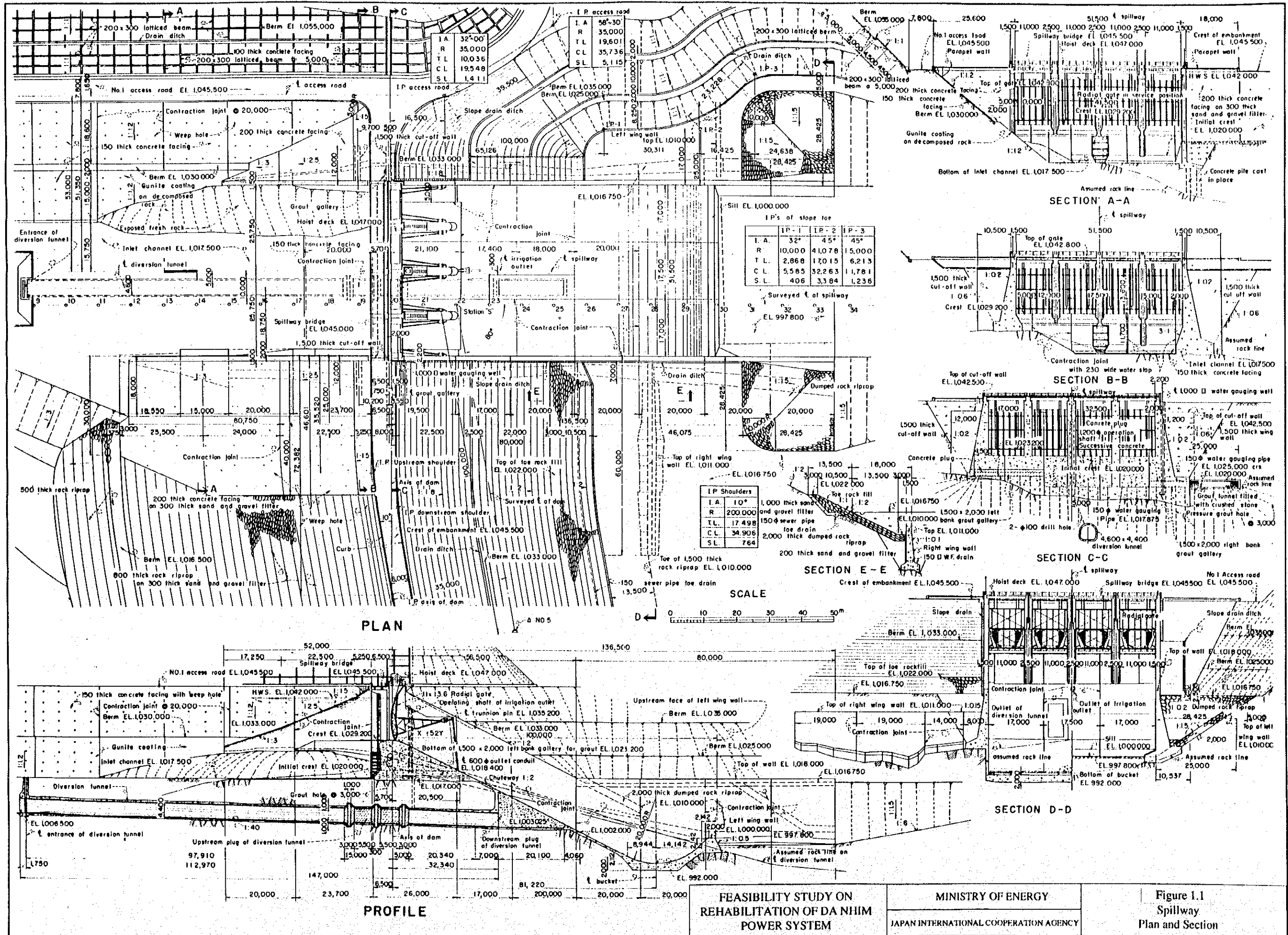
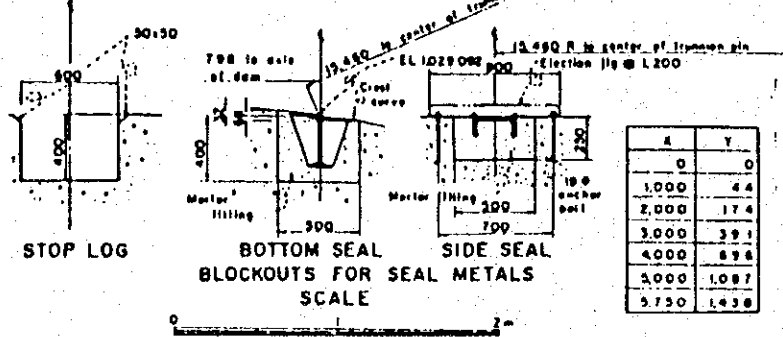
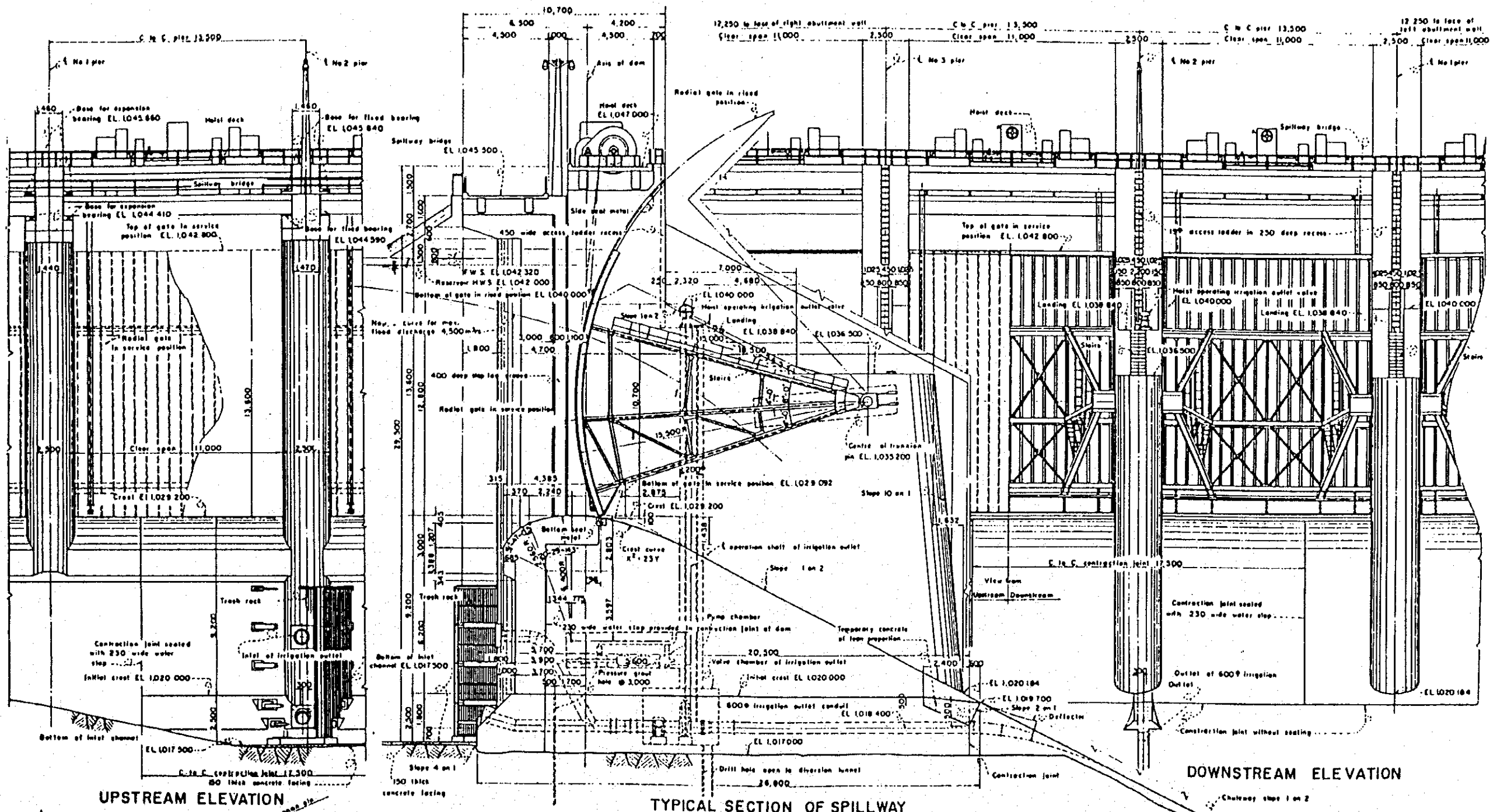
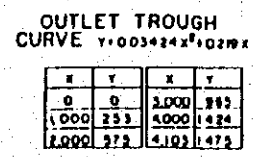
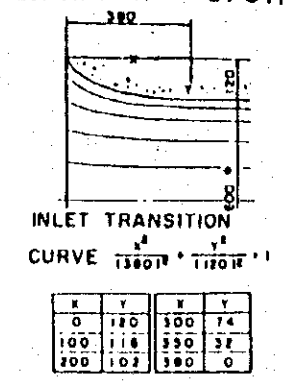
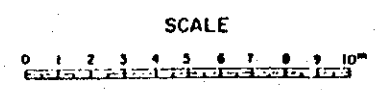
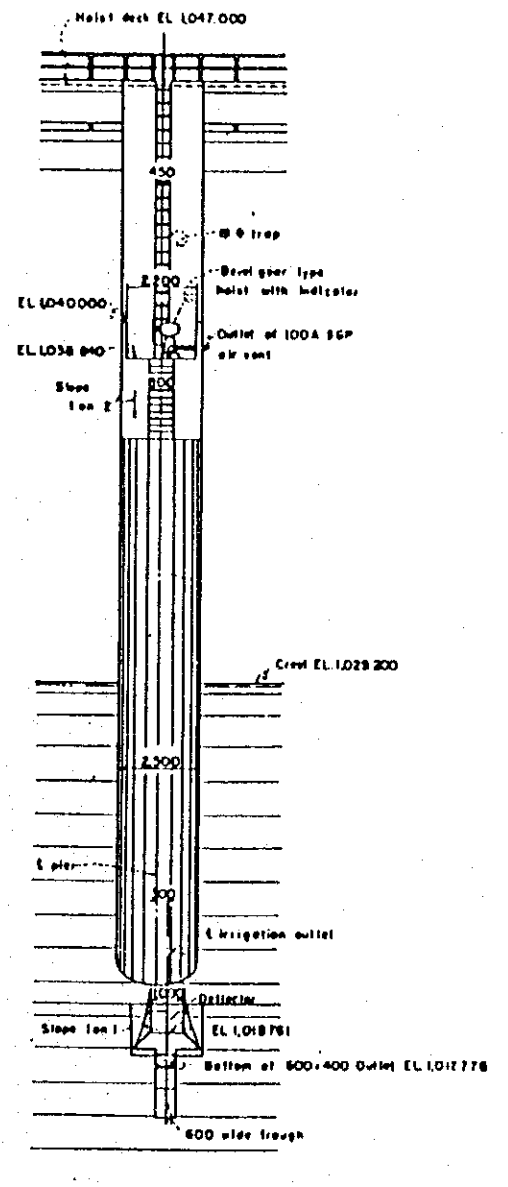
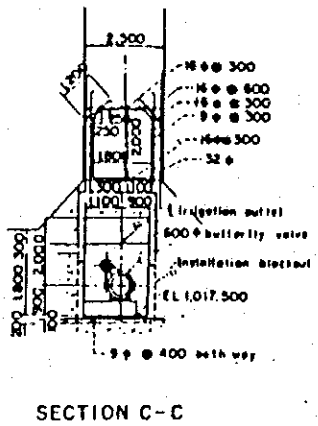
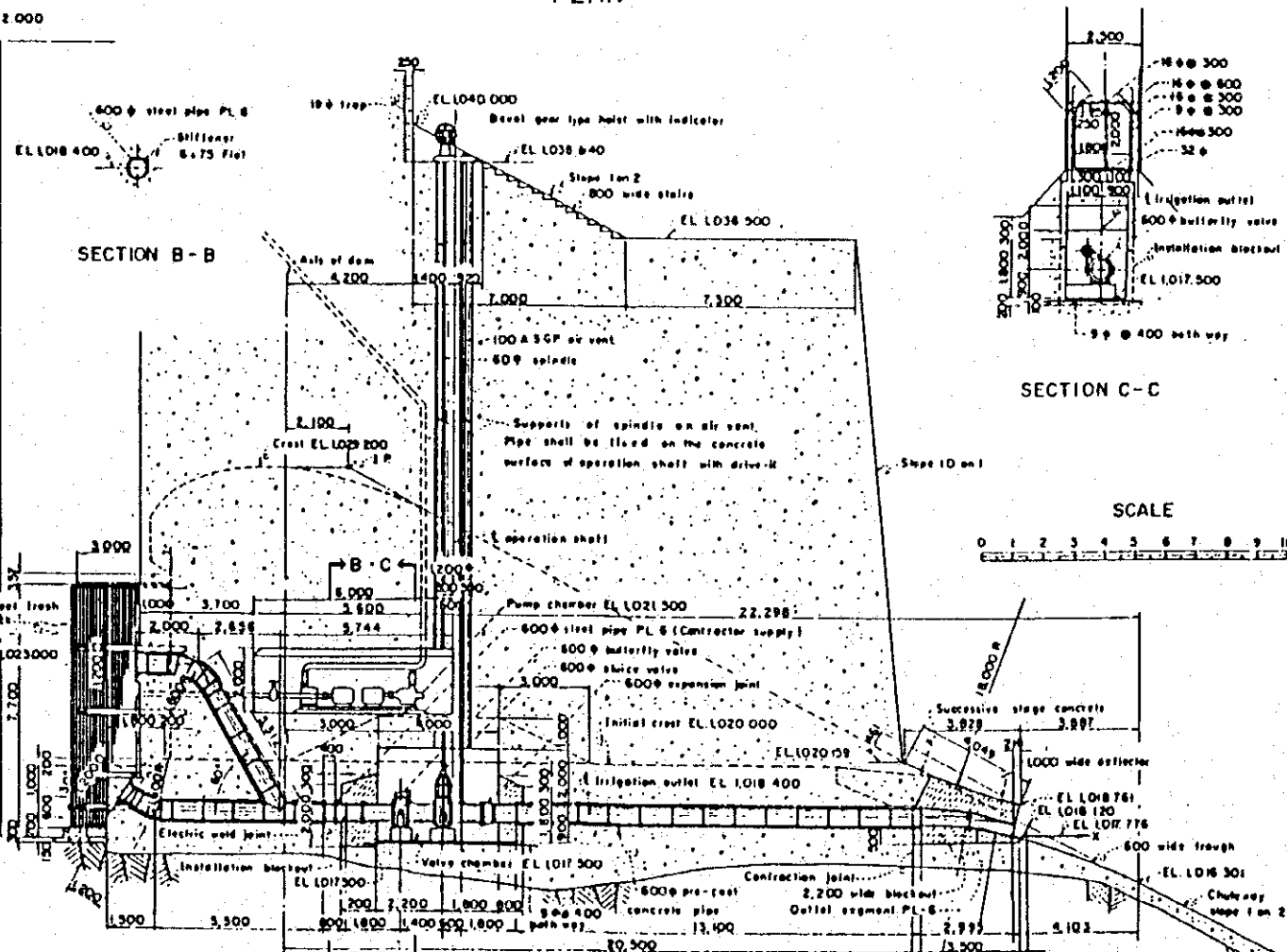
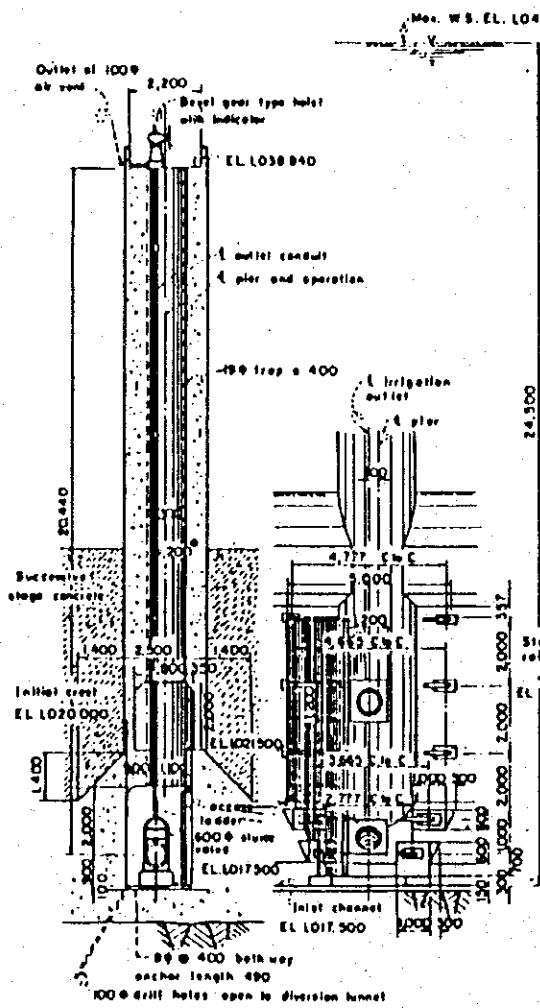
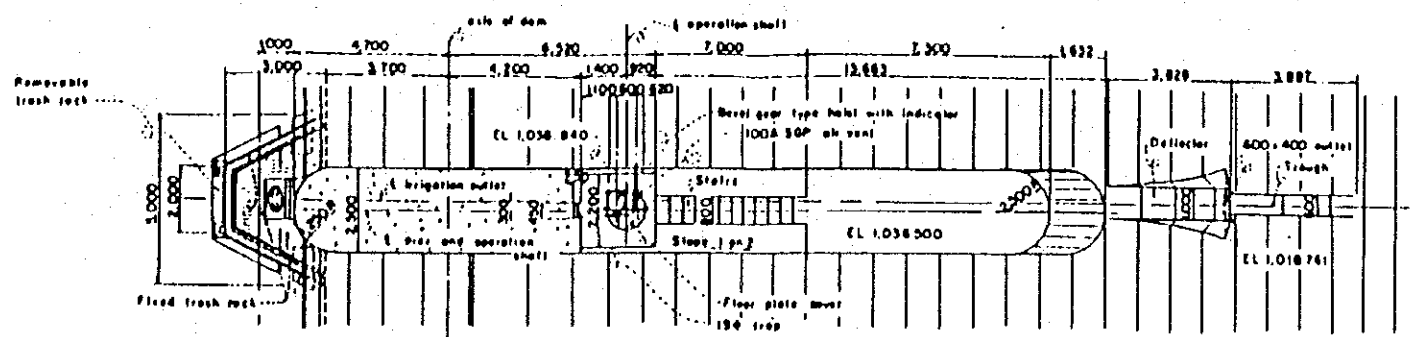


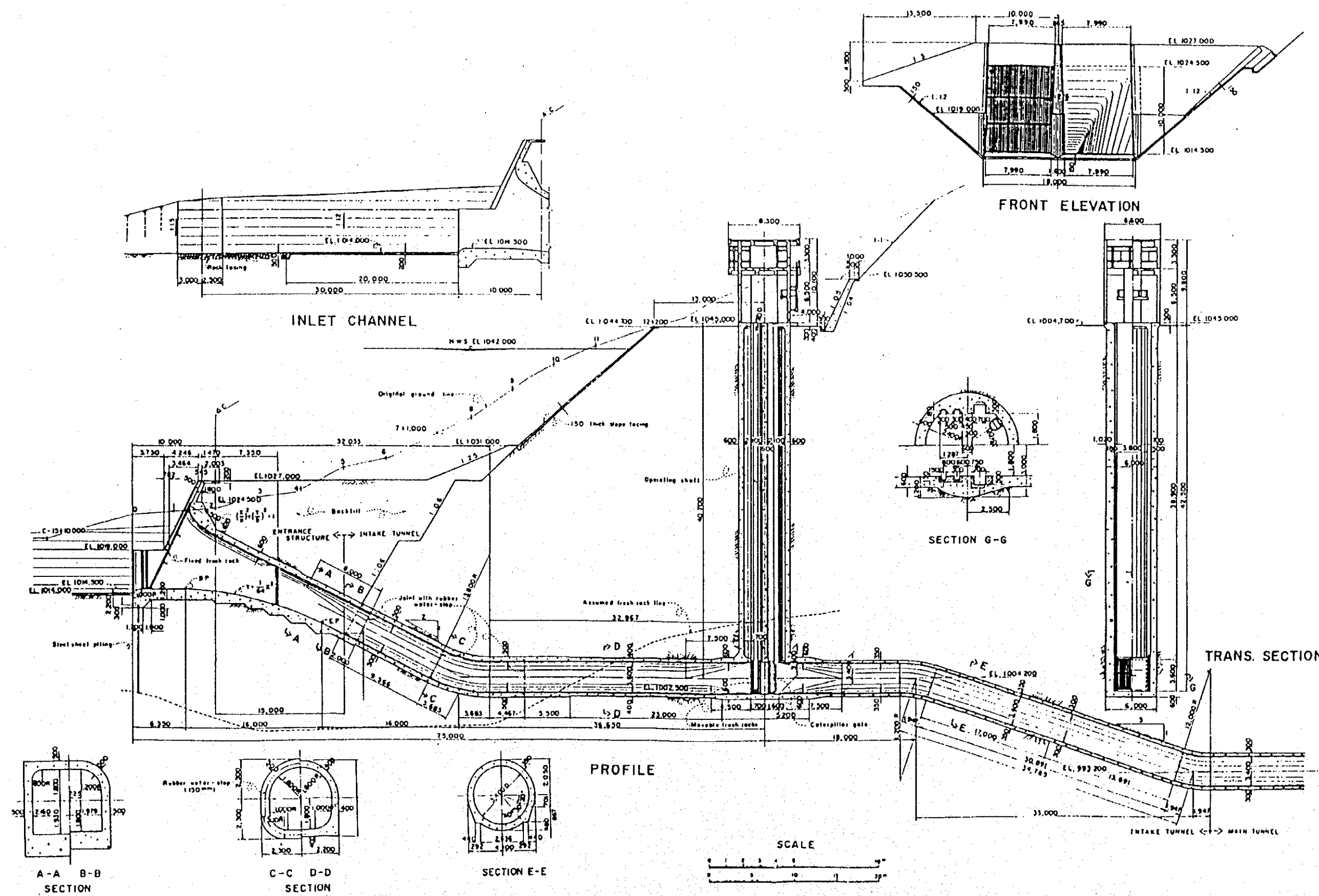
DRAWINGS FOR CHAPTER 1

PENSTOCK AND GATES





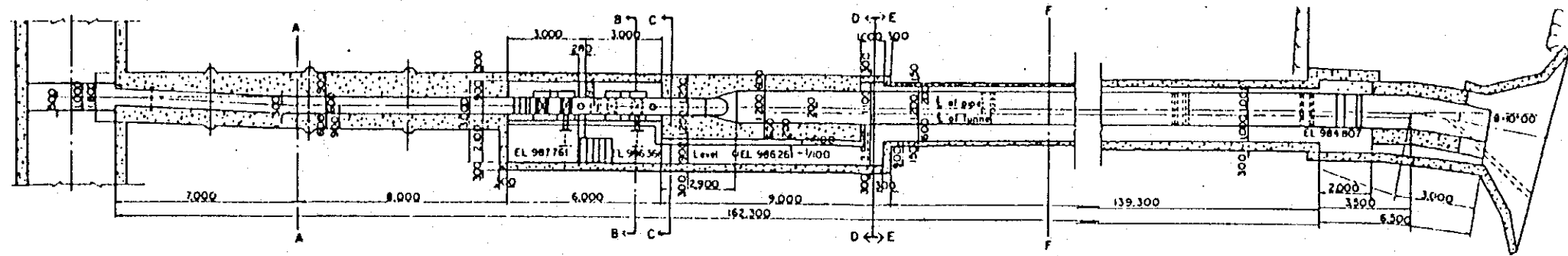




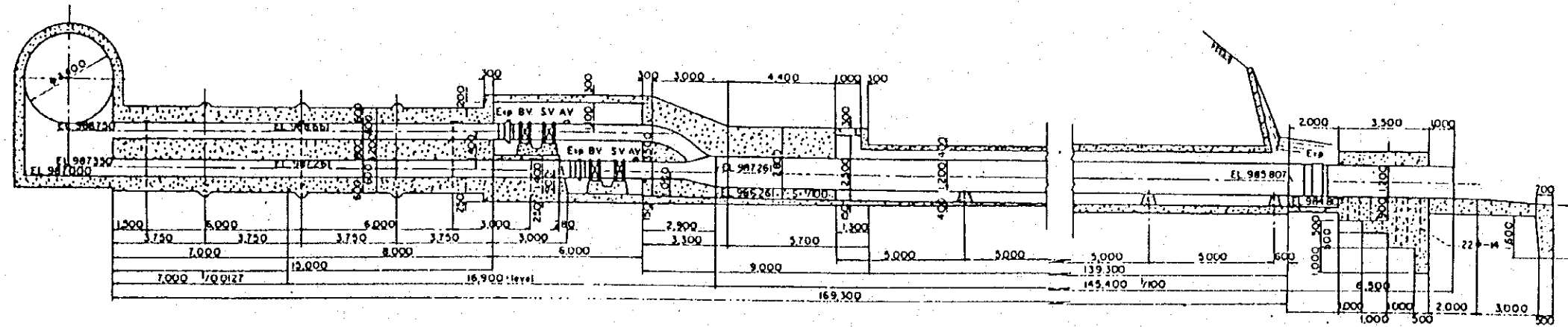
FEASIBILITY STUDY ON
REHABILITATION OF DA NHIM
POWER SYSTEM

MINISTRY OF ENERGY
JAPAN INTERNATIONAL COOPERATION AGENCY

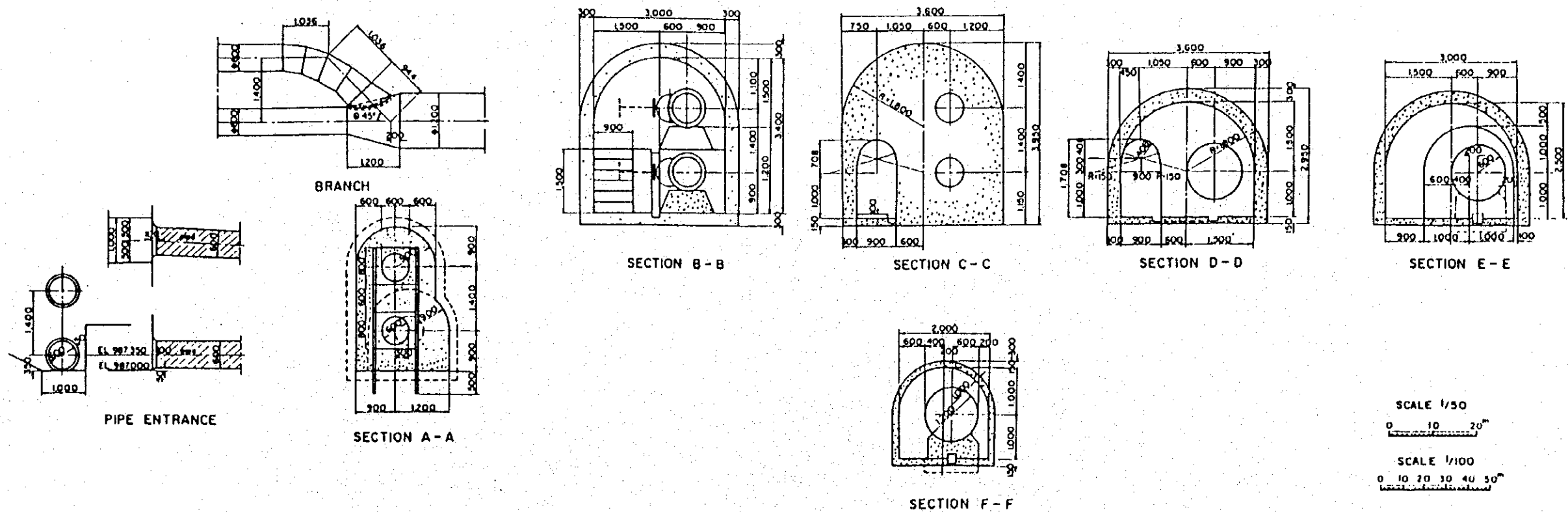
Figure 1.4
Intake Gates Facilities

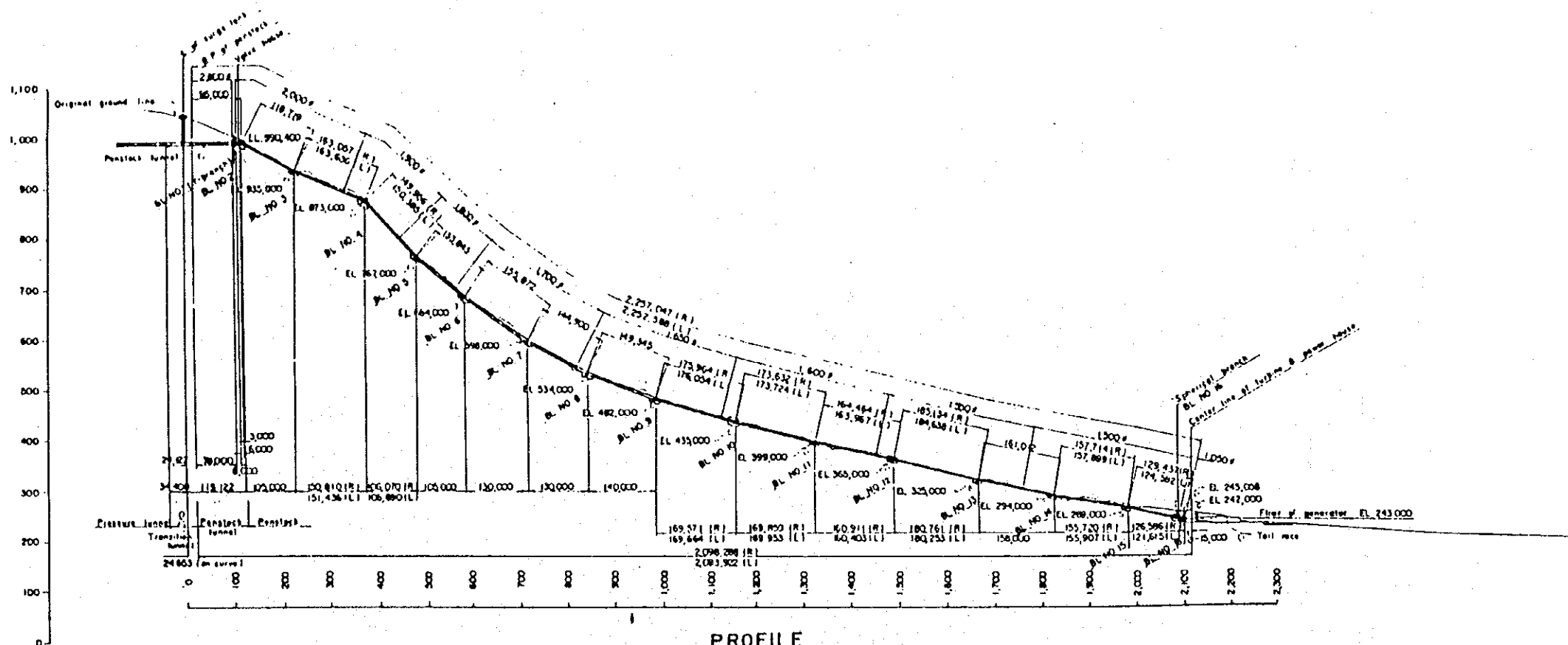


SECTIONAL PLAN

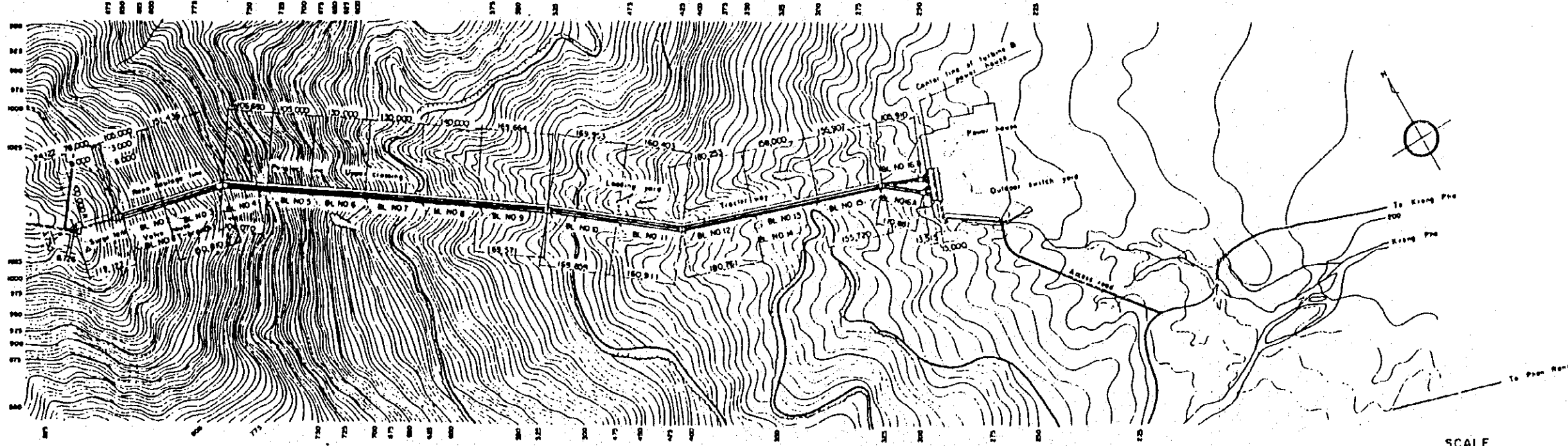


LONGITUDINAL SECTION

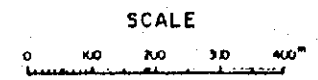




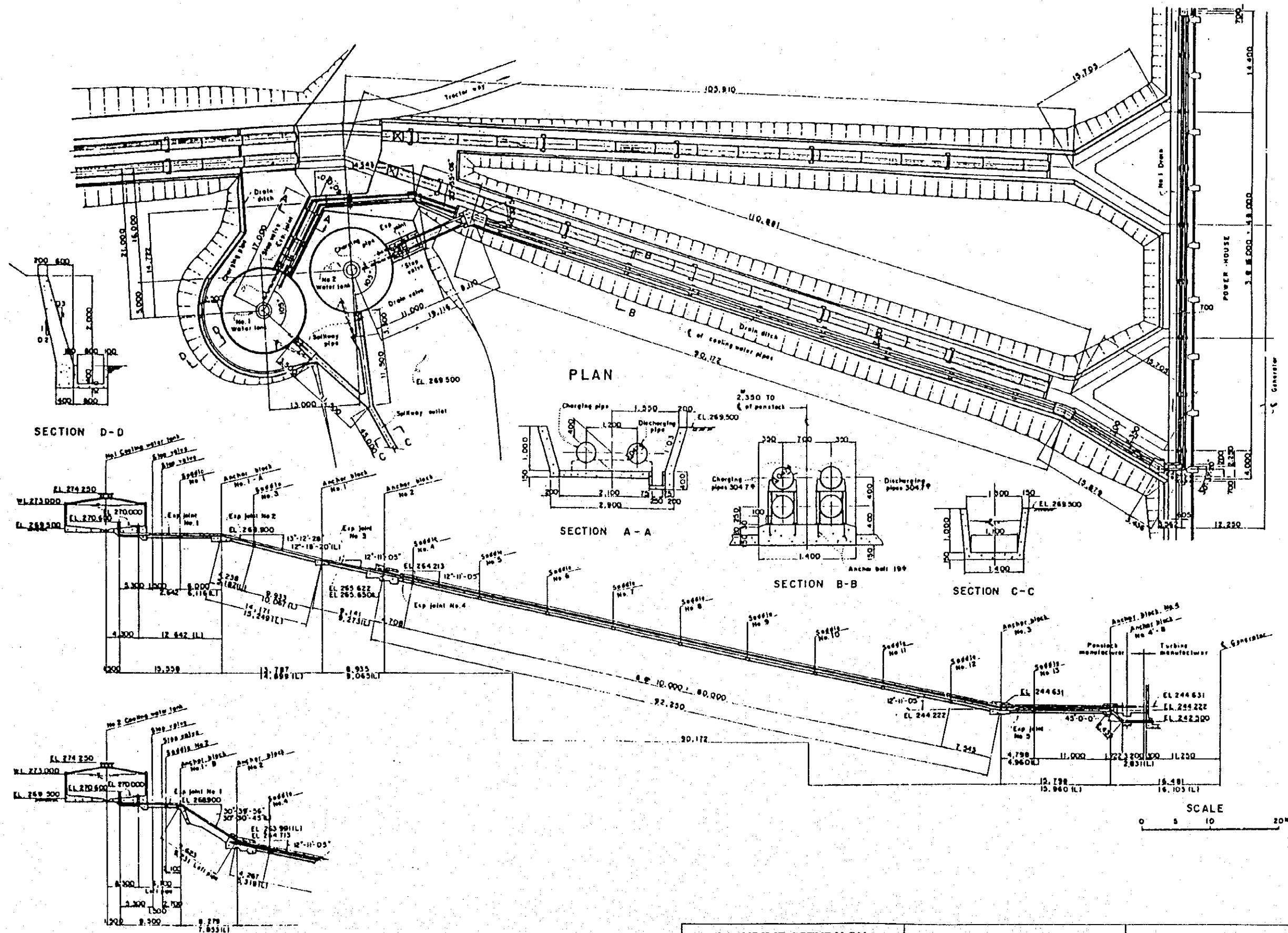
PROFILE

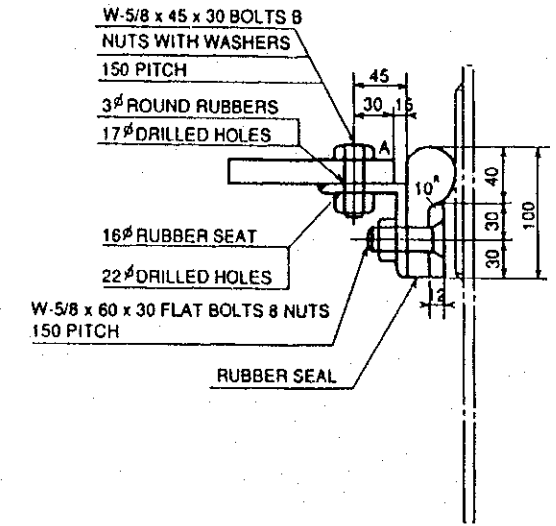
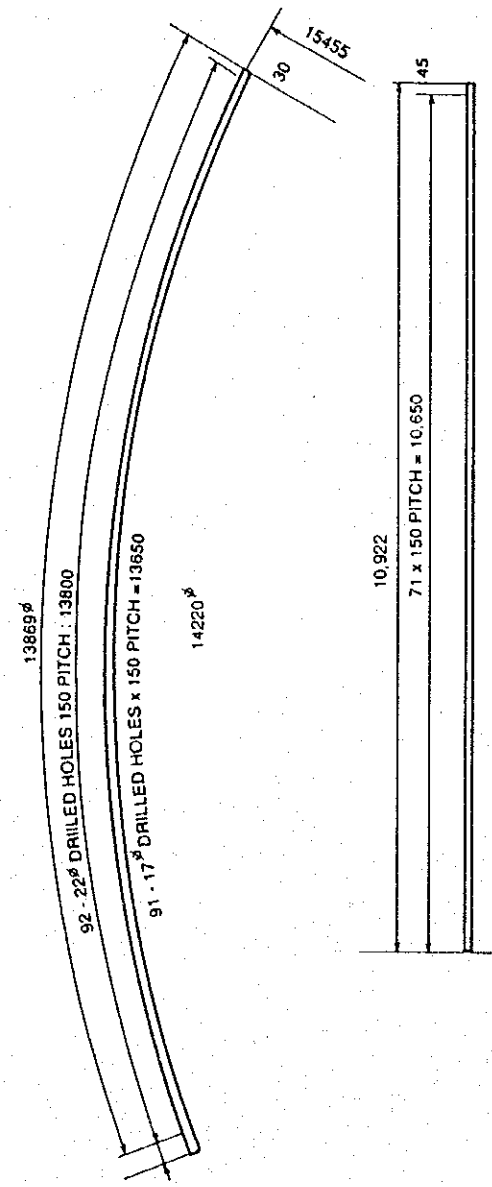
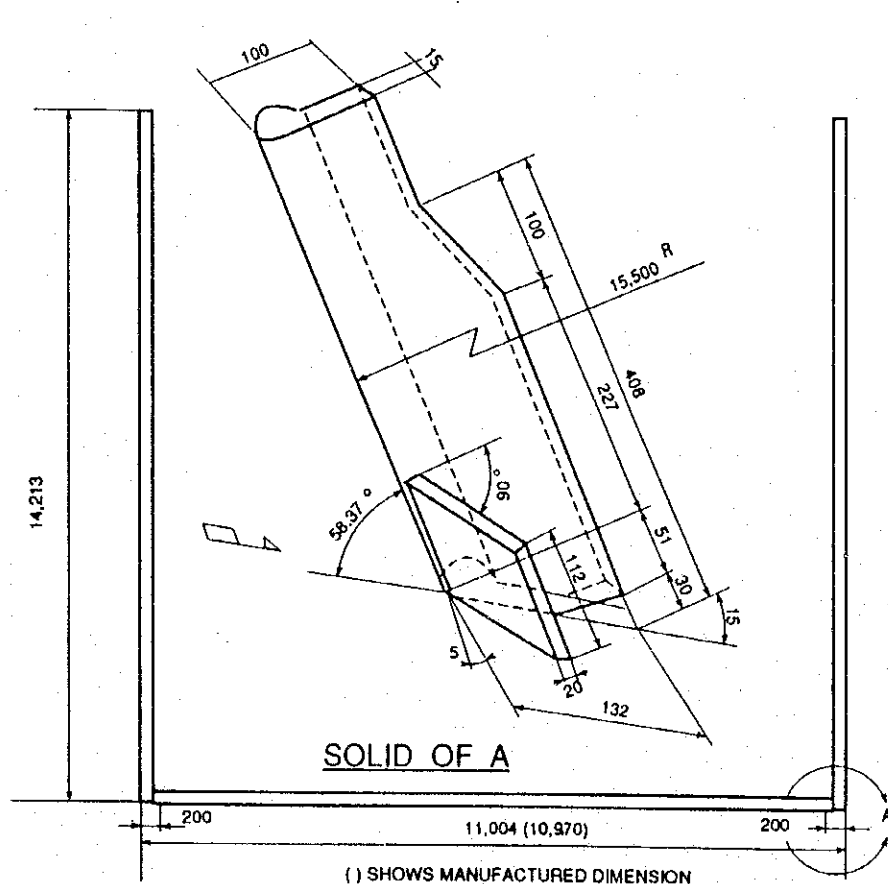


PLAN

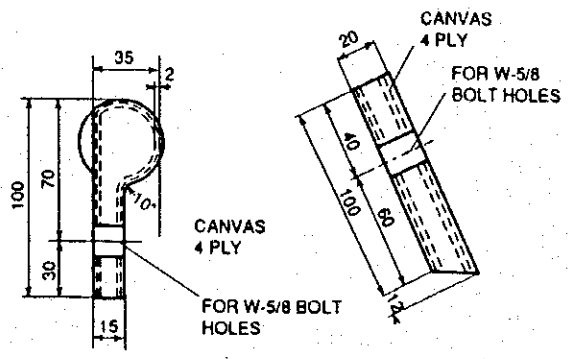


FEASIBILITY STUDY ON REHABILITATION OF DA NHIM POWER SYSTEM	MINISTRY OF ENERGY	Figure 1.6 Penstock
	JAPAN INTERNATIONAL COOPERATION AGENCY	

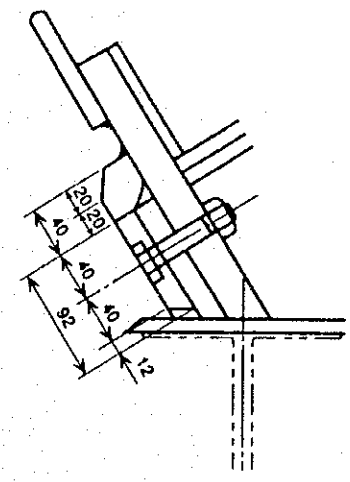




DETAIL OF SIDE WALL SEAL

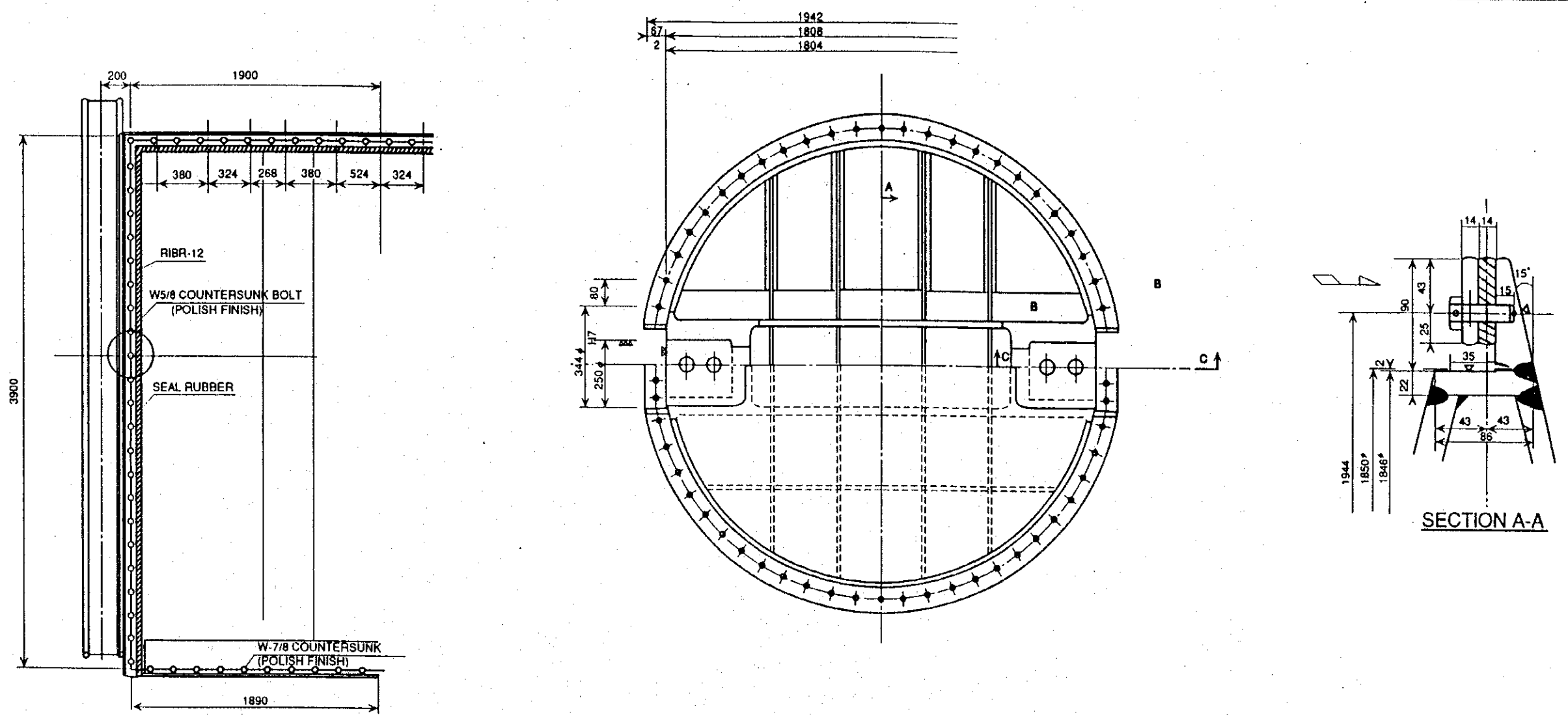


DETAIL OF RUBBER SEAL



17# DRILLED HOLES

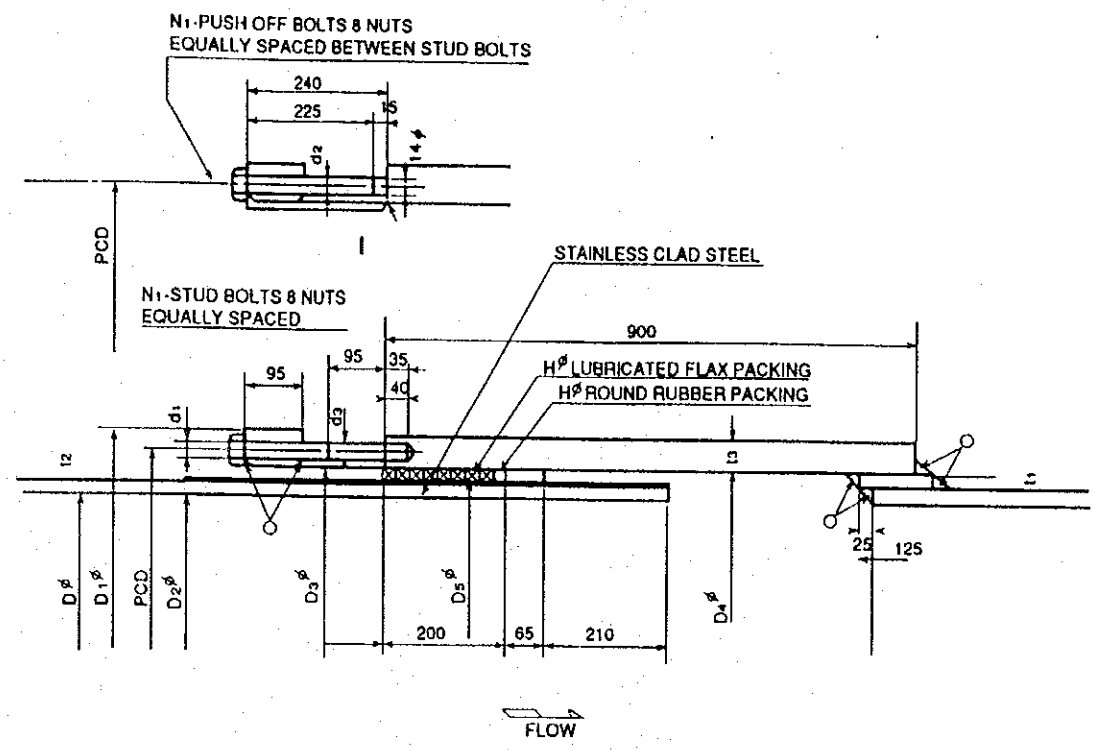
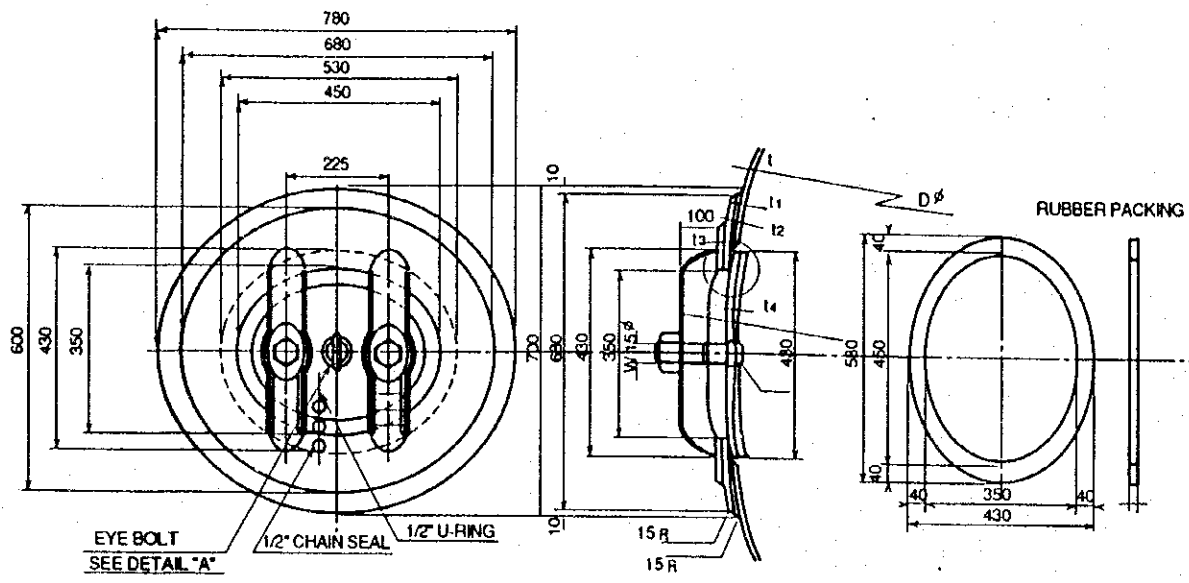
DETAIL OF BOTTOM SEAL



INTAKE CATERPILLAR GATE

BUTTERFLY VALVES

Note: Position of blot holes for seal rubber and clamber shall be adjusted at the site.



MAN HOLE NO	D ϕ	l	l ₁	l ₂	l ₃	l ₄	NO. OF REOD	PIPE NO.	MATERIAL OF l ₁ -l ₃	MATERIAL OF l ₄		
1	2800	11	20	9	9	19	1	(14)	SM41B	SM41B	0°	0°
2	2000	9	22	9	9	19	2	(17) _R (17) _L	-	-	0°	0°
3	2000	11	20	10	9	10	-	(39) _R (39) _L	SM50B	60HTS	22° 21'	22° 16'
4	1900	11	24	11	9	23	-	(67) _R (67) _L	60HTS	-	44° 59'	44° 49'
5	1800	16	25	15	14	29	-	(92) _R (92) _L	-	-	38° 20'	38° 20'
6	1700	19	26	18	18	33	-	(114) _R (114) _L	-	-	33° 29'	33° 29'
7	1700	24	25	22	22	37	-	(140) _R (140) _L	-	-	26° 13'	20° 13'

EXP NO	D ϕ	D ₁ ϕ	D ₂ ϕ	D ₃ ϕ	D ₄ ϕ	D ₅ ϕ	PCD	l ₁	l ₂	l ₃	d ₁ x N ₁	d ₂ x N ₂	d ₃	H	MATERIAL OF l ₁
1	2800	2961	2829	2861	2860	2864	2902	11	13	40	3/4" x 64	5/8" x 16	22 ϕ	19	SM41B
3	2000	2157	2025	2057	2056	2060	2098	9	11	40	3/4" x 44	5/8" x 11	22 ϕ	19	-
7	1700	1885	1747	1785	1784	1788	1831	20	22	45	7/8" x 40	3/4" x 10	25 ϕ	22	-
9	1650	1849	1711	1749	1748	1752	1795	27	29	45	7/8" x 40	3/4" x 10	25 ϕ	22	SM50B
11	1600	1815	1671	1715	1714	1718	1761	32	34	45	7/8" x 40	3/4" x 10	25 ϕ	25	60HTS
13	1550	1771	1627	1671	1670	1674	1717	35	37	45	7/8" x 26	3/4" x 9	25 ϕ	25	-
15	1500	1725	1581	1625	1624	1678	1671	37	39	45	7/8" x 36	3/4" x 9	25 ϕ	25	-
16	1500	1729	1585	1629	1628	1632	1675	39	41	45	7/8" x 36	3/4" x 9	25 ϕ	25	-

MAN HOLE NO	D ϕ	l	l ₁	l ₂	l ₃	l ₄	NO. OF REOD	PIPE NO.	MATERIAL OF l ₁ -l ₃	MATERIAL OF l ₄		
8	1650	26	26	24	24	40	2	(160) _R (160) _L	60HTS	60HTS	20° 23'	20° 23'
9	1650	30	27	27	27	45	-	(191) _R (191) _L	-	-	15° 30'	15° 29'
10	1600	30	27	29	28	45	-	(223) _R (223) _L	-	-	11° 58'	11° 58'
11	1600	32	25	30	30	45	-	(261) _R (261) _L	-	-	11° 56'	11° 58'
12	1550	33	29	31	31	50	-	(279) _R (279) _L	-	-	12° 29'	12° 31'
13	1550	35	27	33	33	50	-	(309) _R (309) _L	-	-	11° 06'	11° 06'
14	1500	35	27	34	33	50	-	(336) _R (336) _L	-	-	9° 07'	9° 06'
15	1500	39	25	35	35	50	-	(365) _R (365) _L	-	-	12° 11'	12° 44'
16	1500	38	24	36	36	50	-	(382) _R (382) _L	-	-	12° 11'	12° 44'

EXP NO	D ϕ	D ₁ ϕ	D ₂ ϕ	D ₃ ϕ	D ₄ ϕ	D ₅ ϕ	PCD	l ₁	l ₂	l ₃	d ₁ x N ₁	d ₂ x N ₂	d ₃	MATERIAL OF l ₁	H
4	2000	2161	2029	2061	2060	2064	2102	11	13	40	3/4" x 44	5/8" x 11	22	SM41B	19
5	1900	2061	1929	1961	1960	1964	2002	11	13	-	3/4" x 44	5/8" x 11	-	-	-
6	1800	1979	1841	1879	1878	1882	1920	17	19	-	3/4" x 44	5/8" x 11	-	-	22
8	1700	1895	1757	1795	1794	1798	1841	25	27	45	7/8" x 40	3/4" x 10	25	SM50B	-
10	1650	1861	1717	1761	1760	1764	1812	30	32	50	7/8" x 40	3/4" x 10	-	-	25
12	1600	1819	1675	1719	1718	1722	1765	34	36	45	7/8" x 40	3/4" x 10	-	60HTS	-
14	1550	1775	1621	1675	1674	1678	1721	37	39	-	7/8" x 36	3/4" x 9	-	-	-

MANHOLES

EXPANSION JOINTS

(I) Spillway radial gates and intake caterpillar gate

<u>Property</u>	<u>Limits</u>
Tensile strength	210 kgf/cm ² minimum
Ultimate elongation	450 % minimum
Specific gravity	1.1 to 1.3
Durometer hardness (Shore, Type A)	more than 60
Water absorption (70°C for 48 hours)	5 % by weight (max.)

(II) Butterfly valves with air valves and expansion joints

<u>Property</u>	<u>Limits</u>
Tensile strength	150 kgf/cm ² minimum
Ultimate elongation	300 % minimum
Specific gravity	1.1 to 1.3
Durometer hardness (Shore, Type A)	more than 55
Water absorption (70°C for 48 hours)	5 % by weight (max.)

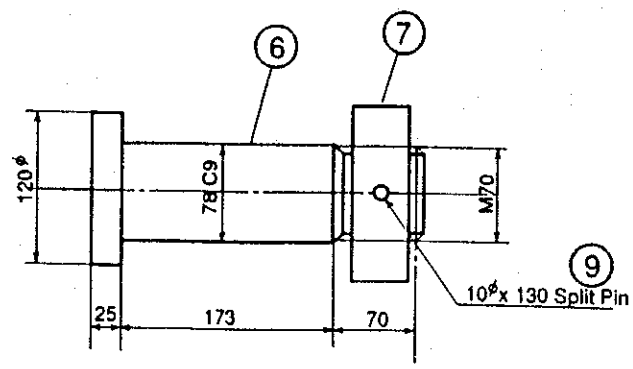
(III) Manhole of penstocks

For No. 1 to No.7 manhole

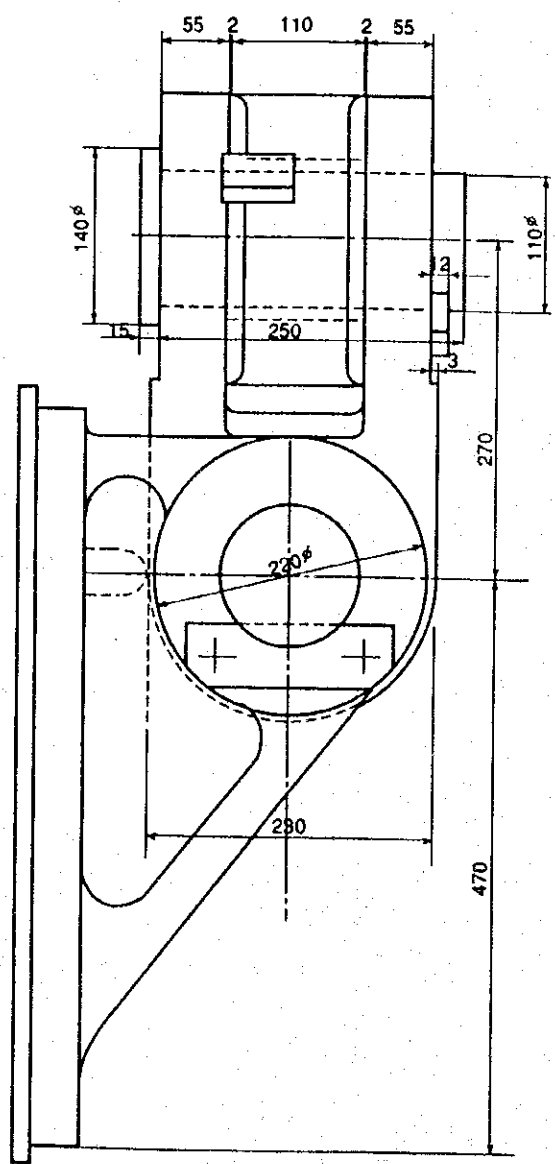
<u>Property</u>	<u>Limits</u>
Tensile strength	150 kgf/cm ² minimum
Ultimate elongation	300 % minimum
Specific gravity	1.1 to 1.3
Durometer hardness (Shore, Type A)	more than 60
Water absorption (70°C for 48 hours)	5 % by weight (max.)

For No. 8 to no.16 manhole

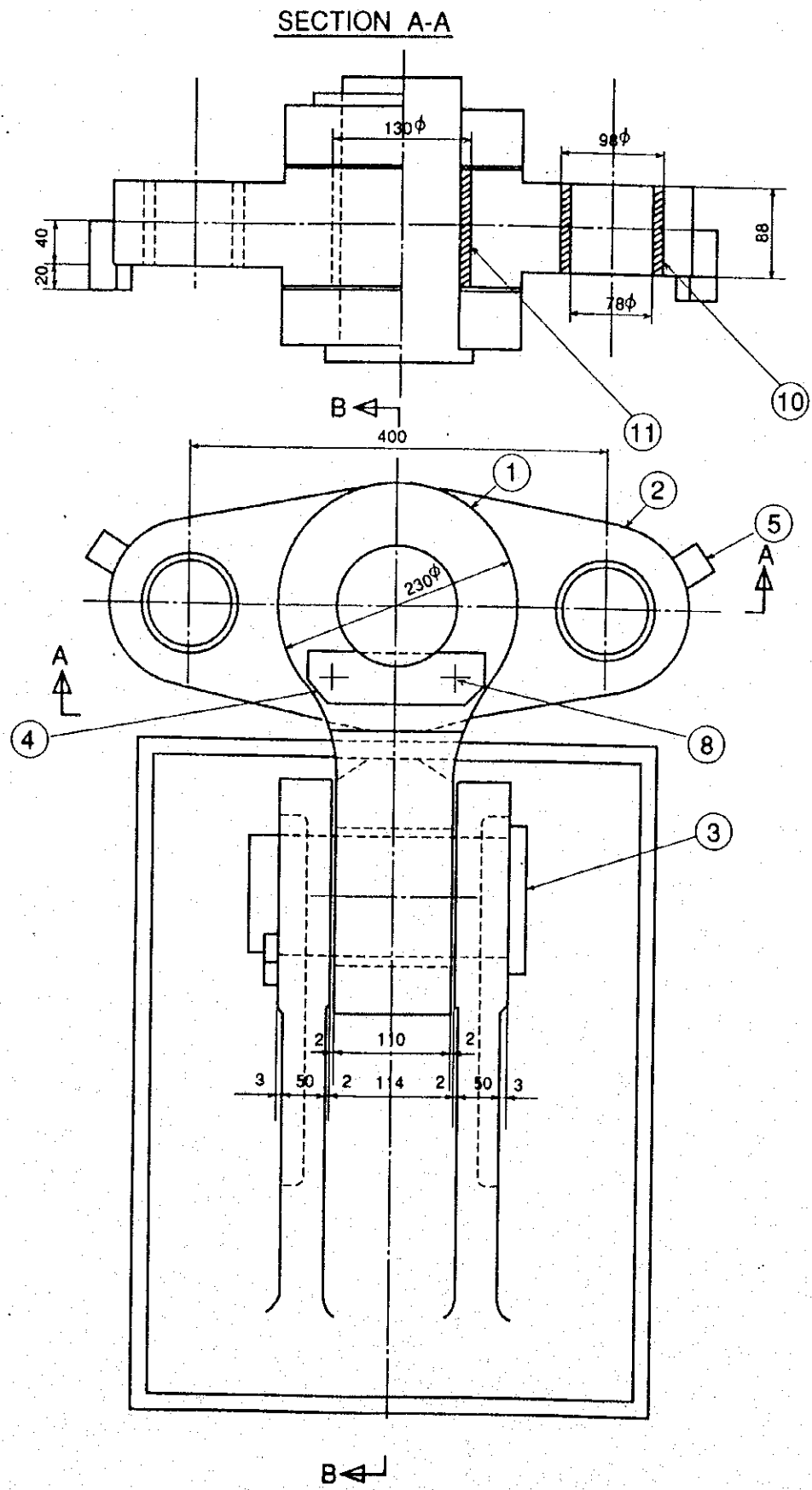
<u>Property</u>	<u>Limits</u>
Tensile strength	200 kgf/cm ² minimum
Ultimate elongation	400 % minimum
Specific gravity	1.1 to 1.3
Durometer hardness (Shore, Type A)	more than 60
Water absorption (70°C for 48 hours)	5 % by weight (max.)



DETAIL OF ROPE PIN



SECTION B-B

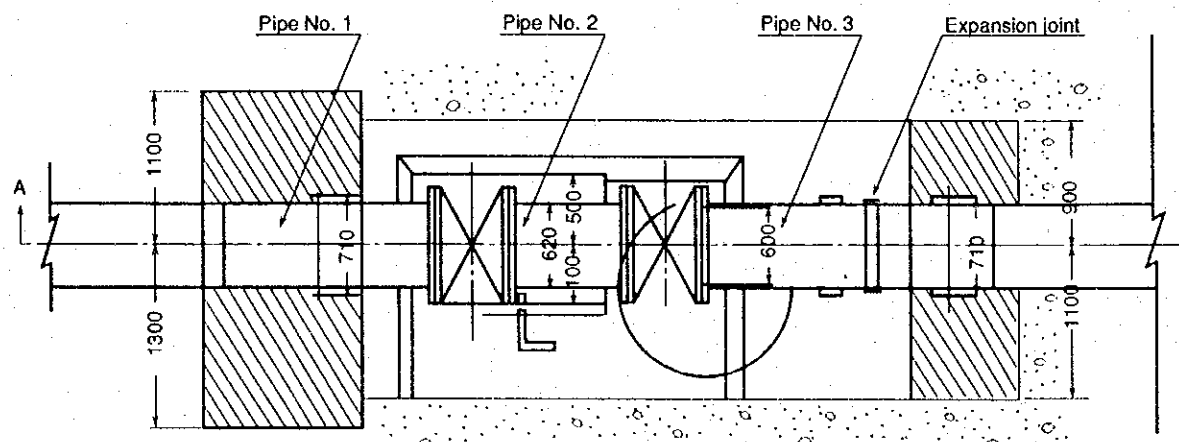


FEASIBILITY STUDY ON
REHABILITATION OF DA NIHM
POWER SYSTEM

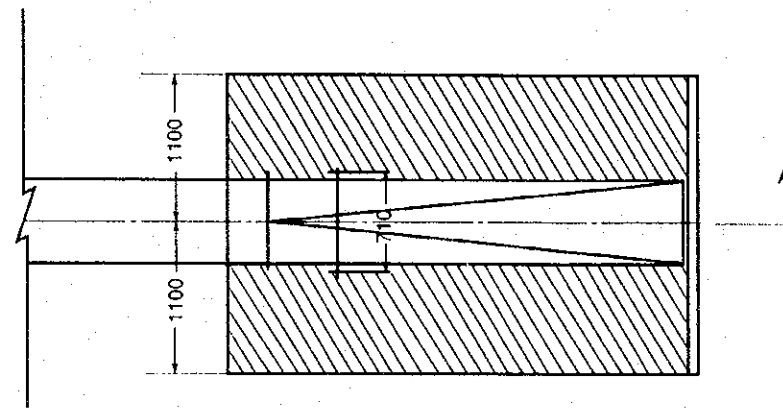
MINISTRY OF ENERGY
JAPAN INTERNATIONAL COOPERATION AGENCY

Figure 1.12
Spillway Radial Gates and Hoists
Wire Rope Hangers

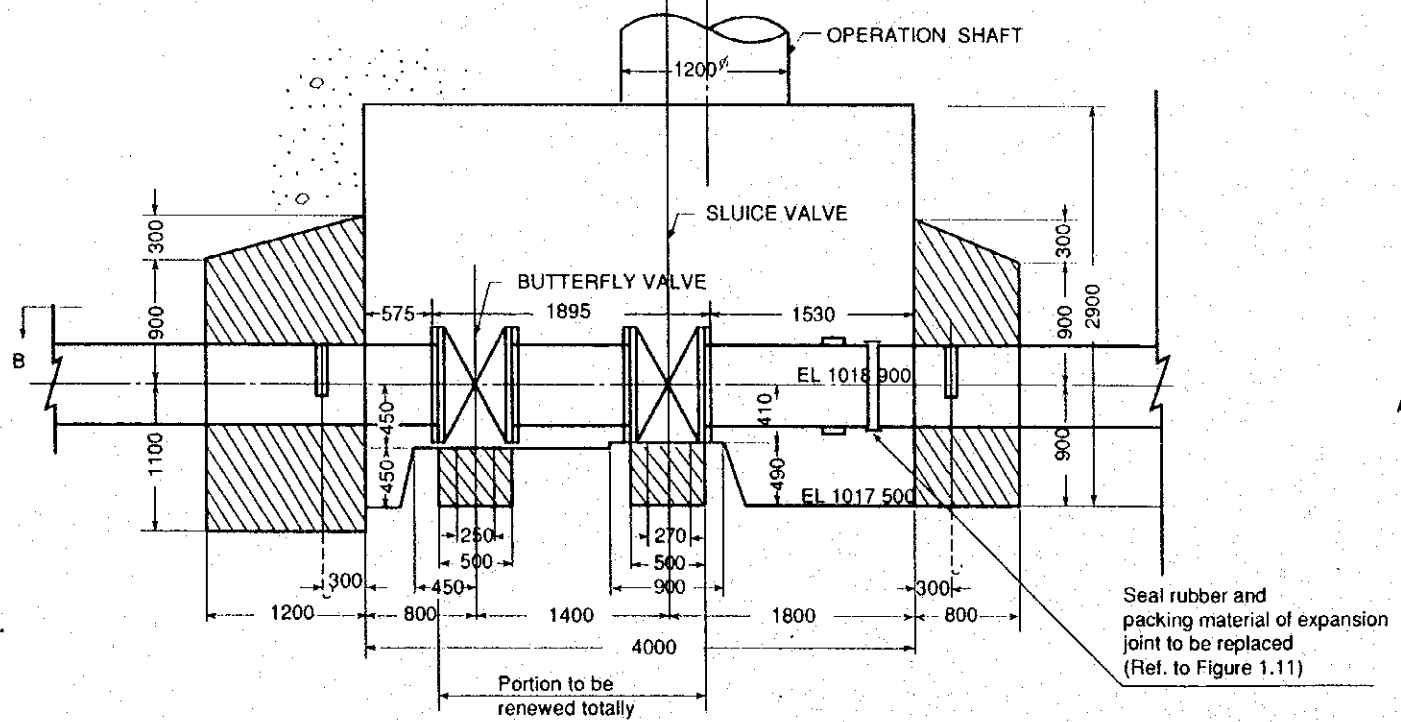
	Parts	Material	Q'ty
①	Rocker	SF540A	2x4
②	Balance Lever	"	2x4
③	Pin	SUS304	2x4
④	Key Plate	SS400	2x4
⑤	Stopper	"	4x4
⑥	Rope Pin	SUS304	4x4
⑦	Nut	SUS	4x4
⑧	Bolt(w3/4x30x25)	S45C	4x4
⑨	Split Pin	SUS	4x4
⑩	Bush	Oilless	4x4
⑪	"	"	4x4
⑫	Set Screw	Bs	16x4



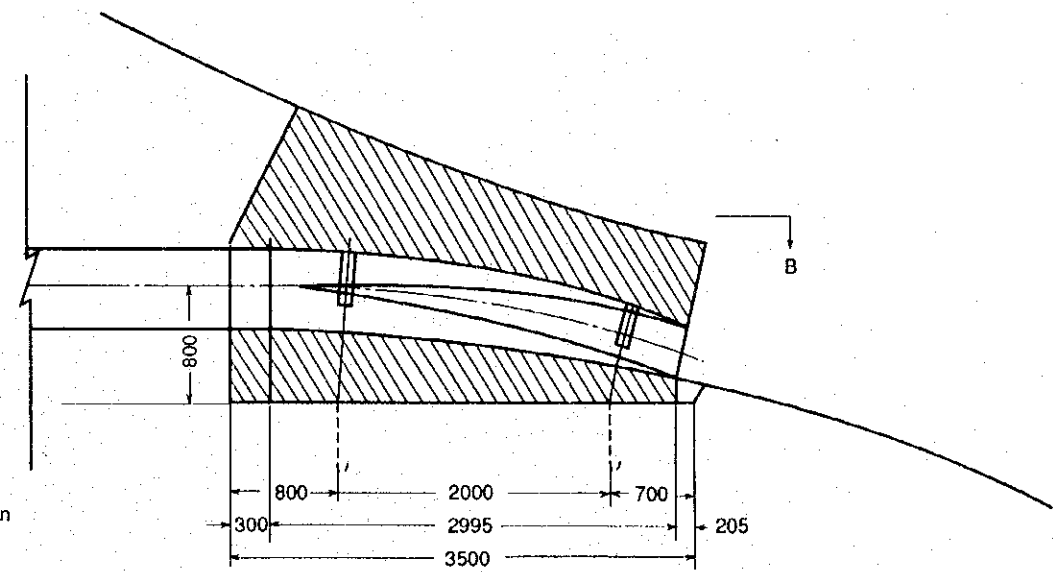
SECTION B-B

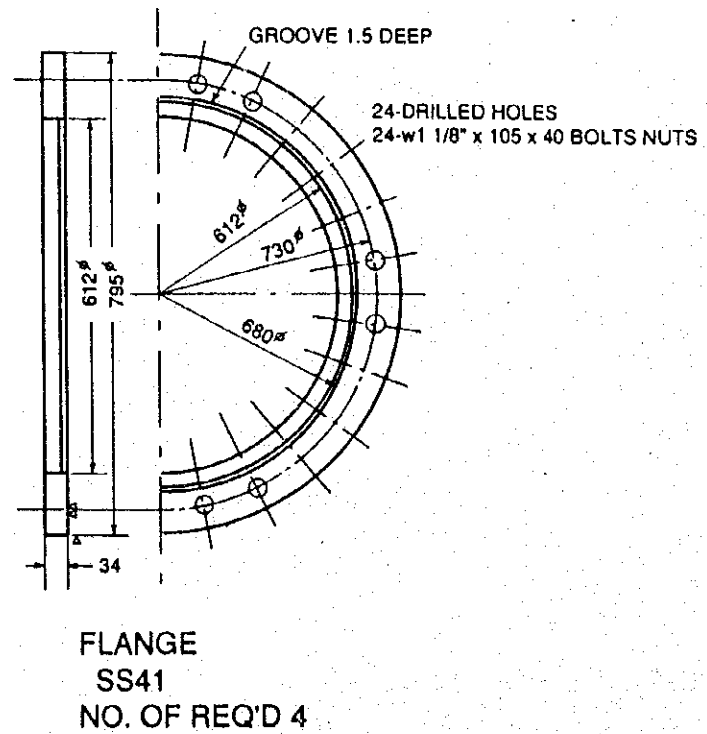
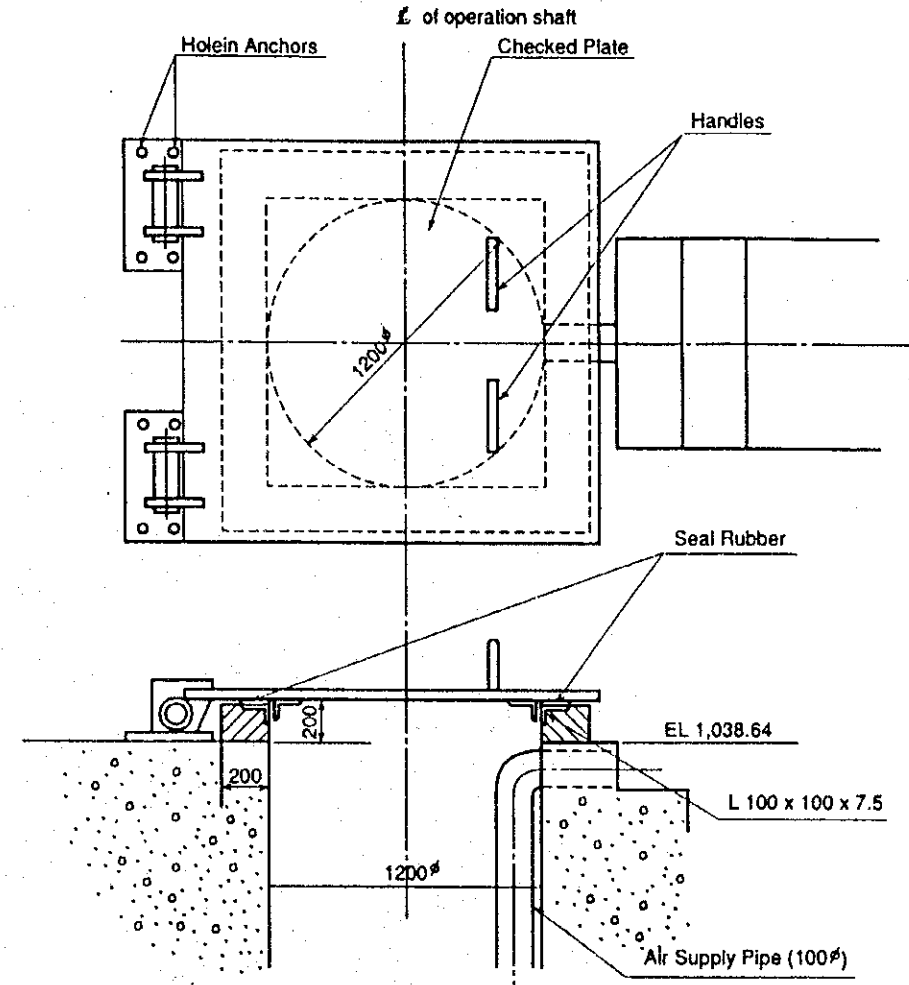
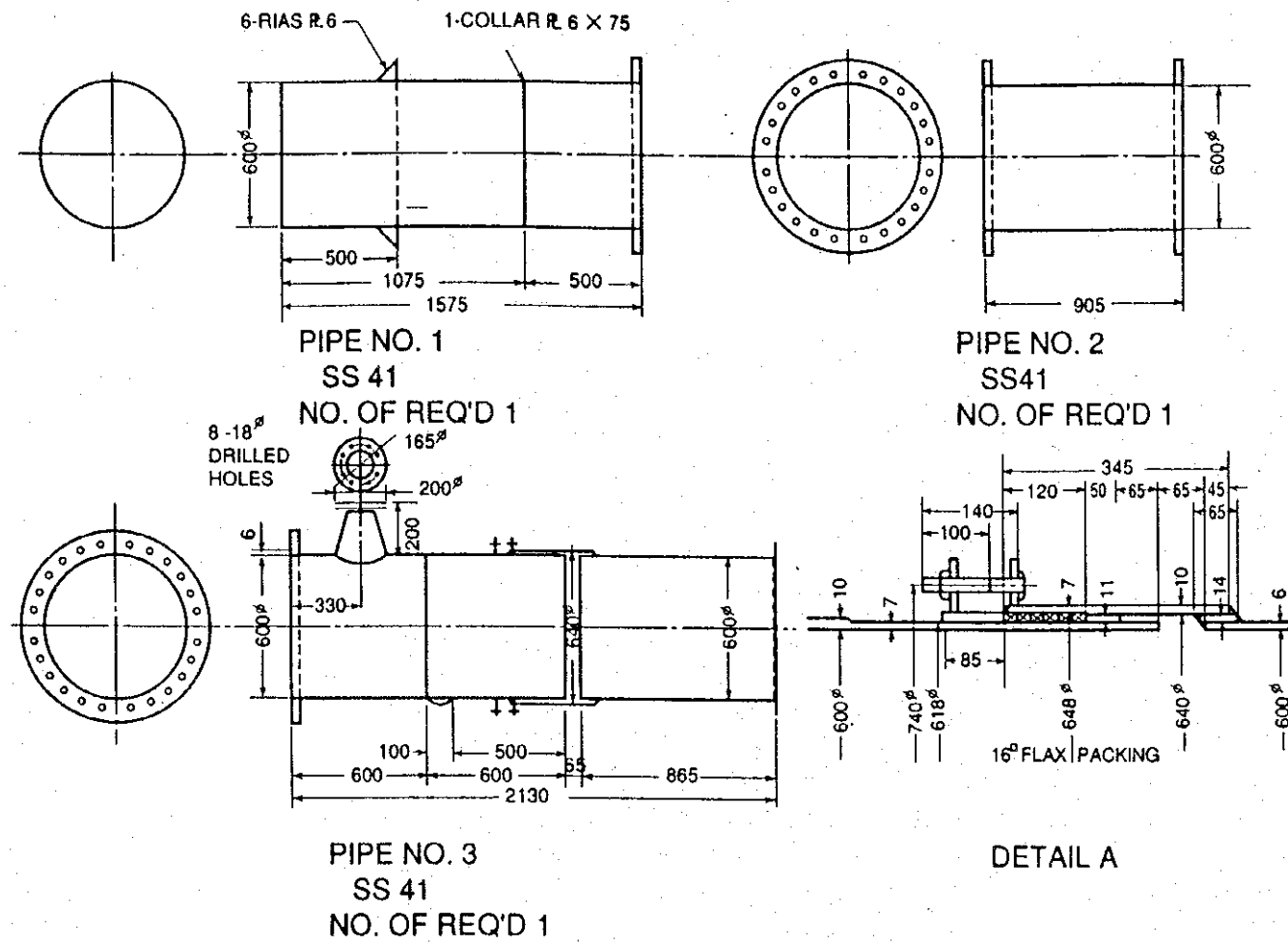


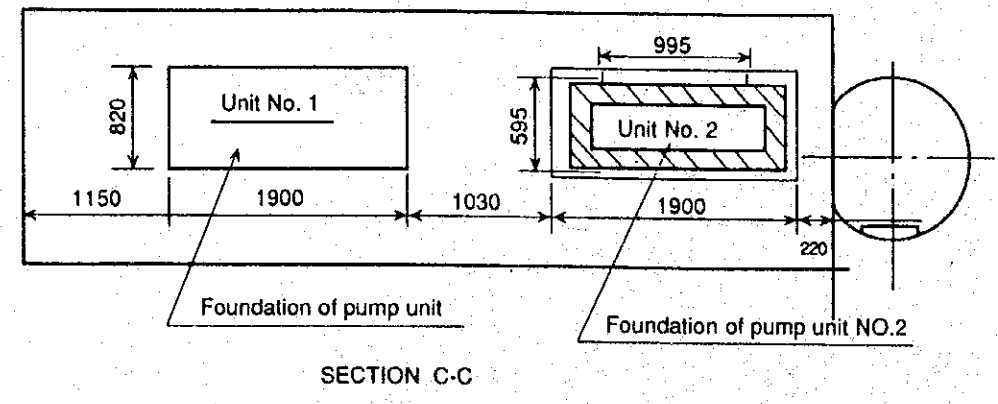
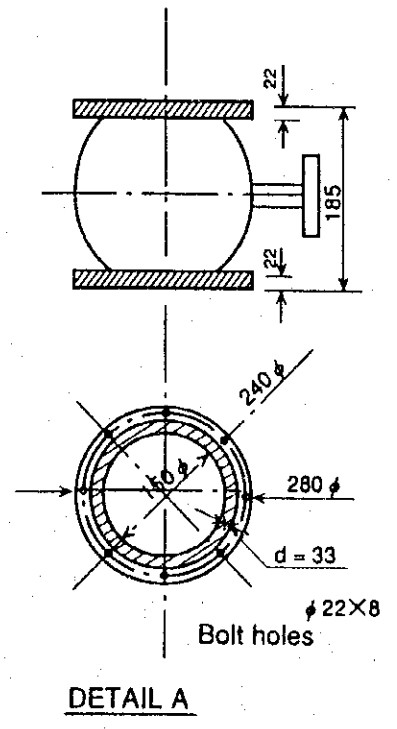
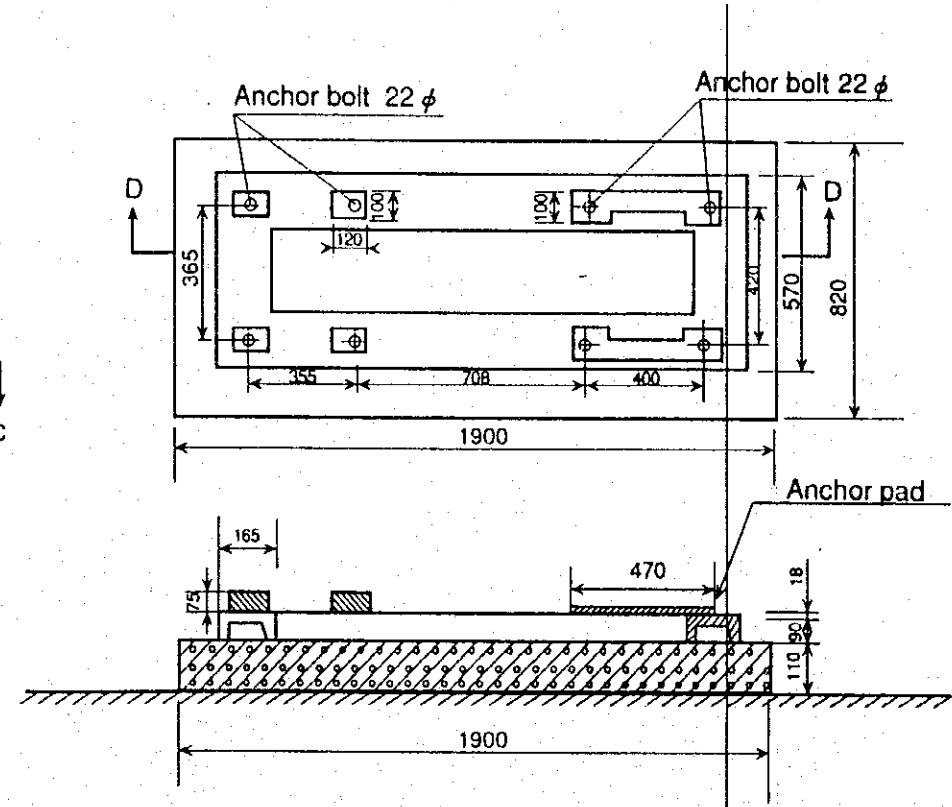
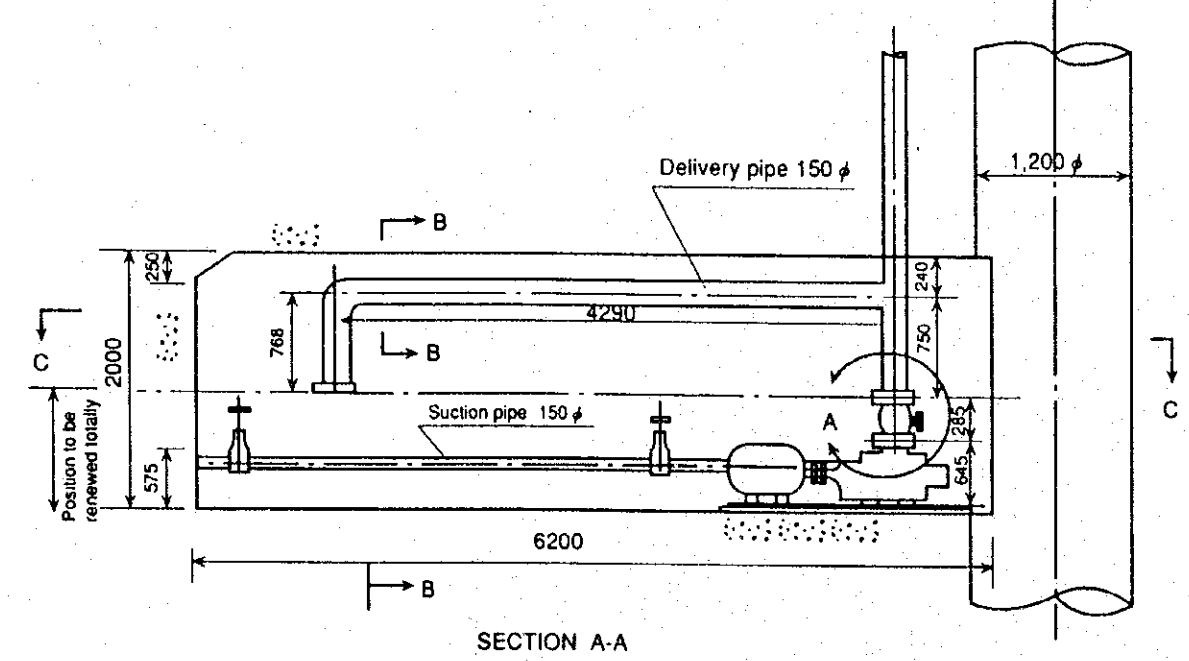
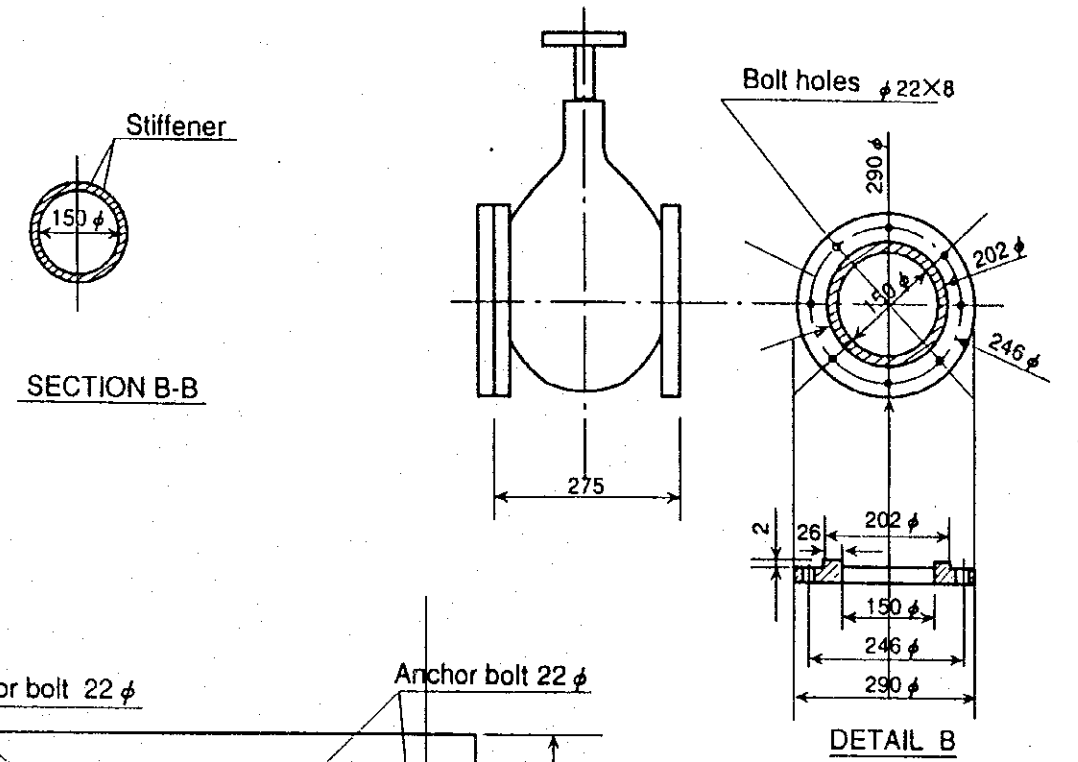
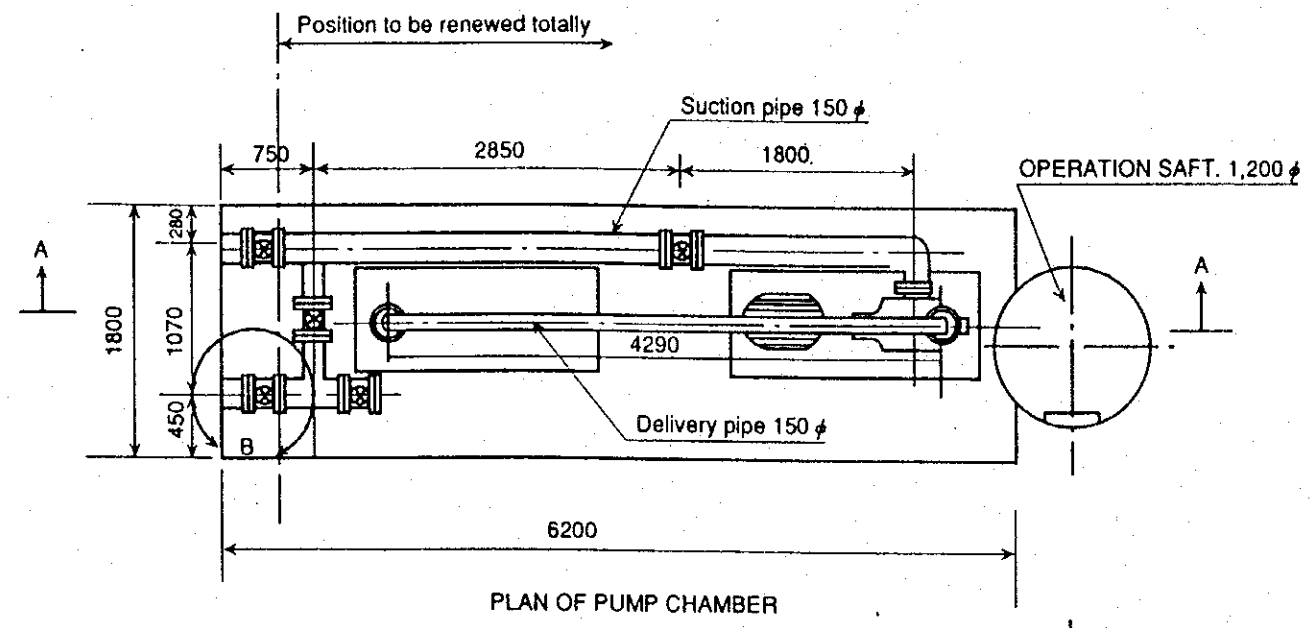
- NOTES:
1. SHOWS SECONDARY CONCRETE.
 2. TYPE OF FLANGE FOR IRRIGATION VALVES SHOWS IN FIGURE 1.14



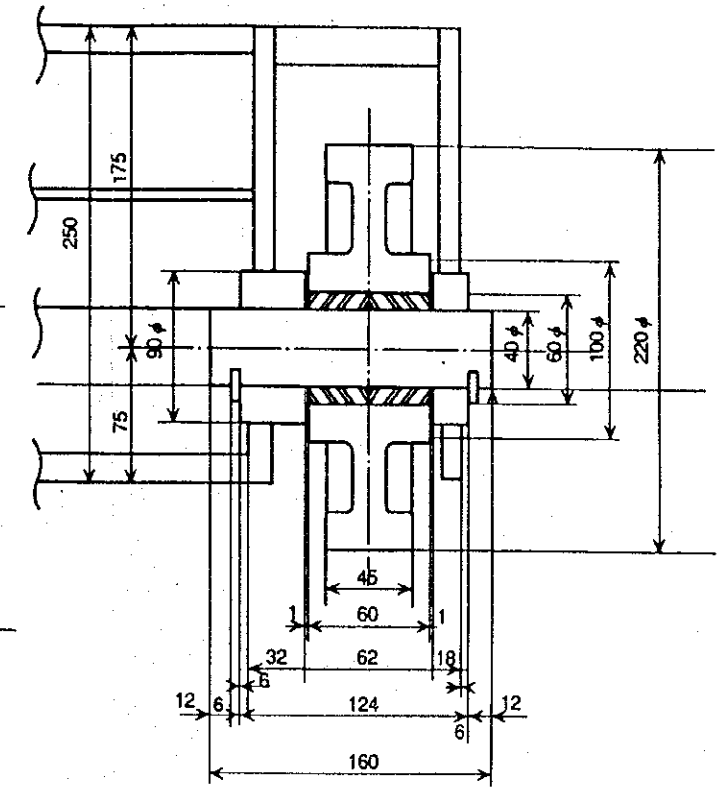
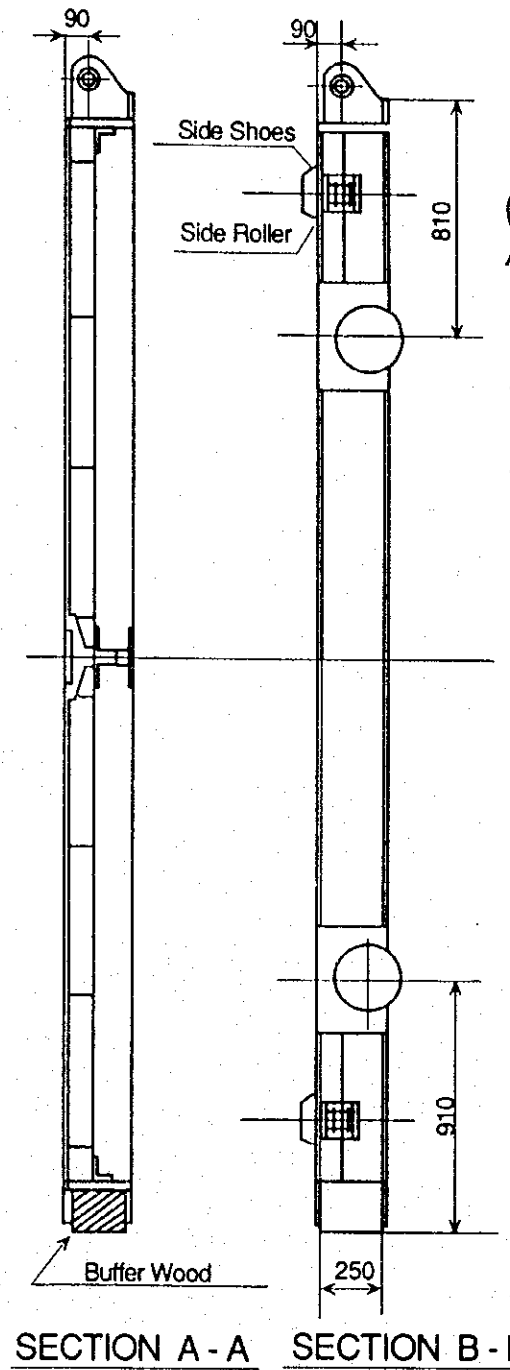
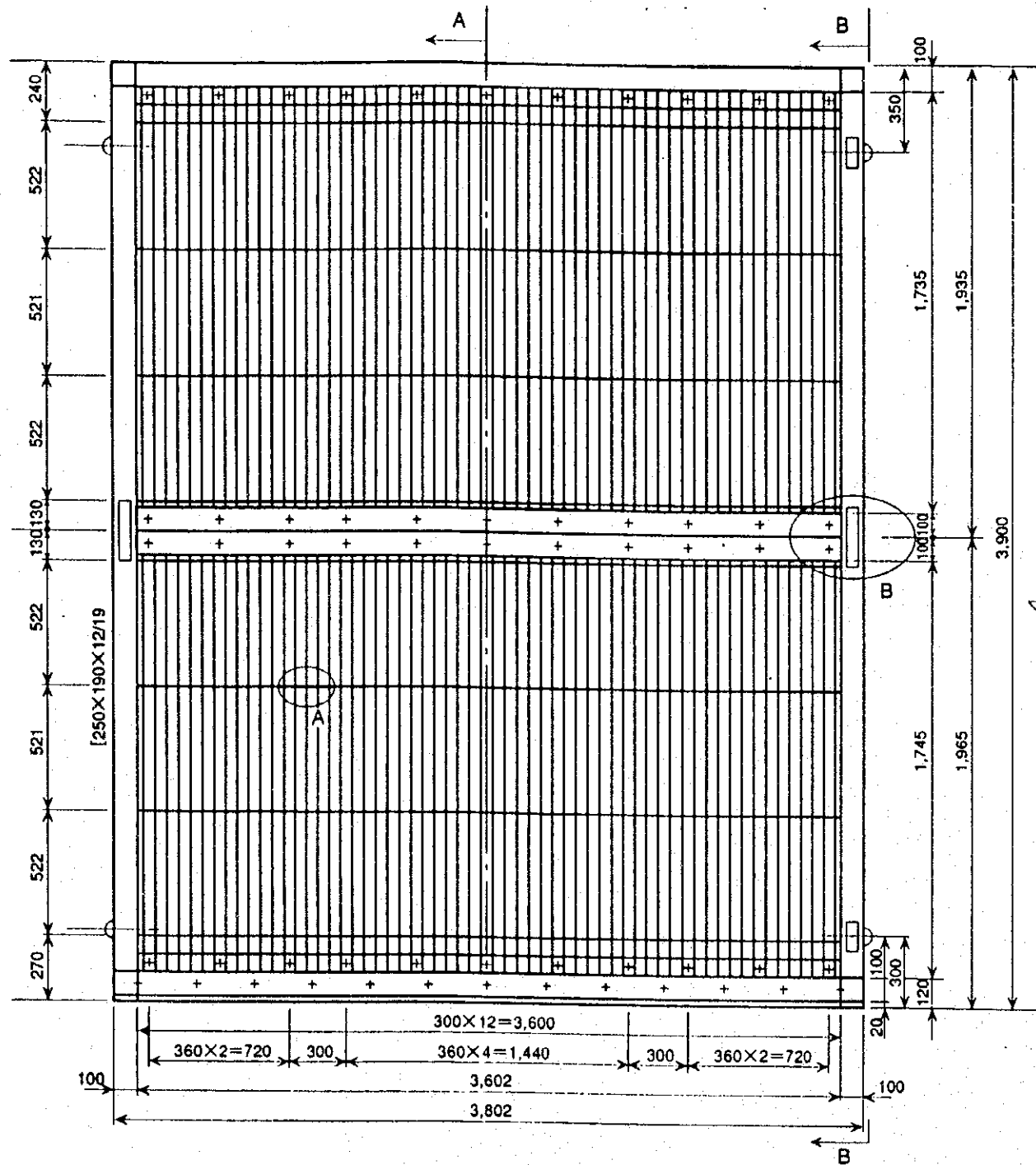
SECTION A-A



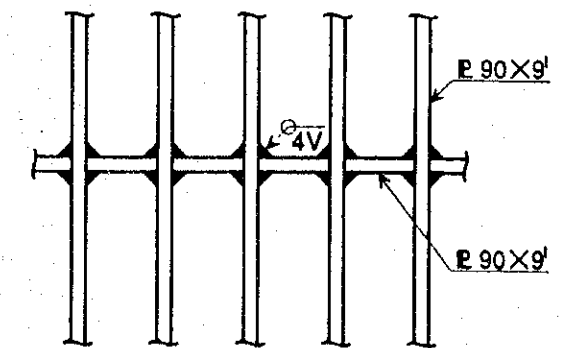




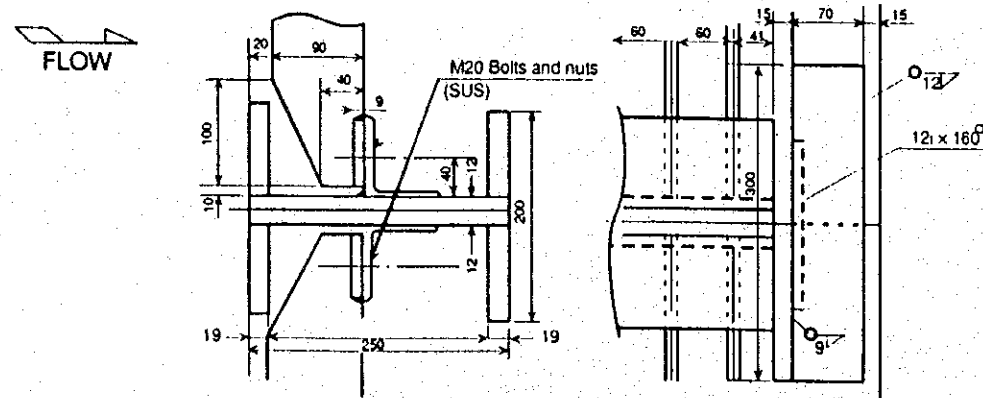
SECTION D-D
FOUNDATION OF PUMP UNIT



DETAIL OF ROLLER PARTS

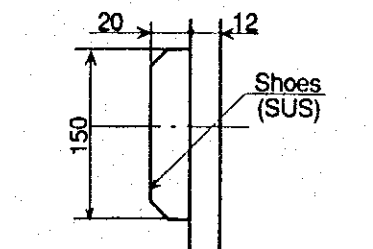


DETAIL A

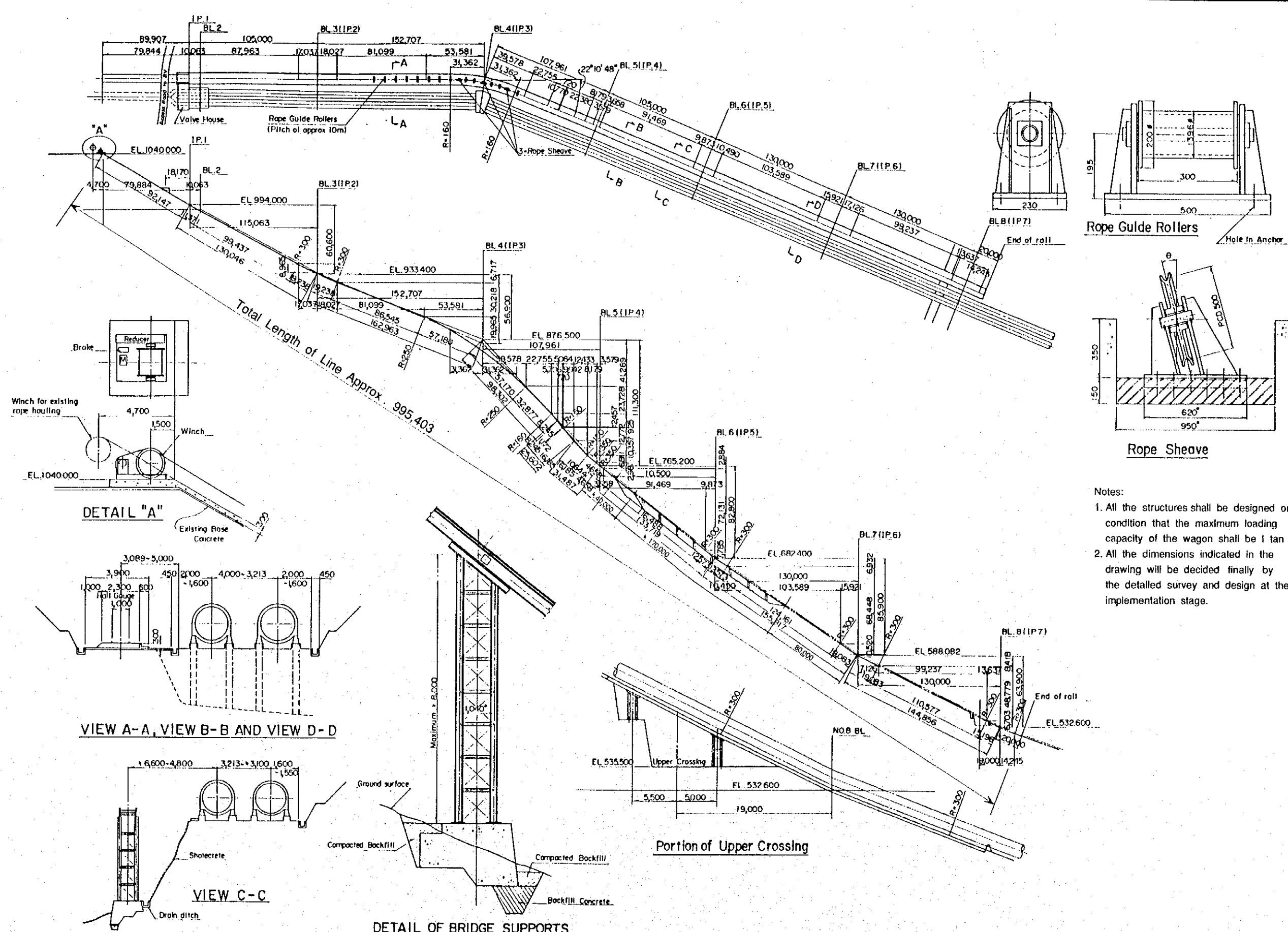


DETAIL B

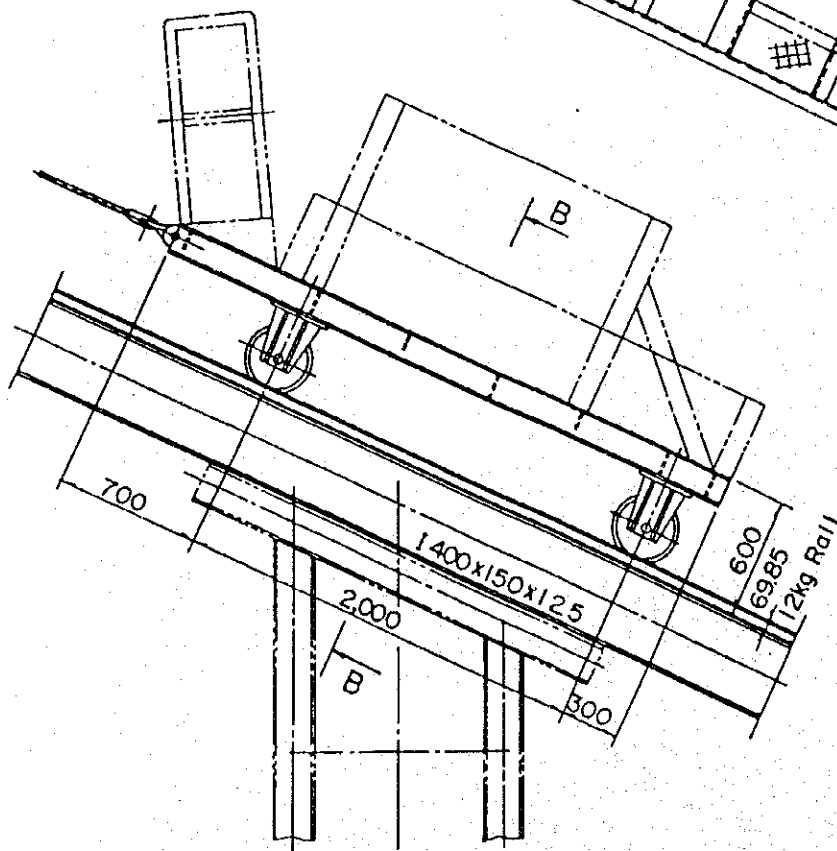
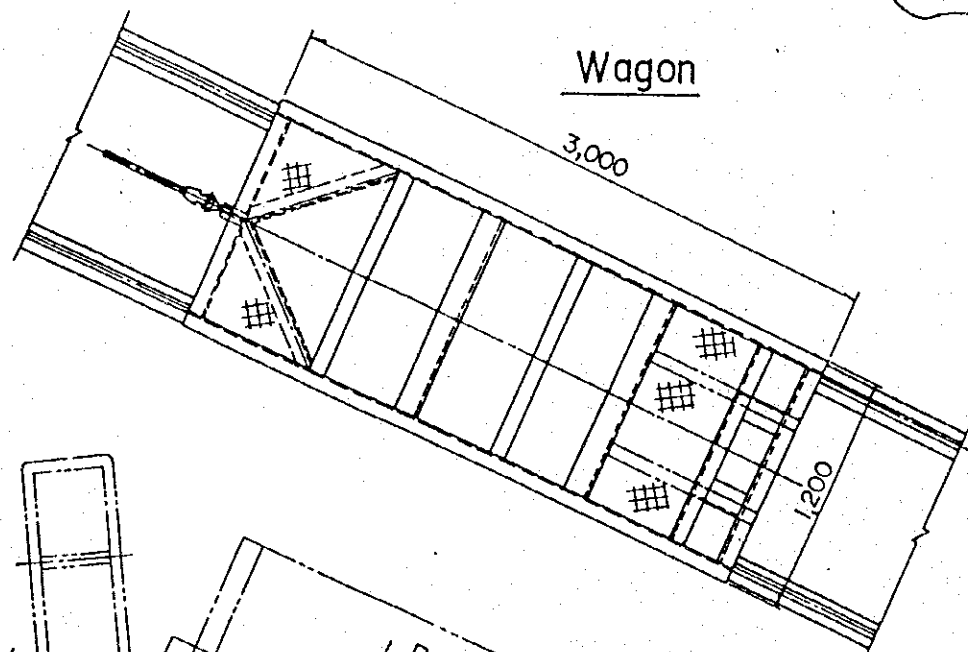
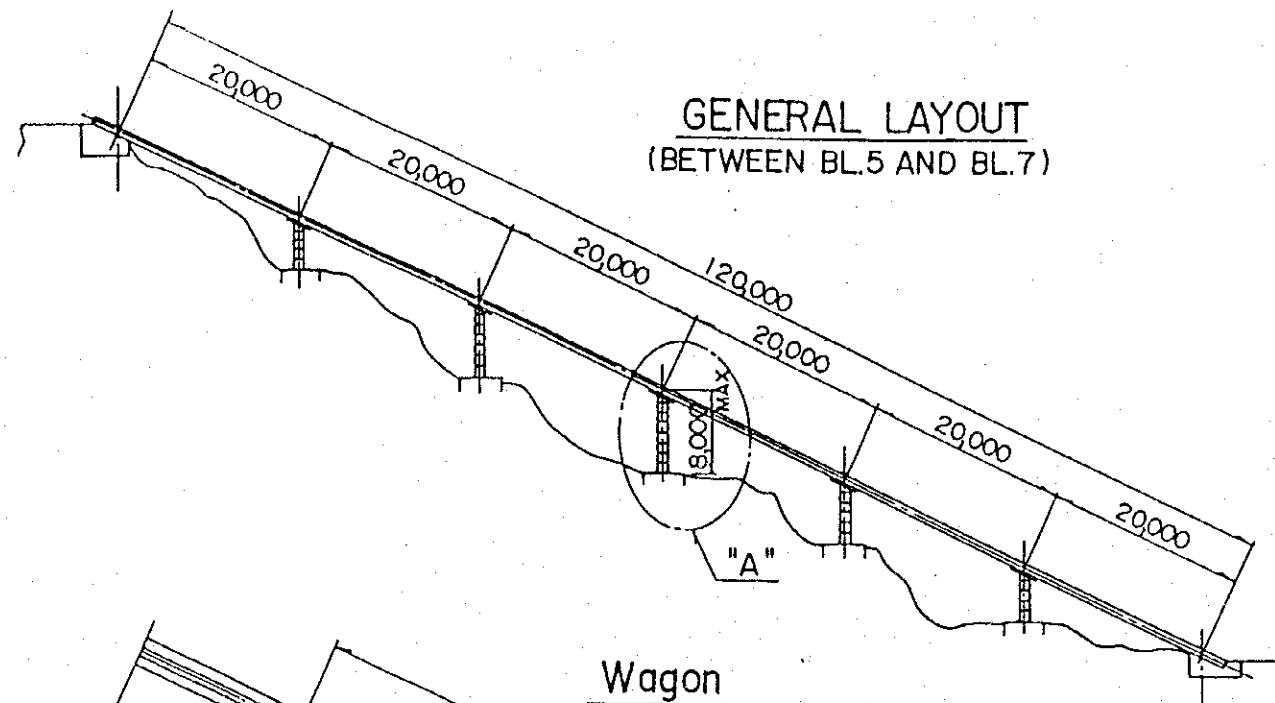
NOTE : SUS : Stainless steel



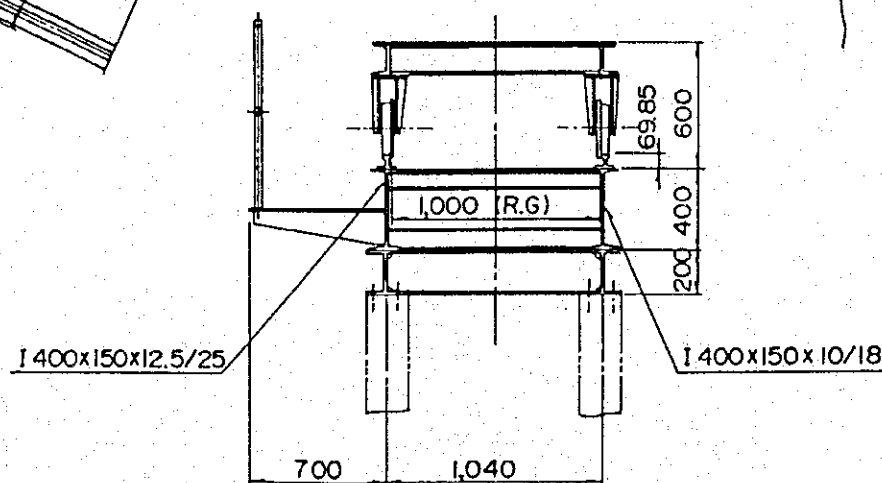
DETAIL OF SHOES



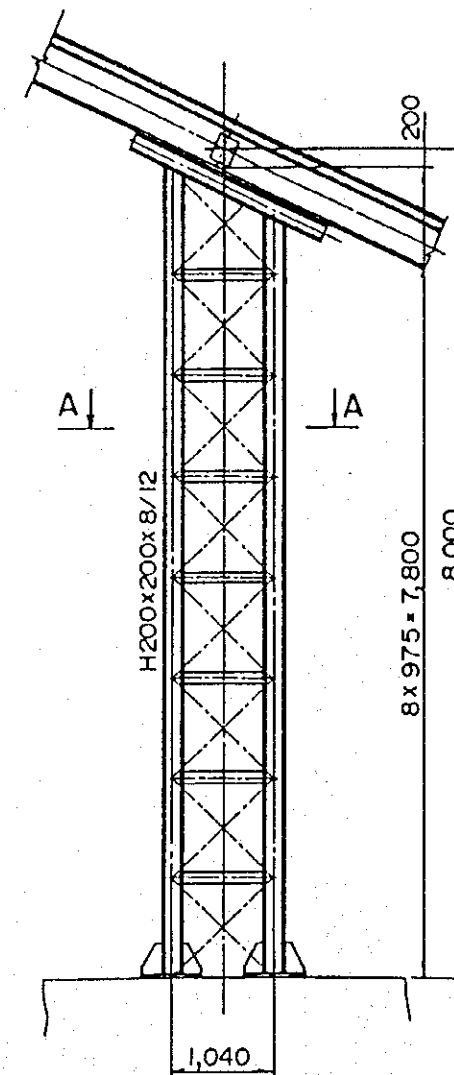
- Notes:
1. All the structures shall be designed on condition that the maximum loading capacity of the wagon shall be 1 ton
 2. All the dimensions indicated in the drawing will be decided finally by the detailed survey and design at the implementation stage.



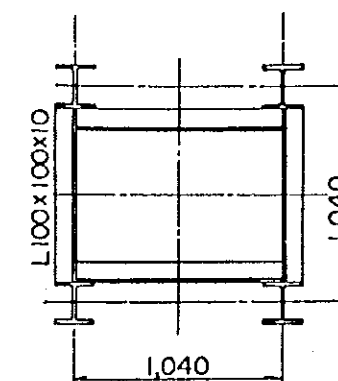
VIEW B-B



DETAIL "A"

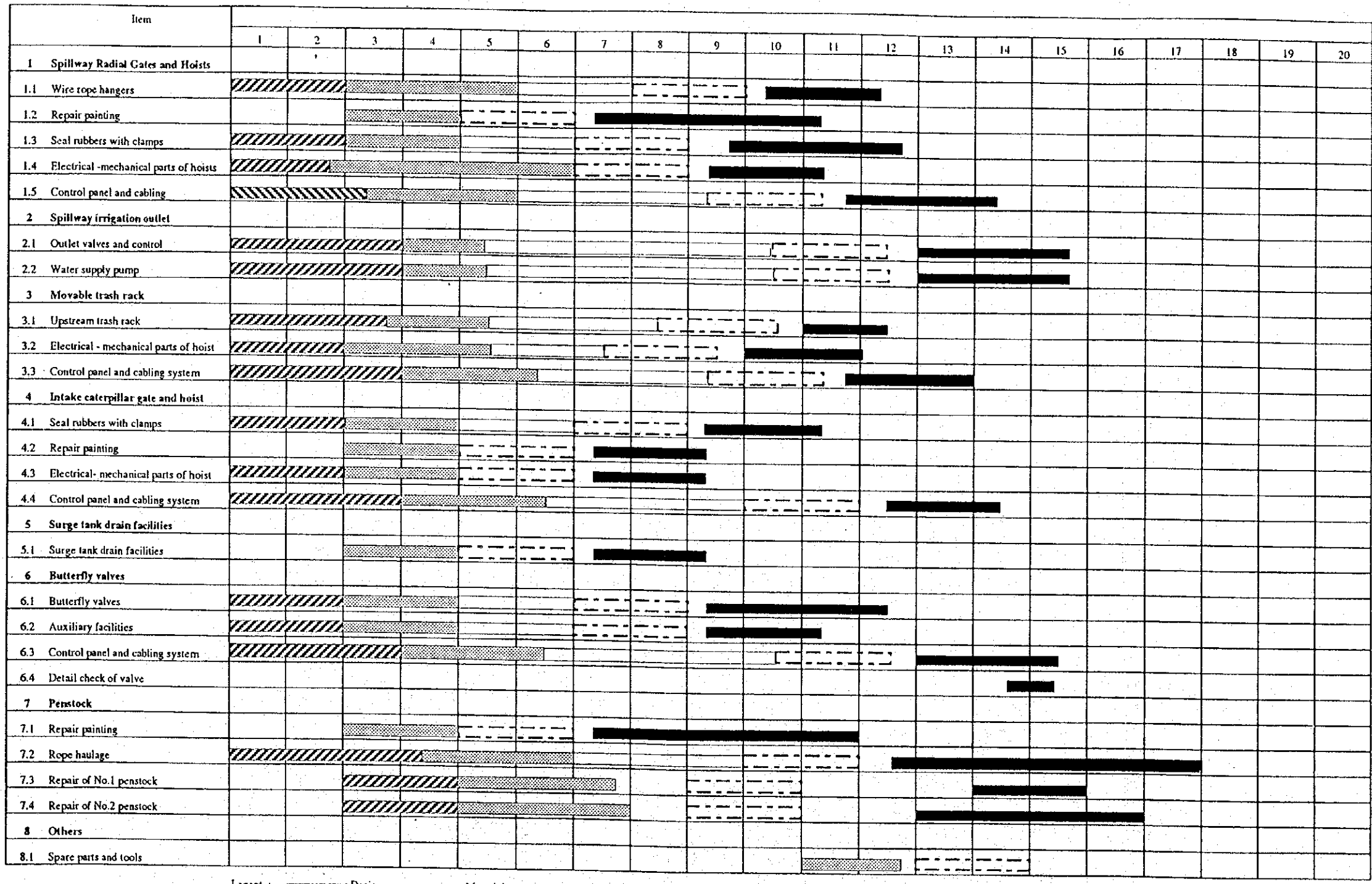


VIEW A-A

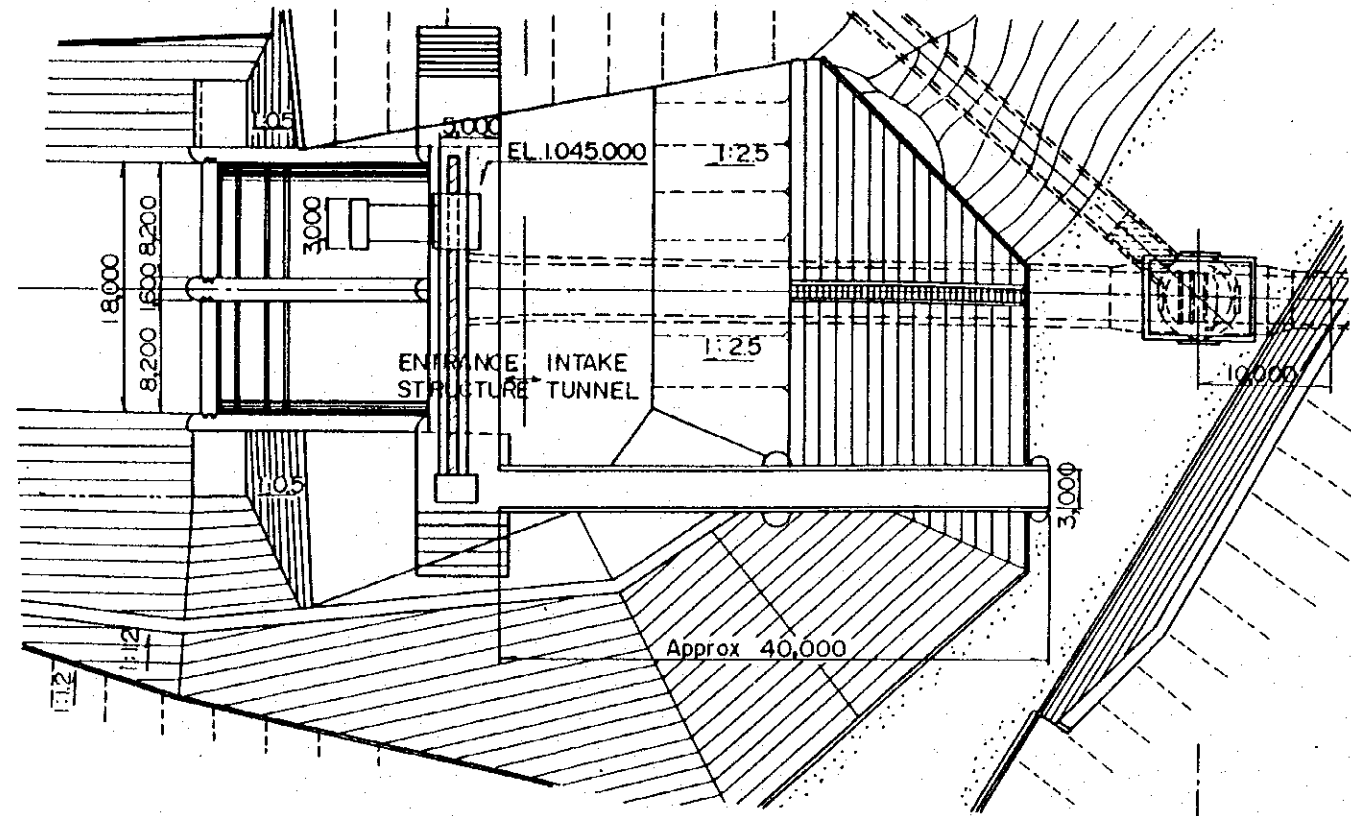


Notes:

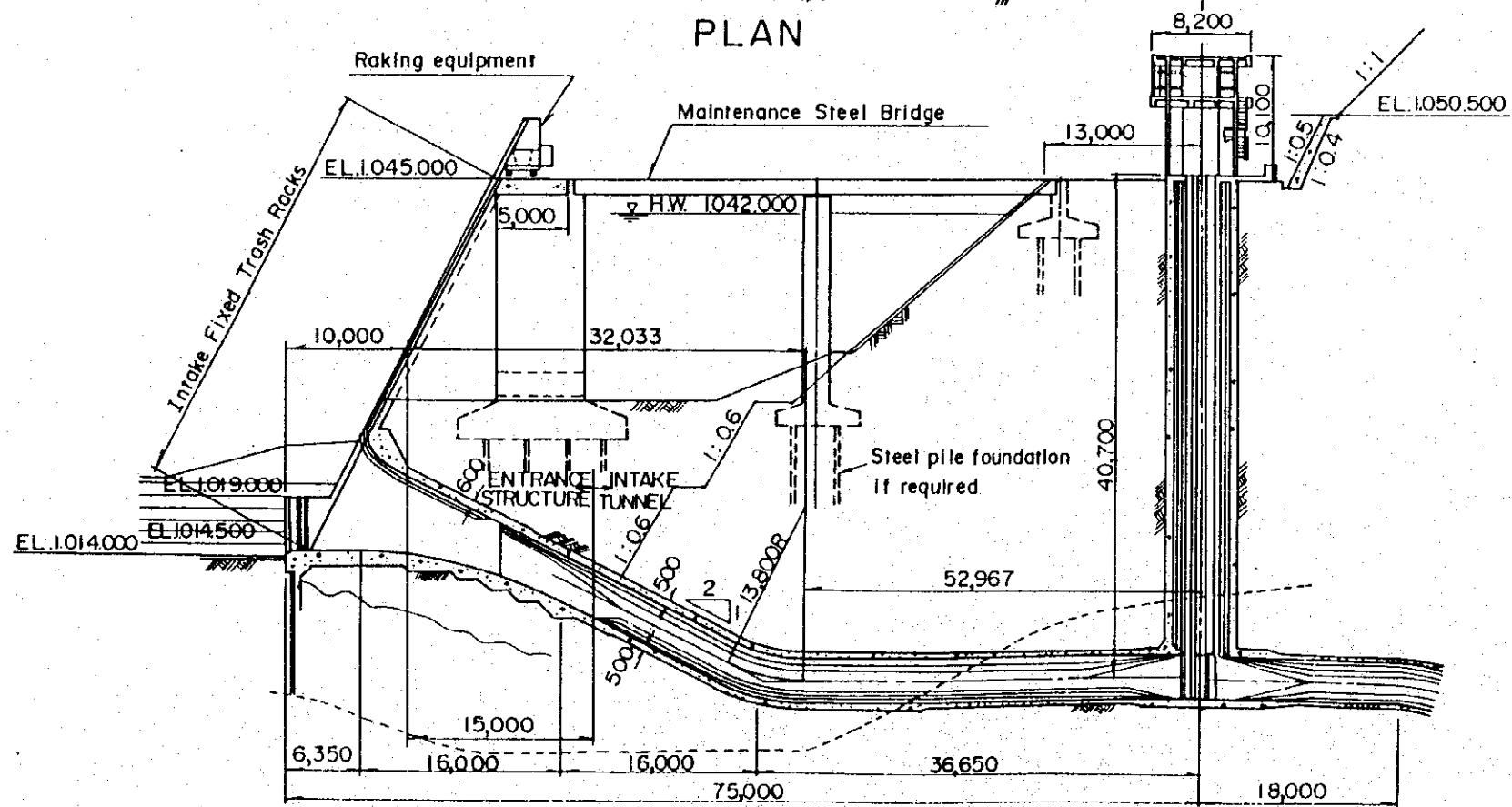
1. All the structures shall be designed on condition that the maximum loading capacity of the wagon shall be 1 tan
2. The parts shown as---- shall be of removable.
3. All the dimensions indicated in the drawing will be decided finally by the detailed survey and design at the implementation stage.



Legend : : Design : Material procurement : Manufacture : Marine transportation : Installation



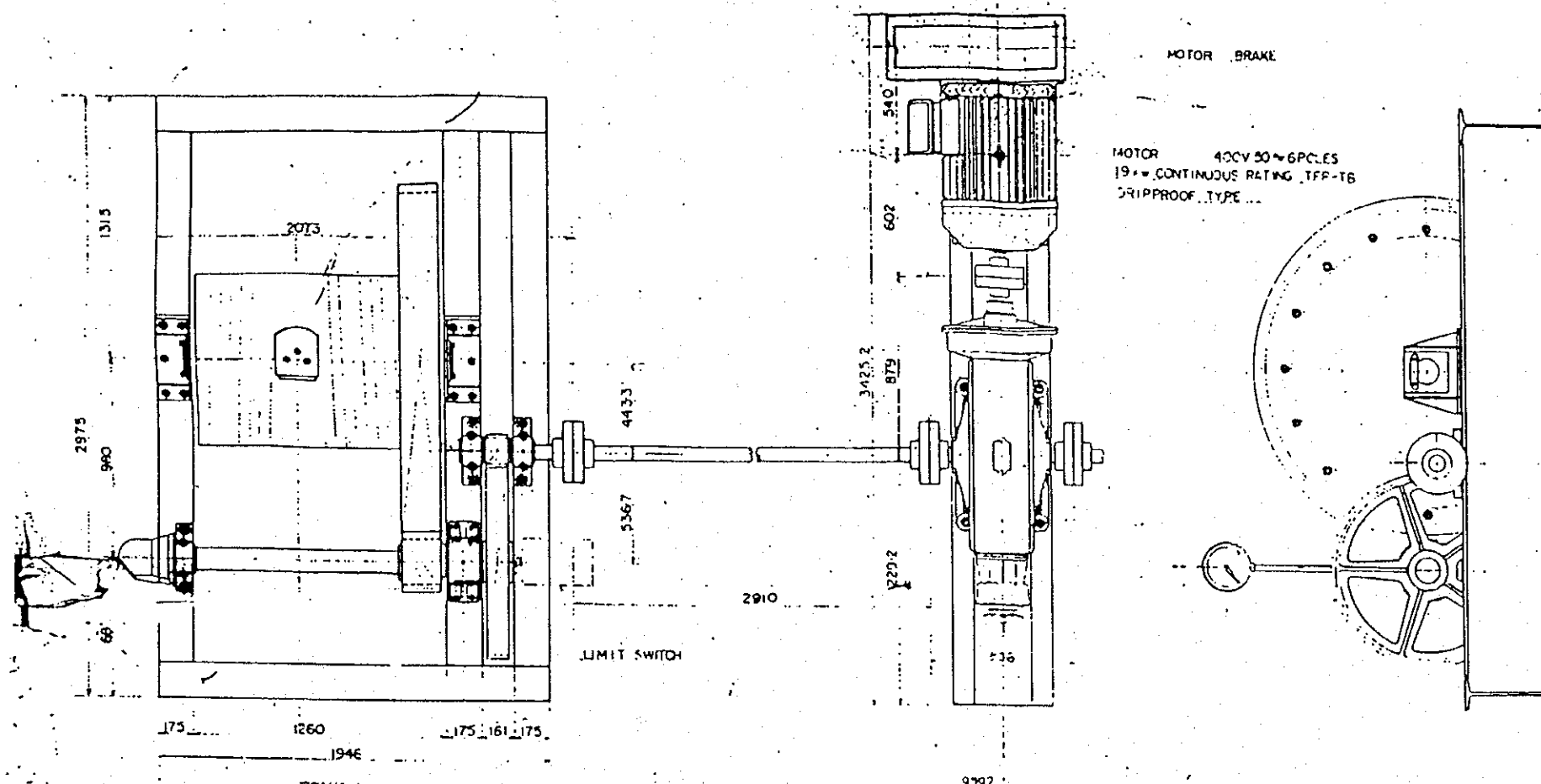
PLAN



PROFILE

Note :

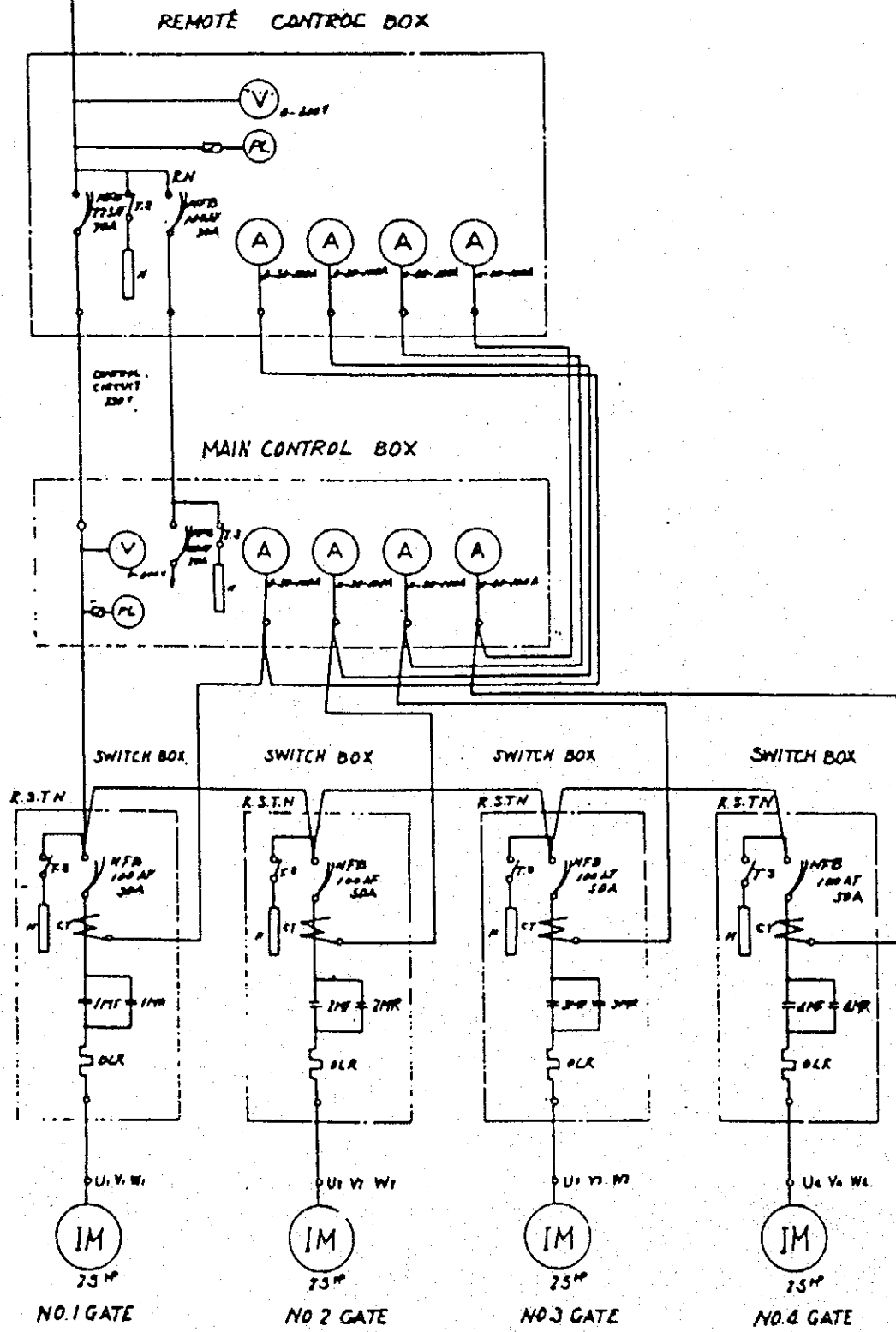
The bar pitch of the intake trash rack shall be changed to 60mm from 100mm.



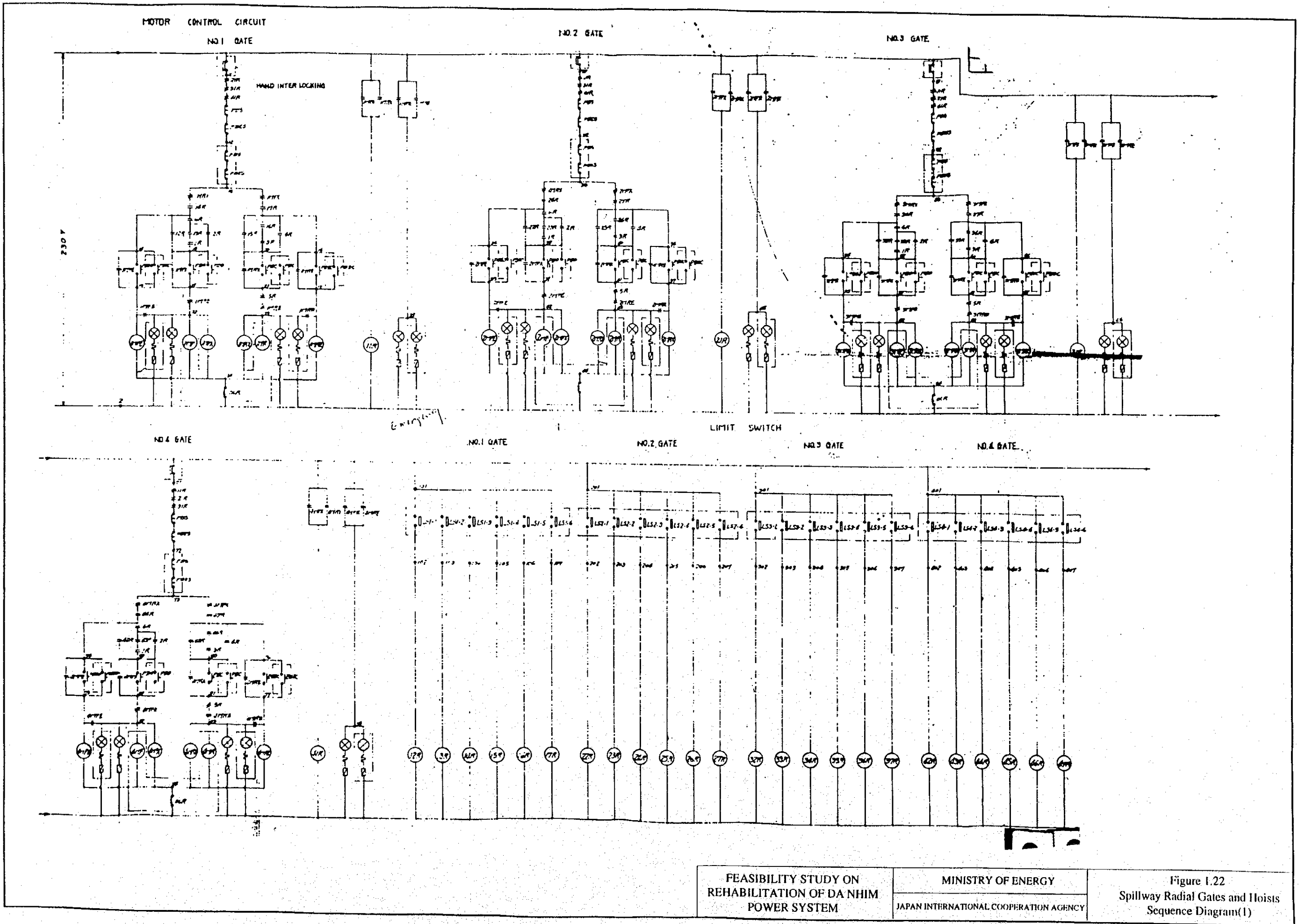
GEAR TABLE

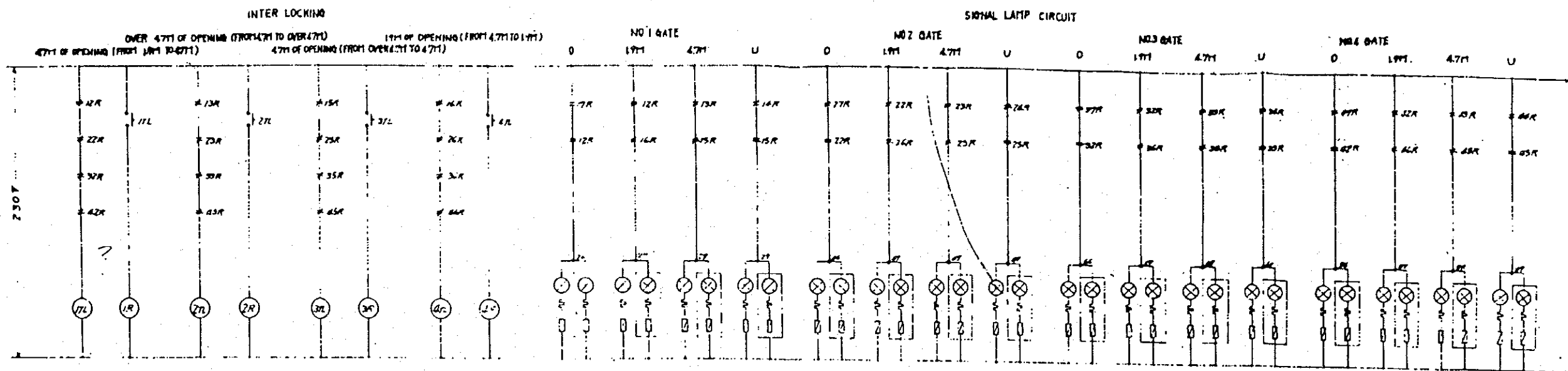
PMT NO.	DESCRIPTION	PIYON	NETO TEETH	P.C.C.	BREATH	MATERIAL	REMARK
1	MOTOR PINION	40P	24	123-408	H0	SP 55	HEAT TREATED
2	MOTOR GEAR	40P	73	443-267	H0	2C 49	
3	WORM	28 CP	1	195		SP 55	HEAT TREATED
4	WORM WHEEL	28 CP	40	24-743		SP 55	
5	PINION / GEAR	M 11	15	143	11C	SP 55	HEAT TREATED
6	SPUR GEAR	M 11	85	525	11C	2C 49	HEAT TREATED
7	DRUM PINION	M 20	15	240	200	SP 55	HEAT TREATED
8	DRUM GEAR	M 20	85	1720	200	2C 49	HEAT TREATED

THREE-PHASE
FOUR-WIRE SYSTEM
RSTN



SYMBOL	DESCRIPTION
	AMMETER
	VOLT METER
	POSITION INDICATOR
	SIGNAL LAMP
	PILOT LAMP
	BELL
	NO-FUSE CIRCUIT BREAKER
	MAGNETIC CONTACT NORMAL OPEN
	MAGNETIC CONTACT NORMAL CLOSE
	TIME DELAY SW. CONTACT NORMAL OPEN ON DELAY
	TIME DELAY SW. CONTACT NORMAL OPEN OFF DELAY
	OVER CURRENT RELAY
	PUSHBUTTON CONTACT
	PUSHBUTTON CONTACT
	LIMIT SWITCH CONTACT
	INDUCTION MOTOR
	MAGNETIC SW.
	AUXILIARY RELAY
	TIME DELAY SW.
	FUSE
	HEATER
	TUMBLE SW.

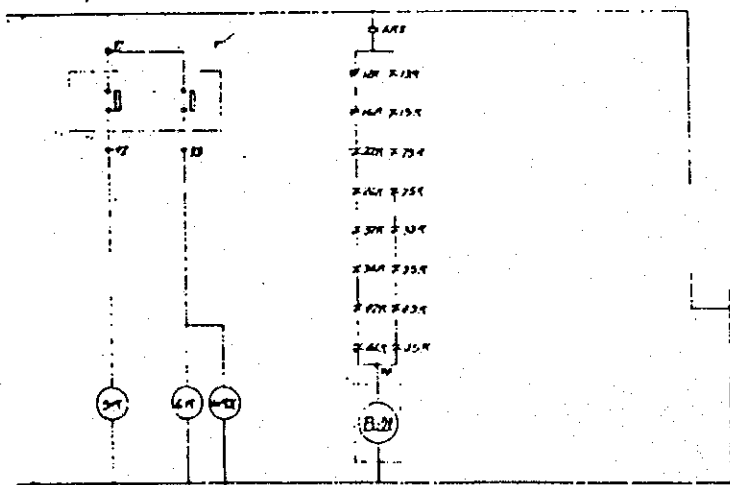




WATER LEVEL DETECTION
EL. 1042000 OR EL. 1047500 ON

ALARM BELL

POSITION INDICATOR

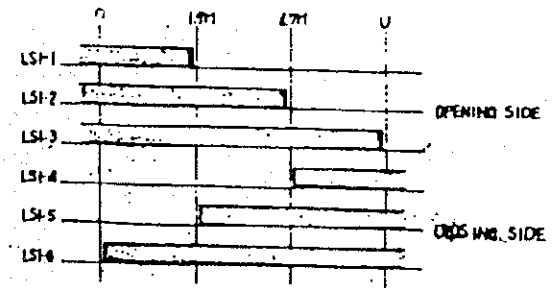


NO.1 GATE

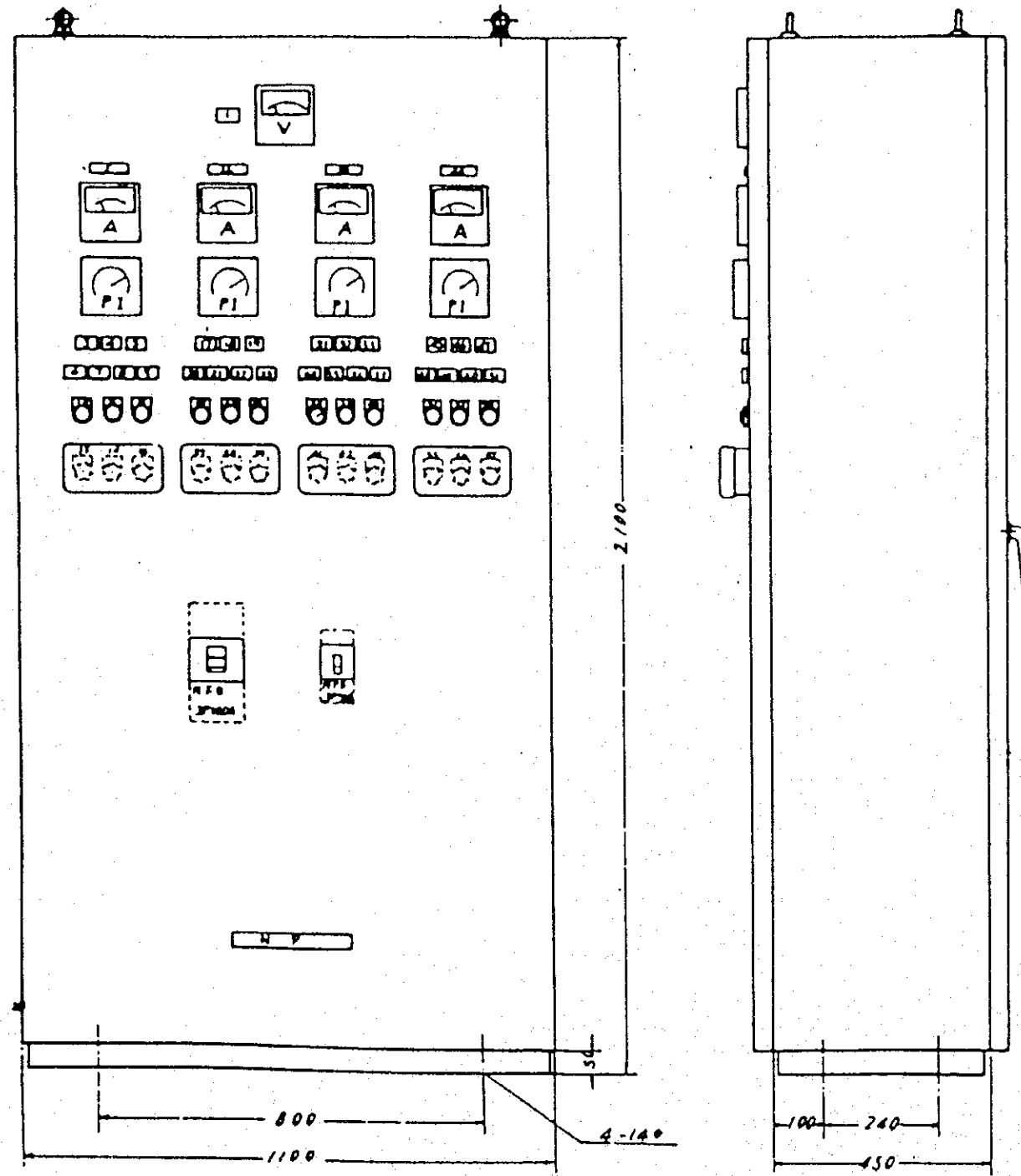
NO.2 GATE

NO.3 GATE

NO.4 GATE

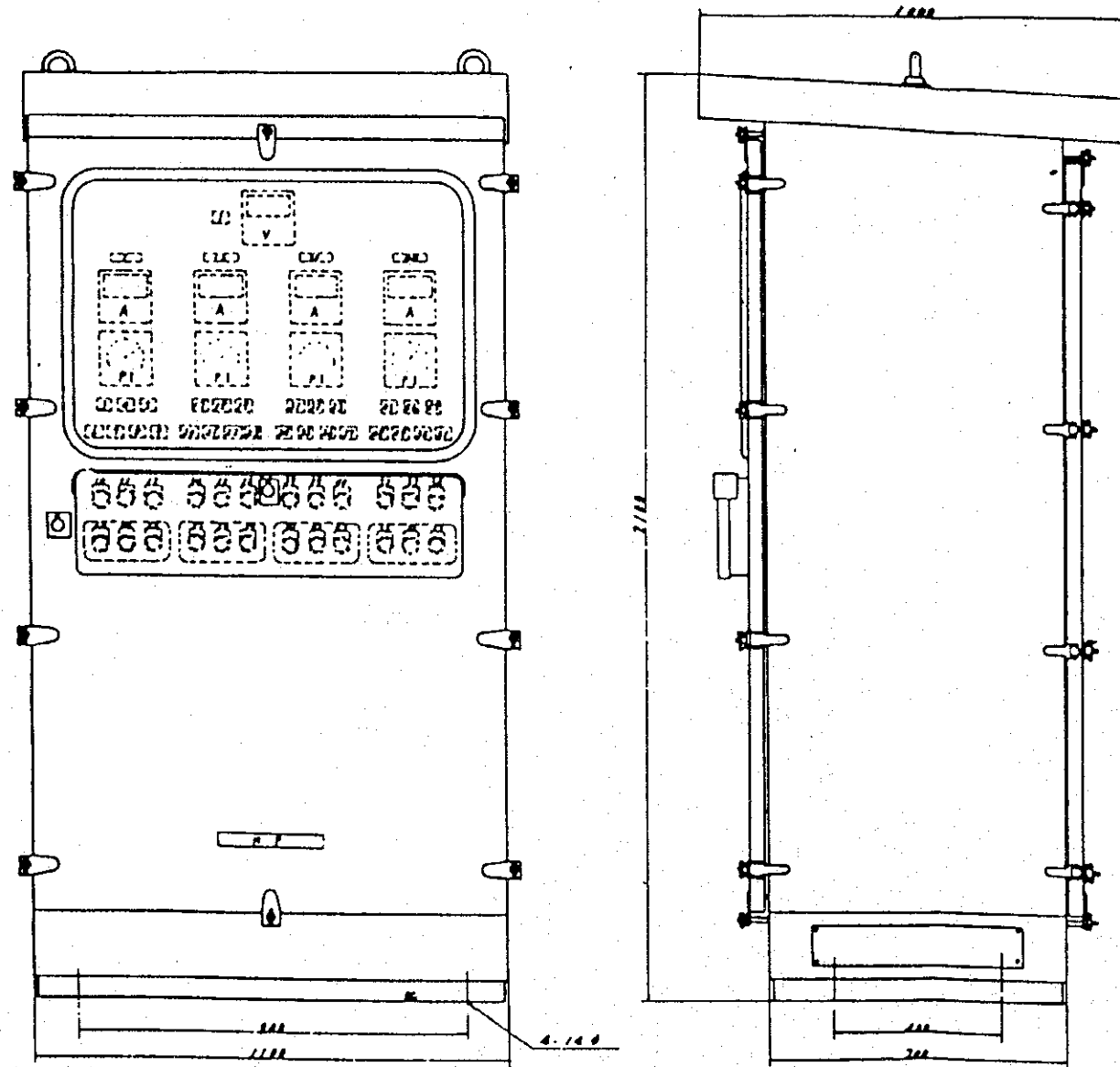


LIMIT SWITCH



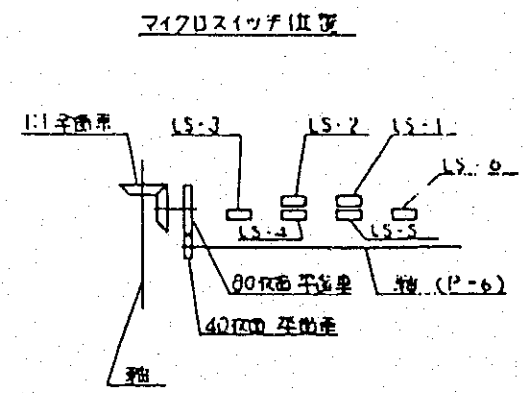
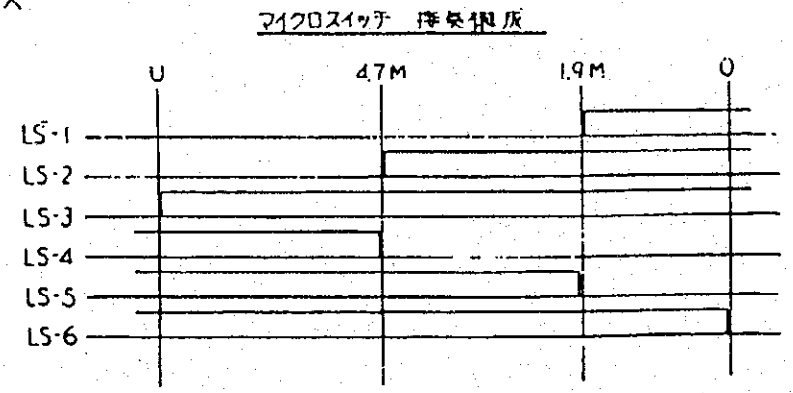
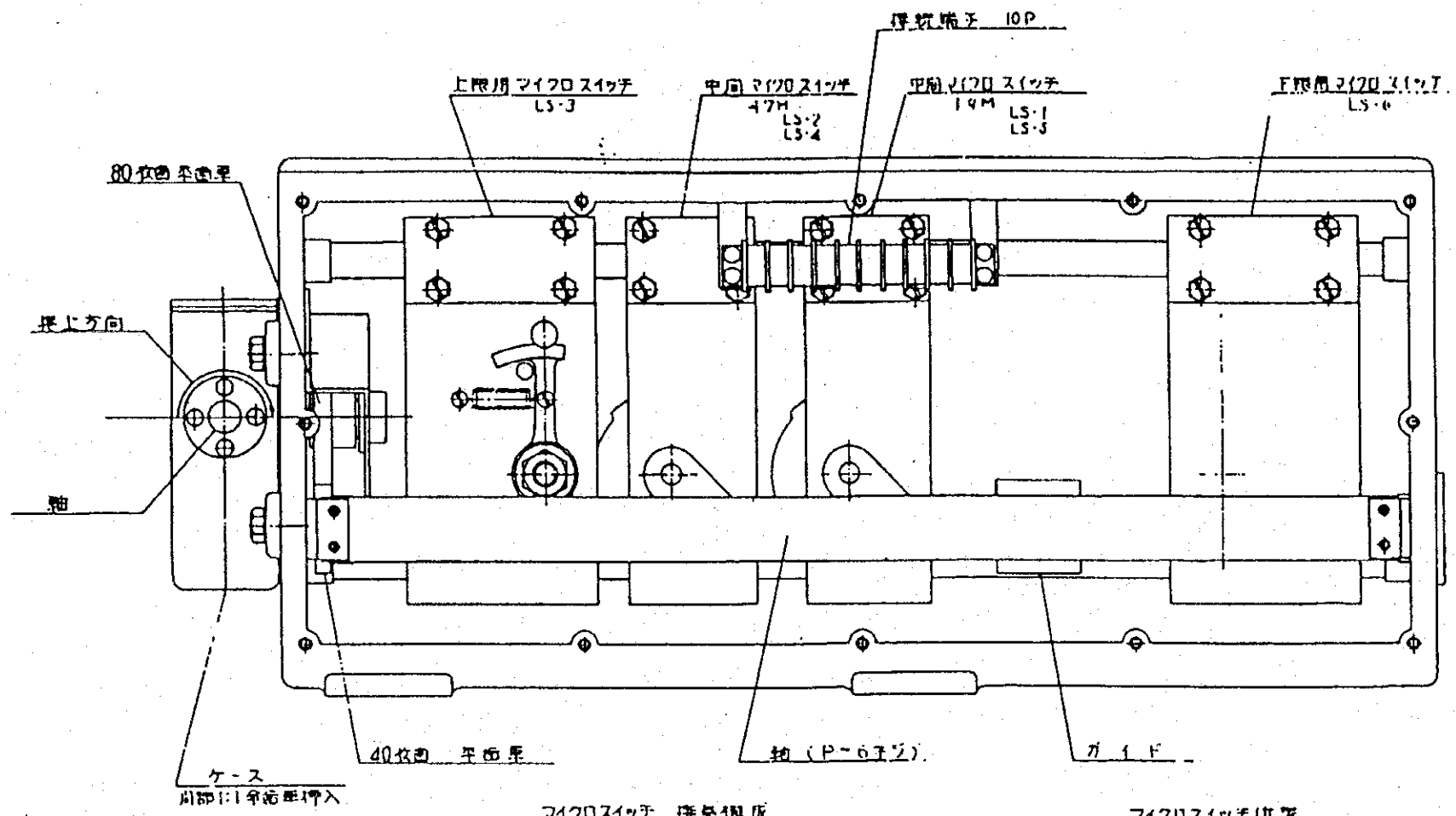
NO	NAME PLATE	
1	SOURCE	
2	NO.1 GATE	
3	↓	
4	EMERGENCY	
5	↑	
6	CLOSE	
7	1.9M	
8	4.7M	
9	OPEN	
10	CLOSE	
11	STOP	
12	OPEN	
13	CLOSE	
14	STOP	
15	OPEN	
16	NO.2 GATE	
17	↓	
18	EMERGENCY	
19	↑	
20	CLOSE	
21	1.9M	
22	4.7M	
23	OPEN	
24	CLOSE	
25	STOP	
26	OPEN	
27	CLOSE	
28	STOP	
29	OPEN	
30	NO.3 GATE	
31	↓	
32	EMERGENCY	
33	↑	
34	CLOSE	
35	1.9M	
36	4.7M	
37	OPEN	
38	CLOSE	
39	STOP	
40	OPEN	
41	CLOSE	
42	STOP	
43	OPEN	

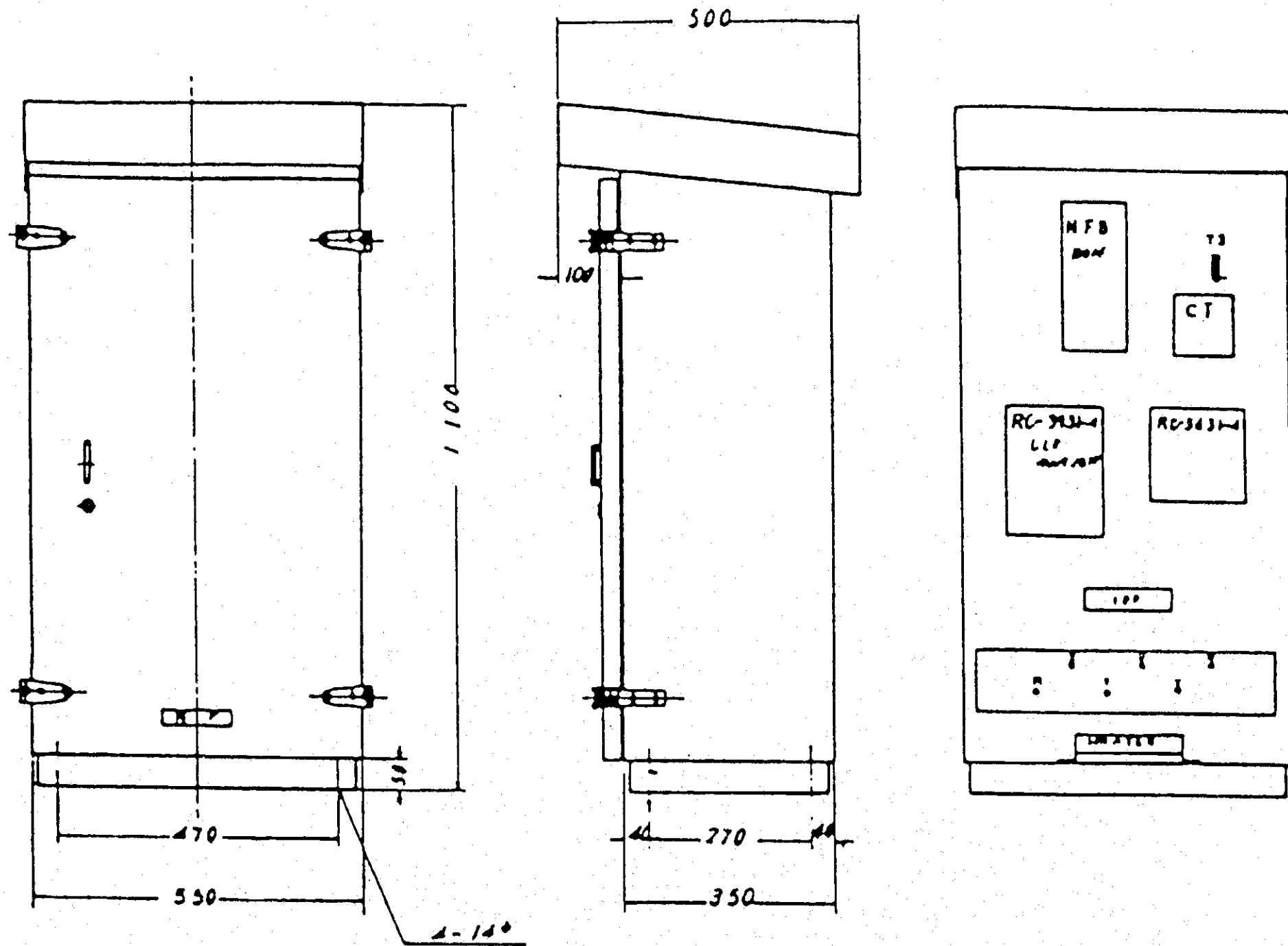
NO	NAME PLATE	
44	NO.4 GATE	
45	↓	
46	EMERGENCY	
47	↑	
48	CLOSE	
49	1.9M	
50	4.7M	
51	OPEN	
52	CLOSE	
53	STOP	
54	OPEN	
55	CLOSE	
56	STOP	
57	OPEN	

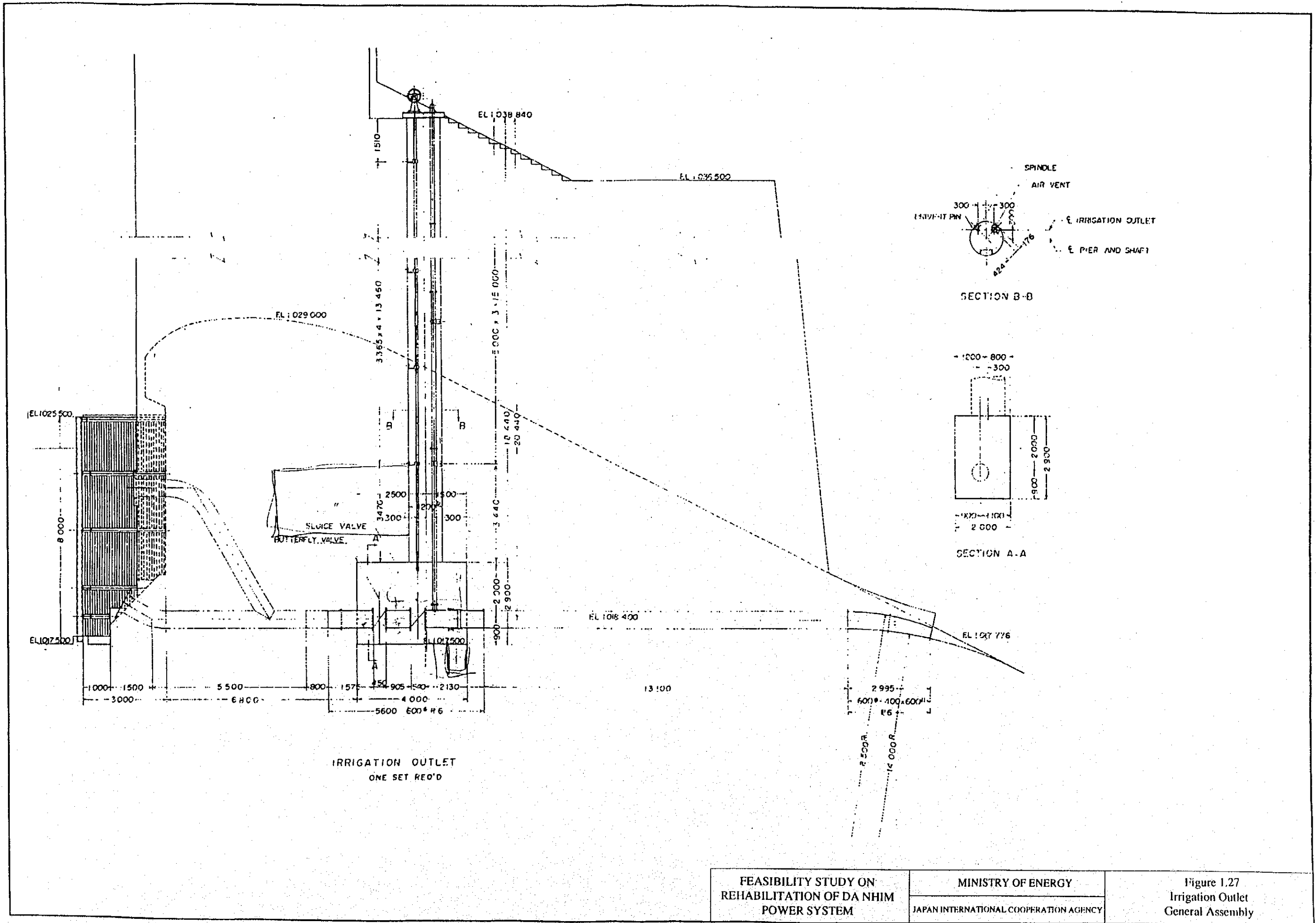


NO	NAME PLATE	
1	SOURCE	
2	NO.1 GATE	
3	↓	
4	EMERGENCY	
5	↑	
6	CLOSE	
7	1.9M	
8	4.7M	
9	OPEN	
10	CLOSE	
11	STOP	
12	OPEN	
13	CLOSE	
14	STOP	
15	OPEN	
16	NO.2 GATE	
17	↓	
18	EMERGENCY	
19	↑	
20	CLOSE	
21	1.9M	
22	4.7M	
23	OPEN	
24	CLOSE	
25	STOP	
26	OPEN	
27	CLOSE	
28	STOP	
29	OPEN	
30	NO.3 GATE	
31	↓	
32	EMERGENCY	
33	↑	
34	CLOSE	
35	1.9M	
36	4.7M	
37	OPEN	
38	CLOSE	
39	STOP	
40	OPEN	
41	CLOSE	
42	STOP	
43	OPEN	

NO	NAME PLATE	
44	NO.4 GATE	
45	↓	
46	EMERGENCY	
47	↑	
48	CLOSE	
49	1.9M	
50	4.7M	
51	OPEN	
52	CLOSE	
53	STOP	
54	OPEN	
55	CLOSE	
56	STOP	
57	OPEN	



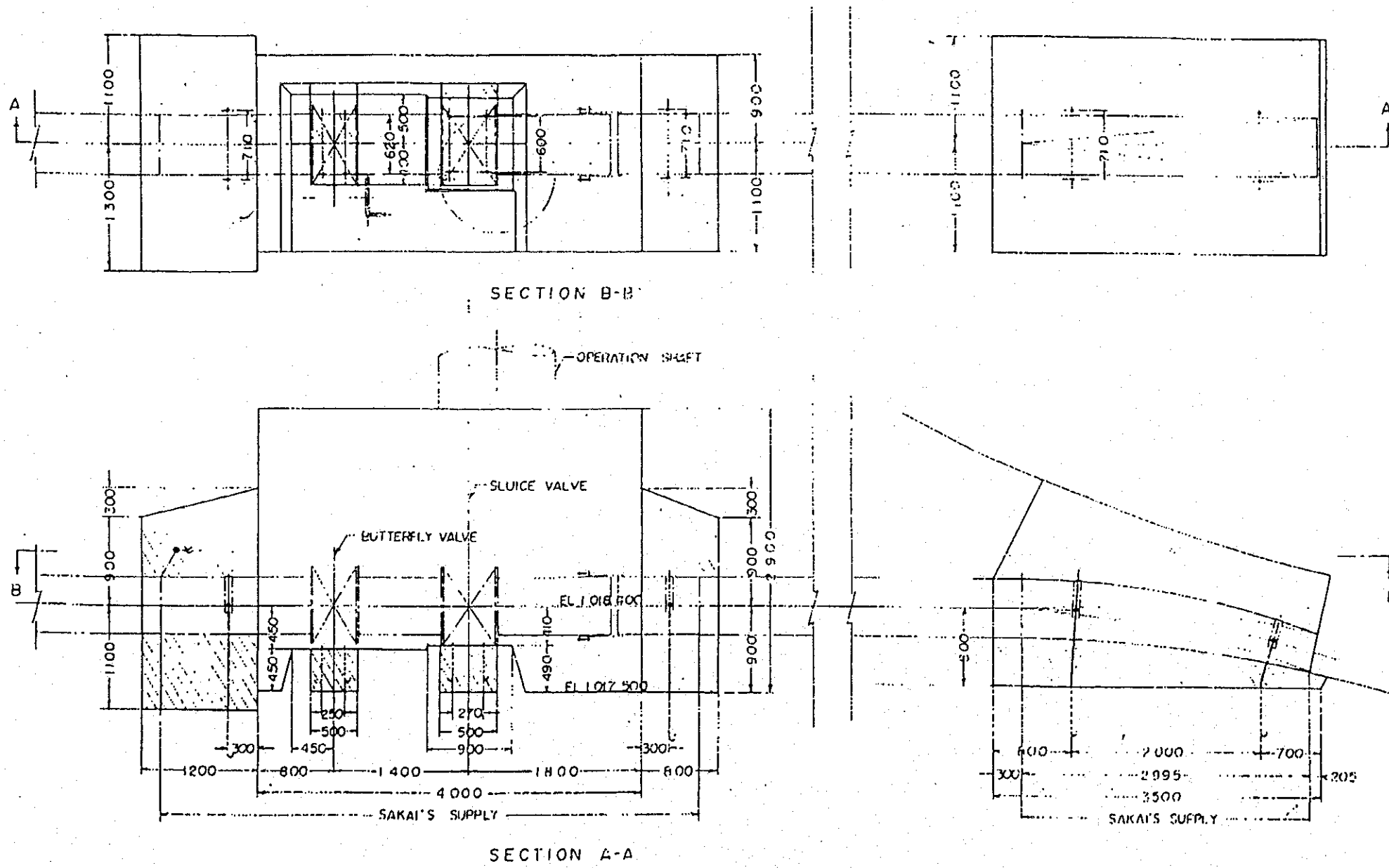




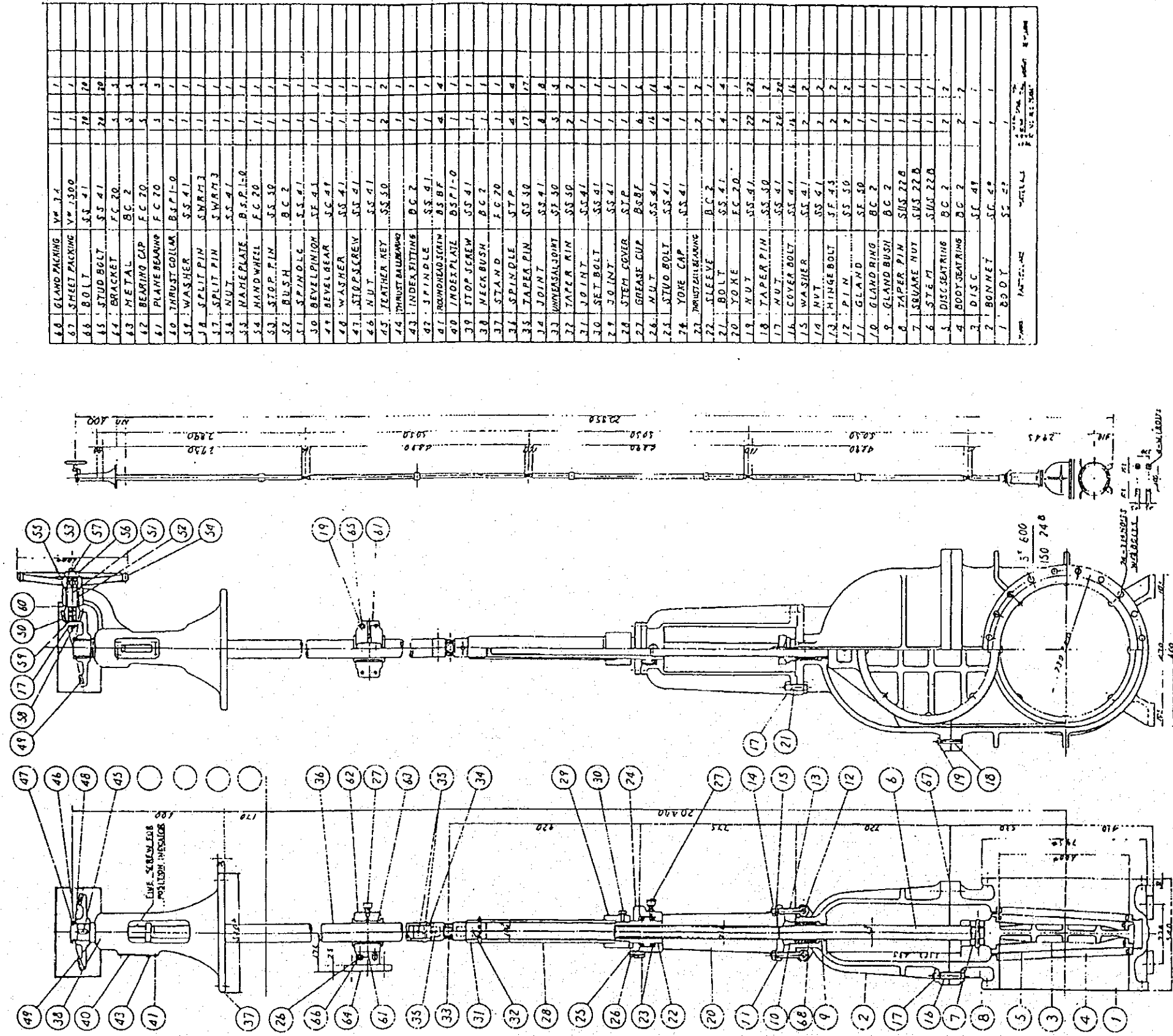
FEASIBILITY STUDY ON
REHABILITATION OF DA NHAM
POWER SYSTEM

MINISTRY OF ENERGY
JAPAN INTERNATIONAL COOPERATION AGENCY

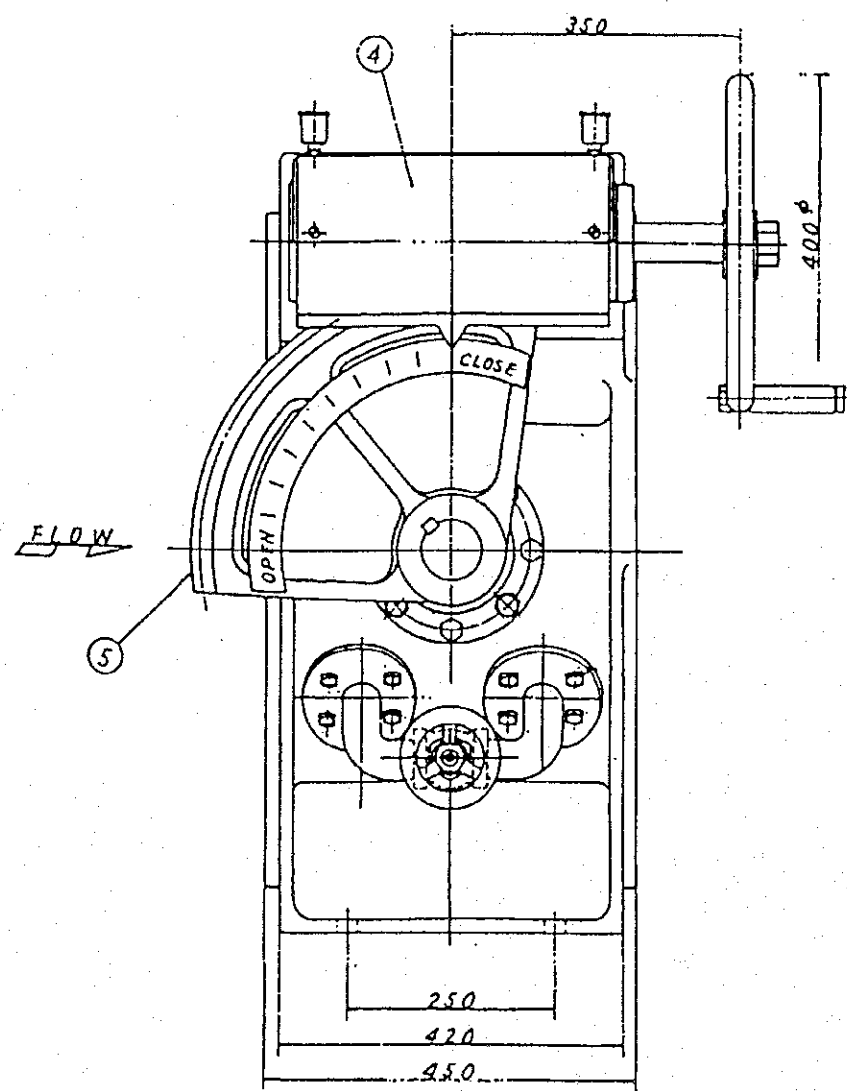
Figure 1.27
Irrigation Outlet
General Assembly



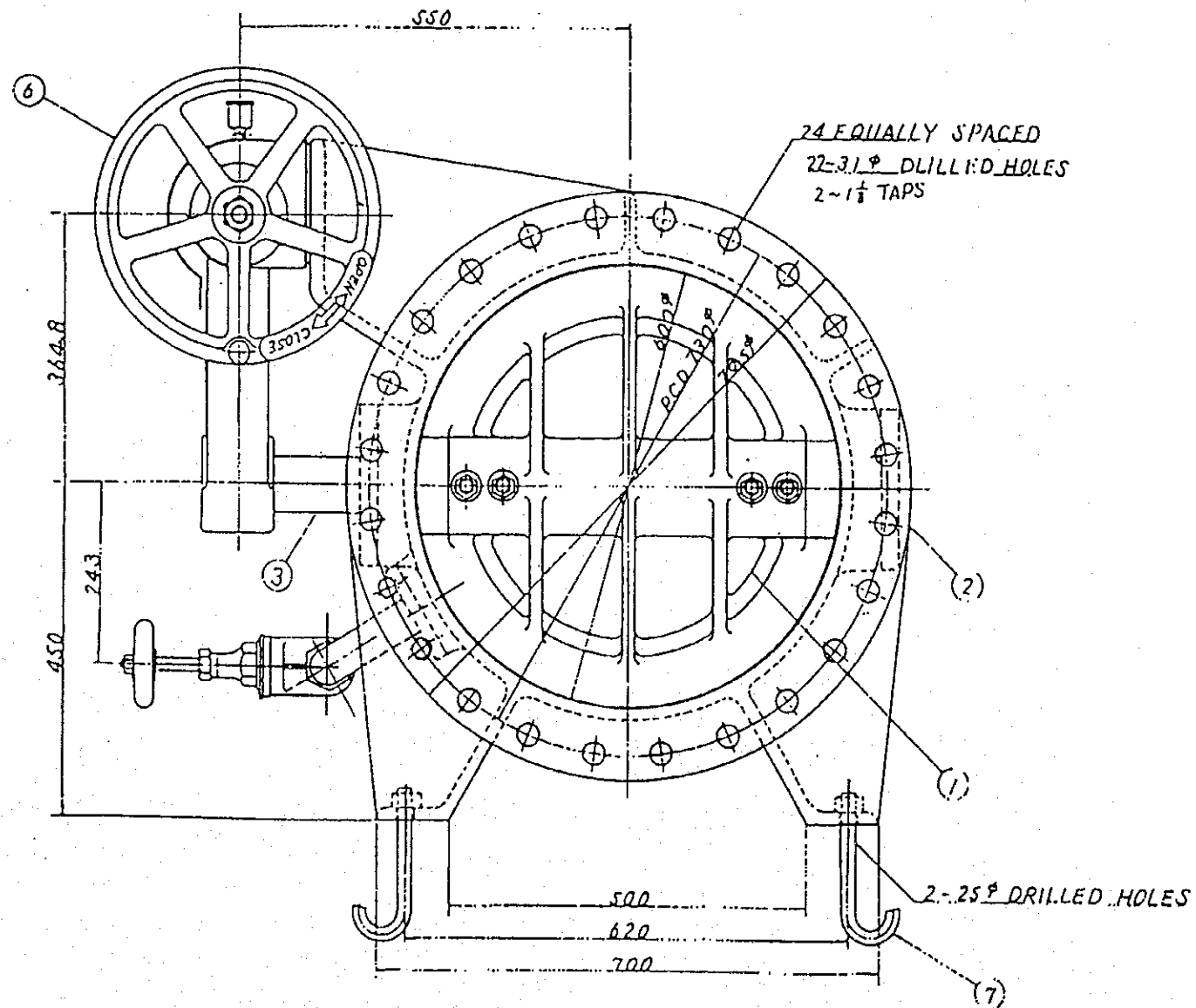
- NOTES:
1. [Hatched box symbol] SHOWS INSTALLATION BLOCKS
 2. ANCHOR BARS FOR ANCHOR BAND: SHALL BE PLUGGED INTO INITIAL CONCRETE BY PURCHASER.



No.	Part Name	Material	Quantity	Remarks
44	GLAND PACKING	Vt 14	1	
45	SHEET PACKING	Vt 1500	1	
46	BOLT	SS 41	10	
47	STUD BOLT	SS 41	24	
48	WASHER	FC 20	3	
49	THRUST COLLAR	B.P.I-0	1	
50	WASHER	SS 41	1	
51	SPLIT PIN	SWRM3	1	
52	SPLIT PIN	SWRM3	1	
53	WASHER	SS 41	1	
54	HAND WHEEL	FC 20	1	
55	STOP PIN	SS 30	1	
56	BUSH	BC 2	1	
57	SPINDLE	SS 41	1	
58	BEVEL PINION	SE 41	1	
59	BEVEL GEAR	SC 41	1	
60	WASHER	SS 41	1	
61	STOP SCREW	SS 41	1	
62	NUT	SS 41	2	
63	LEATHER KEY	SS 50	1	
64	THrust BALL BEARING	BC 2	1	
65	INDEX FITTING	BC 2	1	
66	SPINDLE	SS 41	1	
67	ROUND SCREW	BS BF	4	
68	INDEX PLATE	OSP1-0	1	
69	STOP SCREW	SS 41	1	
70	NECK BUSH	BC 2	1	
71	STAND	FC 20	1	
72	SPINDLE	SS 30	1	
73	TAPER PIN	SS 30	1	
74	JOINT	SS 41	1	
75	UNIVERSAL JOINT	SI 30	1	
76	TAPER RIM	SS 50	2	
77	JOINT	SS 41	1	
78	SET BOLT	SS 41	1	
79	JOINT	SS 41	1	
80	STEEL COVER	STP	1	
81	GREASE CUP	BSBF	1	
82	NUT	SS 41	1	
83	STUD BOLT	SS 41	4	
84	YOKE CAP	SS 41	1	
85	THrust BALL BEARING	BC 2	2	
86	SLEEVE	BC 2	1	
87	BOLT	SS 41	4	
88	YOKE	FC 20	1	
89	NUT	SS 41	22	
90	TAPER PIN	SS 30	2	
91	NUT	SS 41	20	
92	COVER BOLT	SS 41	1	
93	WASHER	SS 41	2	
94	NUT	SS 41	2	
95	HINGE BOLT	SE 41	2	
96	PIN	SS 50	1	
97	GLAND	SE 50	1	
98	GLAND RING	BC 2	1	
99	GLAND BUSH	BC 2	1	
100	TAPER PIN	SS 22B	1	
101	SQUARE NUT	SS 22B	1	
102	STEEL	SS 22B	1	
103	DISC SEATING	BC 2	2	
104	BODY SEATING	BC 2	2	
105	DISC	SC 41	1	
106	BONNET	SC 41	1	
107	BODY	SS 22	1	



SIDE ELEVATION



DOWNSTREAM ELEVATION

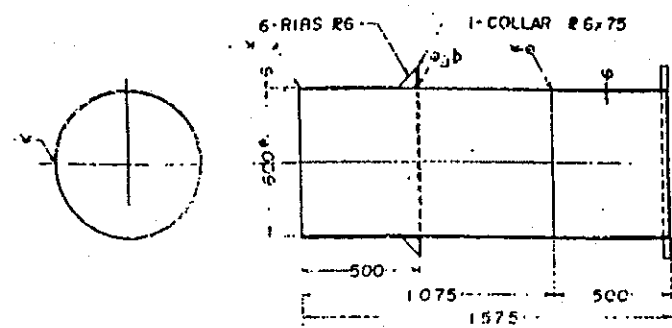
PART NO.	DESCRIPTION	MATERIAL	REMARKS
1	LEAF	CAST STEEL	SC46
2	BODY	CAST STEEL	SC46
3	STEM	STAINLESS STEEL	SUS22
4	WORM GEAR	FORGED STEEL	SFS0
5	WORM WHEEL GEAR	CAST STEEL	SC42
6	HANDLE	CAST IRON	FC20
7	ANCHOR BOLTS	ROLLED STEEL	SS41

DESIGN PRESSURE	2.4	kg/cm ²
TEST PRESSURE	3.6	kg/cm ²

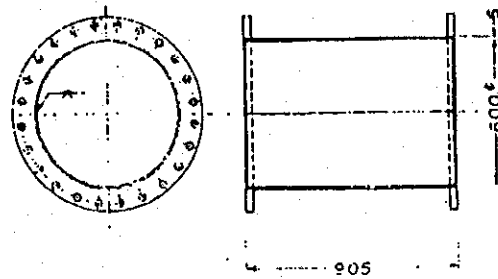
FEASIBILITY STUDY ON
REHABILITATION OF DA NHIM
POWER SYSTEM

MINISTRY OF ENERGY
JAPAN INTERNATIONAL COOPERATION AGENCY

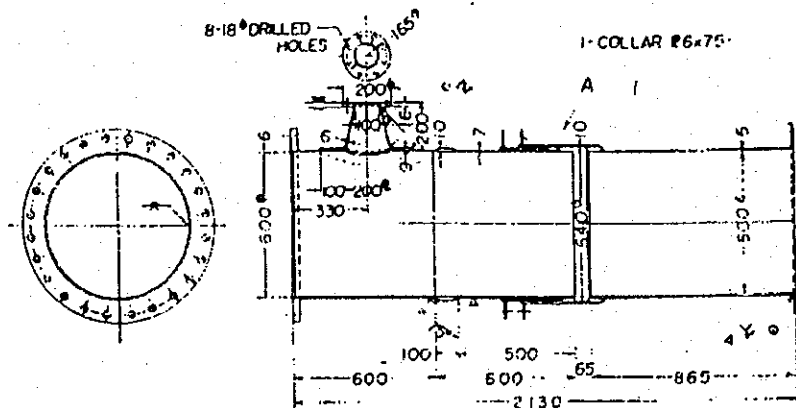
Figure 1.30
Irrigation Outlet
600 mm Butterfly Valve



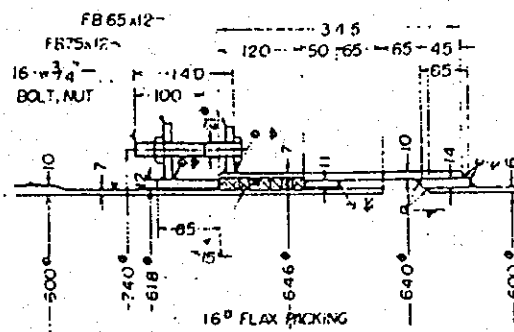
PIPE NO. 1
SS 41
NO. OF REQ'D 1



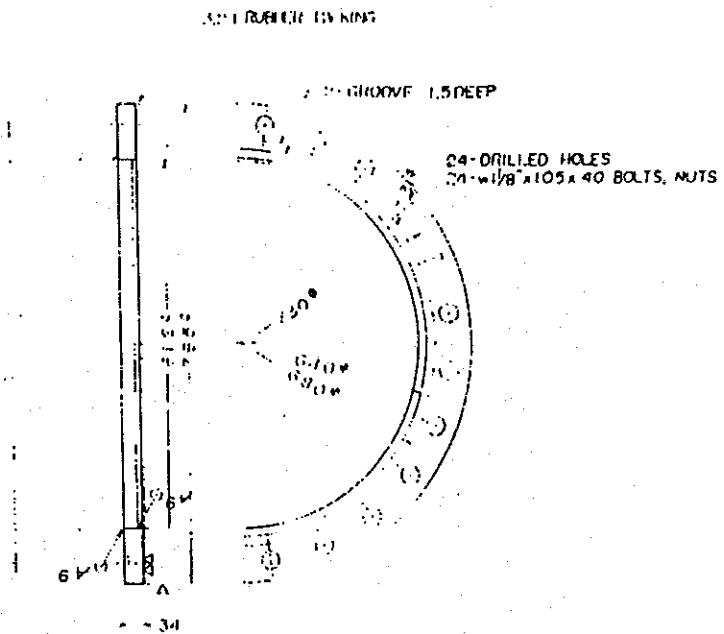
PIPE NO. 2
SS 41
NO. OF REQ'D 1



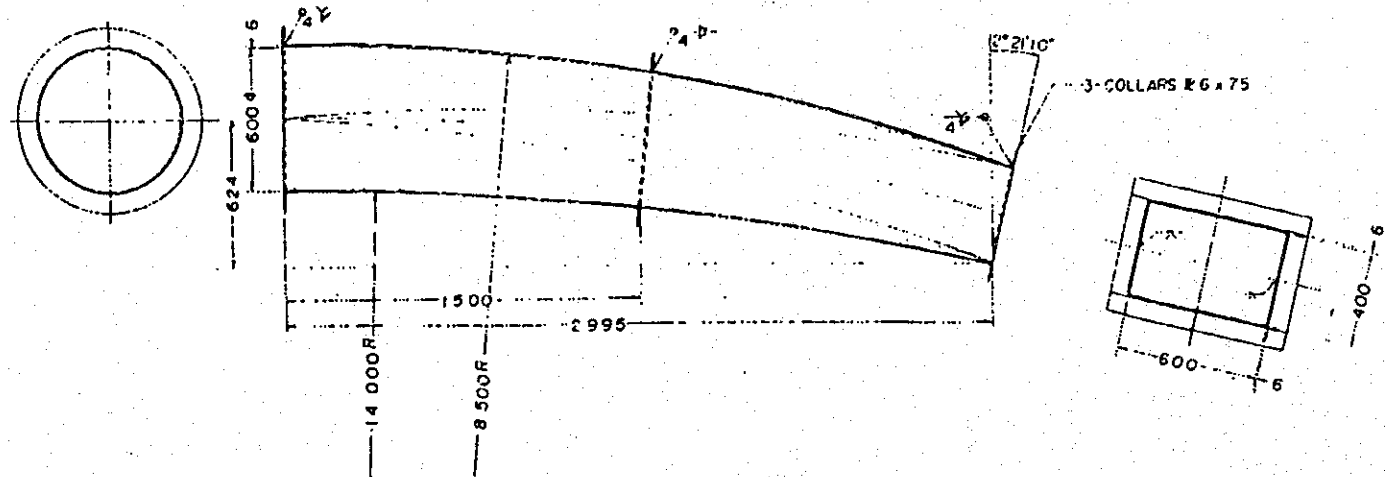
PIPE NO. 3
SS 41
NO. OF REQ'D 1



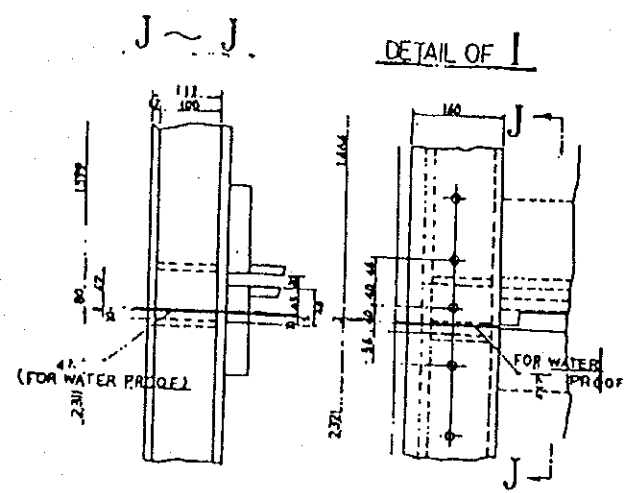
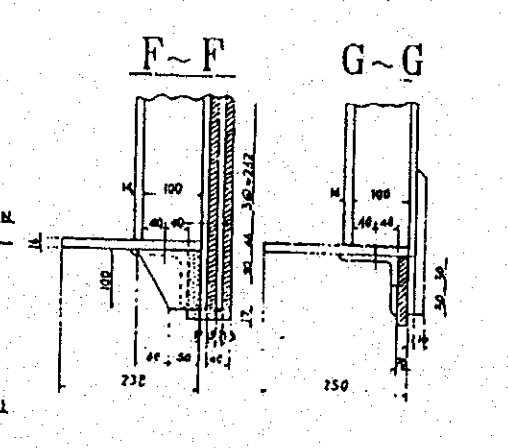
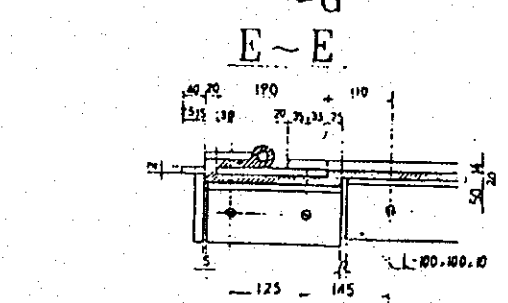
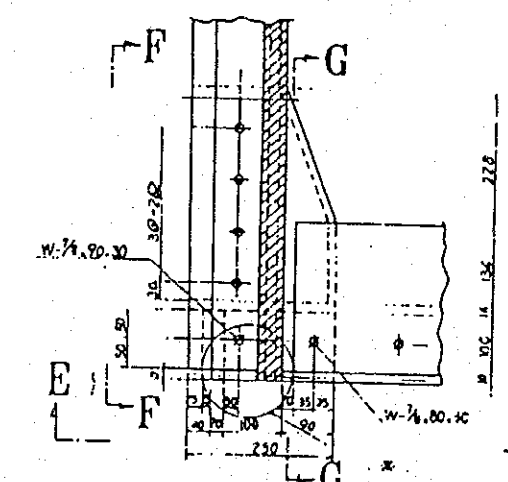
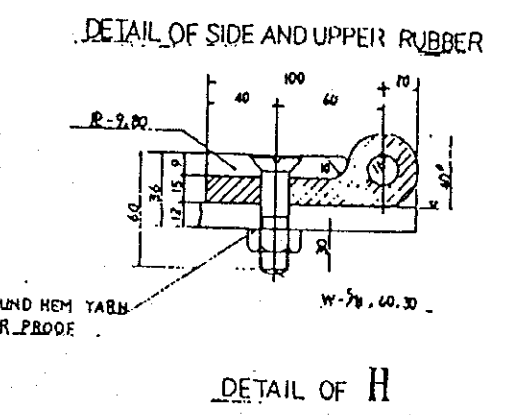
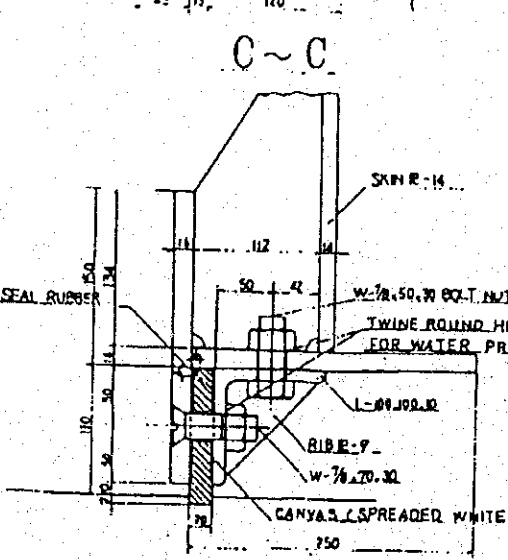
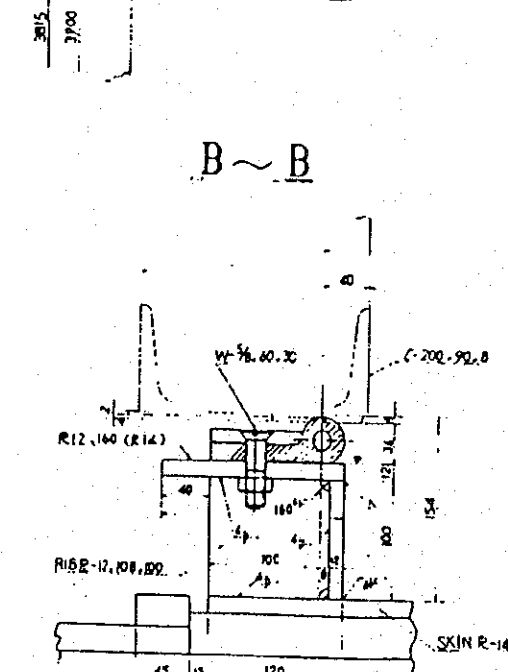
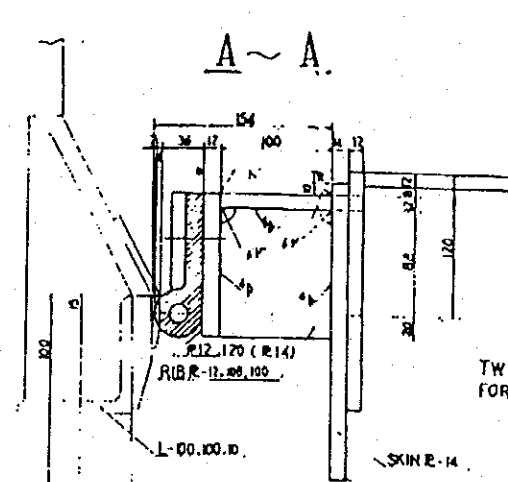
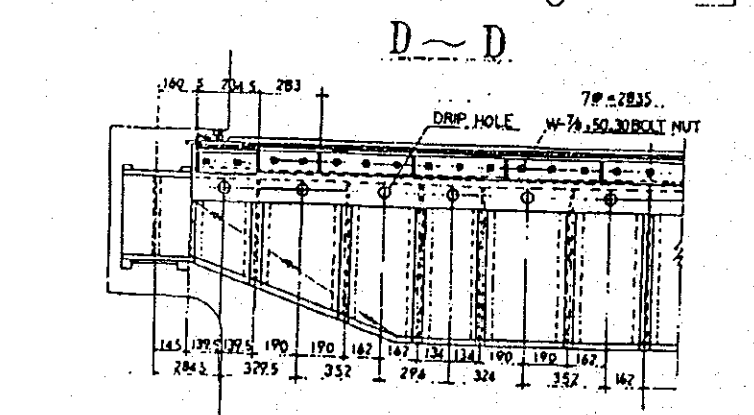
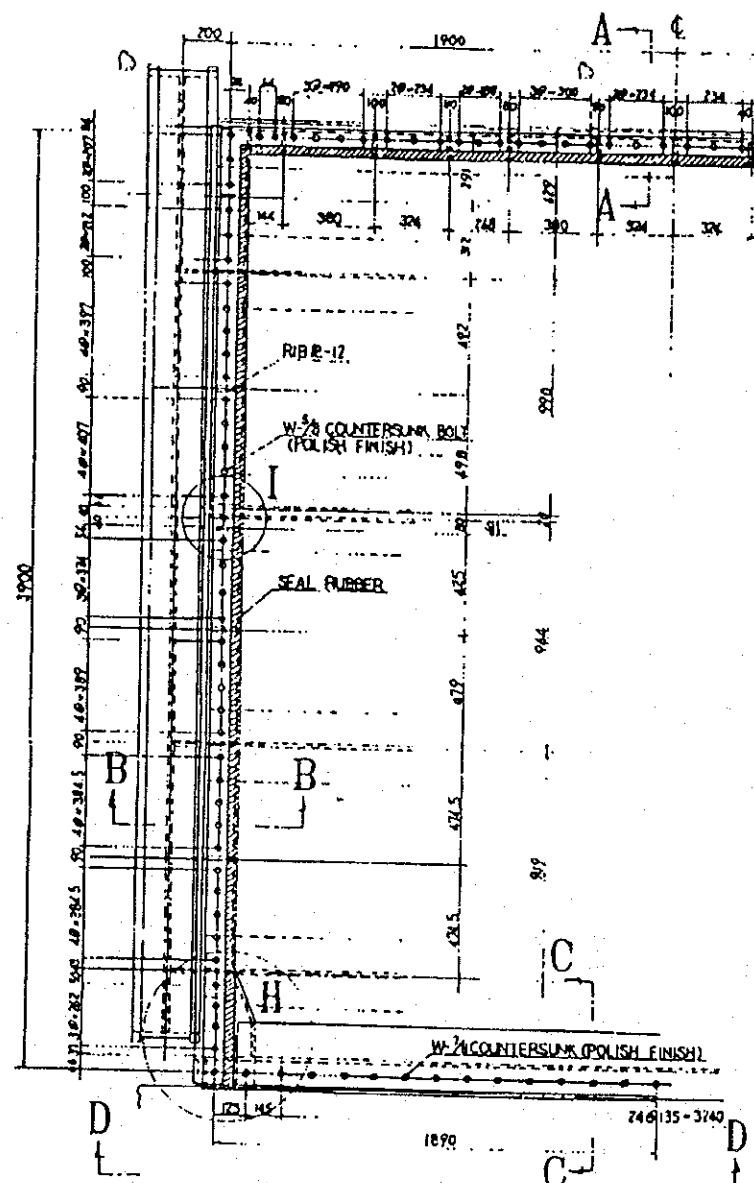
DETAIL A



FLANGE
SS 41
NO. OF REQ'D 4



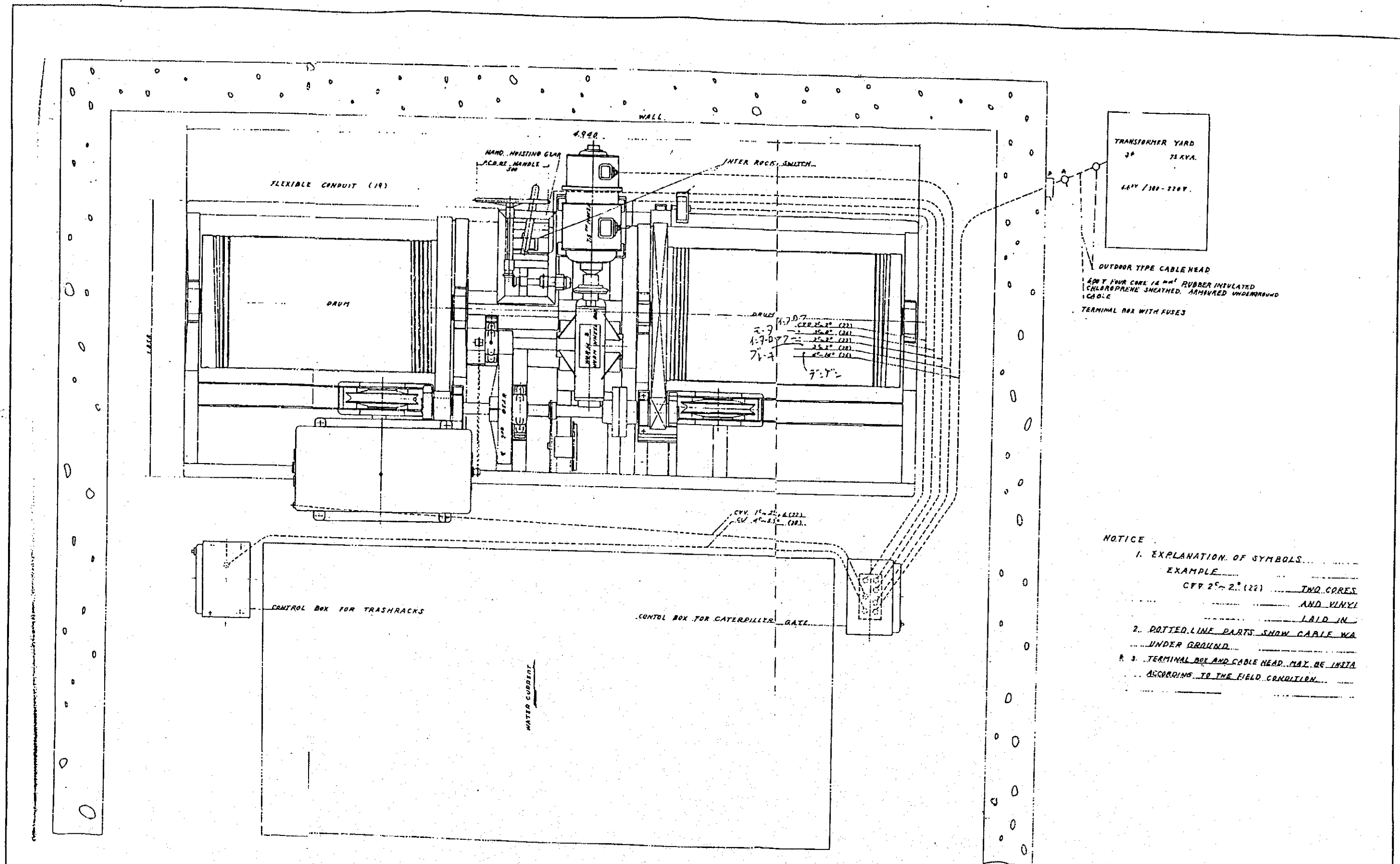
PIPE NO. 4
SS 41
NO. OF REQ'D 1



PROPERTIES OF SEAL RUBBER

TENSILE STRENGTH (BEFORE AGEING)	> 180 ^{kg} /cm ²
TENSILE STRESS (AFTER 192-HOUR AGEING)	> 145 ^{kg} /cm ²
ELONGATION (BEFORE AGEING)	> 500 %
ELONGATION (AFTER 192-HOUR AGEING)	> 400 %
HARDNESS (JIS HARDNESS)	> 50 ~ 60

- NOTES
- 1) SIDE, UPPER AND BOTTOM RUBBER ARE CONNECTED IN SHOP.
 - 2) BOTTOM OF SIDE RUBBER (SKIN R-14) ARE MANUFACTURED 5" LONGER THAN DIMENSION OF DRAWING AND ADJUSTED ACCORDING TO DIMENSION OF DRAWING IN FIELD.

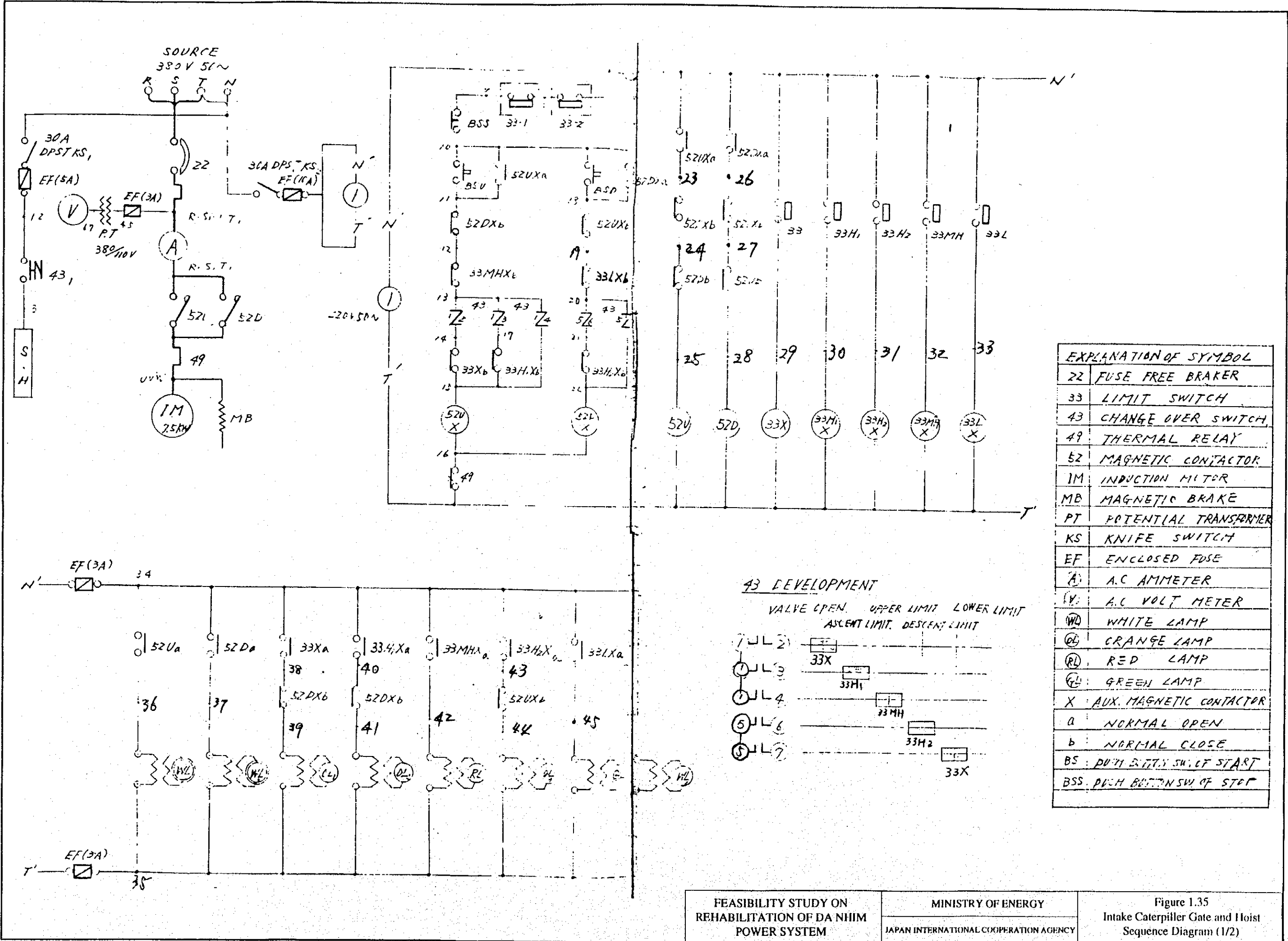


FEASIBILITY STUDY ON REHABILITATION OF DA NHIM POWER SYSTEM	MINISTRY OF ENERGY	Figure 1.33 Intake Caterpillar Gates and Hoist Electric Cable Layout
	JAPAN INTERNATIONAL COOPERATION AGENCY	

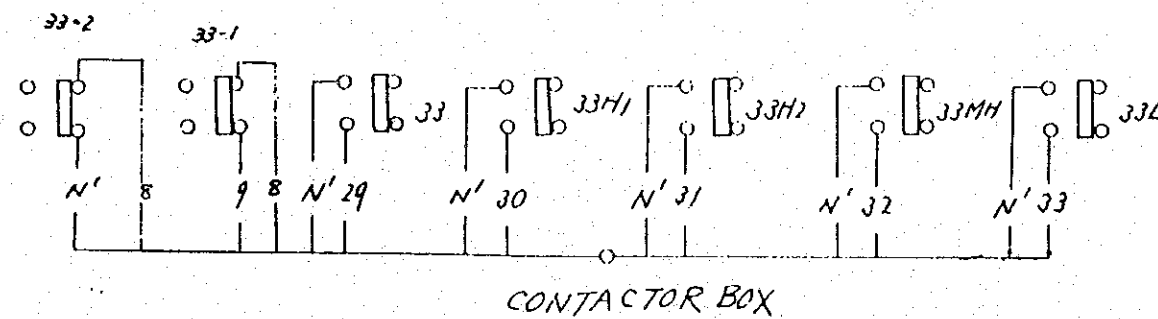
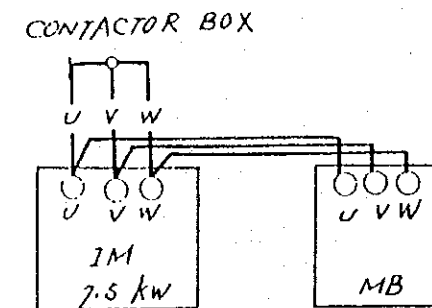
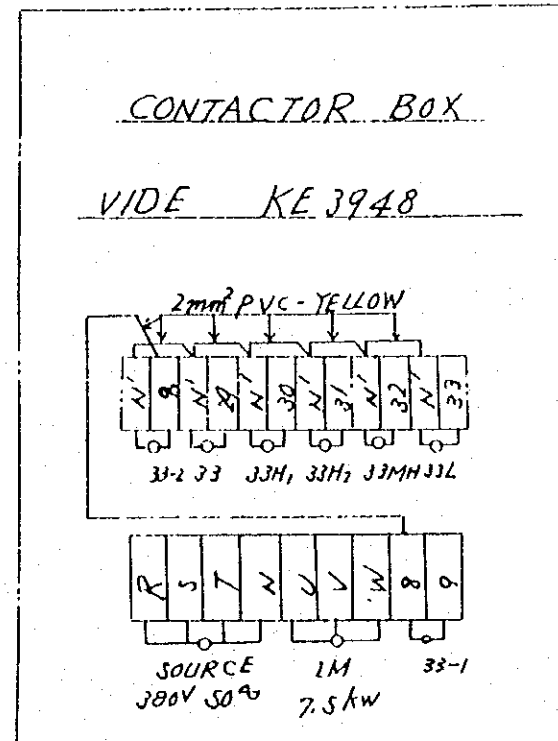
名 称	規格	数量	備 考
△ 5kV絶縁フックレス鋼甲線架ケーブル	4 ^c -14 ^{mm}	30 ^m	地中直埋用(600V用)
△ 全上用ケーブルヘッド		2 ^ヶ	屋外用
厚鋼電線管	(22)	30 ^m	
・	(28)	20 ^m	
・	(36)	35 ^m	
フレキシブルコンジット	(19)	3 ^m	ロータリリミットスイッチ1ヶ分使用
ジャケット形多心制御用ビニールケーブル	1 ^c -2 ^{mm}	100 ^m	CVV
・	2 ^c -2 ^c	30 ^m	CVV
・	3 ^c -2 ^c	16 ^m	CVV
・	3 ^c -8 ^c	16 ^m	CVV
・	4 ^c -5.5 ^c	20 ^m	CVV
△ 屋外用PVC電線(0.7mm径)	1 ^c -14 ^{mm}	10 ^m	屋外用・決壊・修繕に使用
1-マルチバンド	(36)	4 ^ヶ	
ロックナット(厚鋼用)	(22)	8 ^ヶ	
・()	(28)	8 ^ヶ	
・()	(36)	8 ^ヶ	
ブッシング(厚鋼用)	(16)	4 ^ヶ	
・()	(22)	4 ^ヶ	
・()	(28)	4 ^ヶ	
・()	(36)	4 ^ヶ	
C形エルボA(厚鋼用)	(22)	2 ^ヶ	制御室内用～配電盤内使用(コンクリート基上)
C形エルボB(厚鋼用)	(36)	1 ^ヶ	電動機～()
丸形突出ボックス(厚鋼用2ヶ止)	(28)	1 ^ヶ	電動ブレーキ～()
・()	(36)	1 ^ヶ	弁圧機～()
△ カップリング(厚鋼用)	(22)	12 ^ヶ	
△ ()	(28)	8 ^ヶ	
△ ()	(36)	20 ^ヶ	
△ エキスパンカップリング(厚鋼用)	(22)	2 ^ヶ	
△ ()	(28)	2 ^ヶ	
△ ()	(36)	2 ^ヶ	
オドル	(22)	6 ^ヶ	
・	(36)	10 ^ヶ	
コンビネーションカップリング	22-19T	1 ^ヶ	ロータリリミットスイッチ回路の電線～フレキシブルケーブルに使用
ストレートボックスコネクタ	22-19T	1 ^ヶ	フレキシブルケーブルに使用

△ 仮定を示す

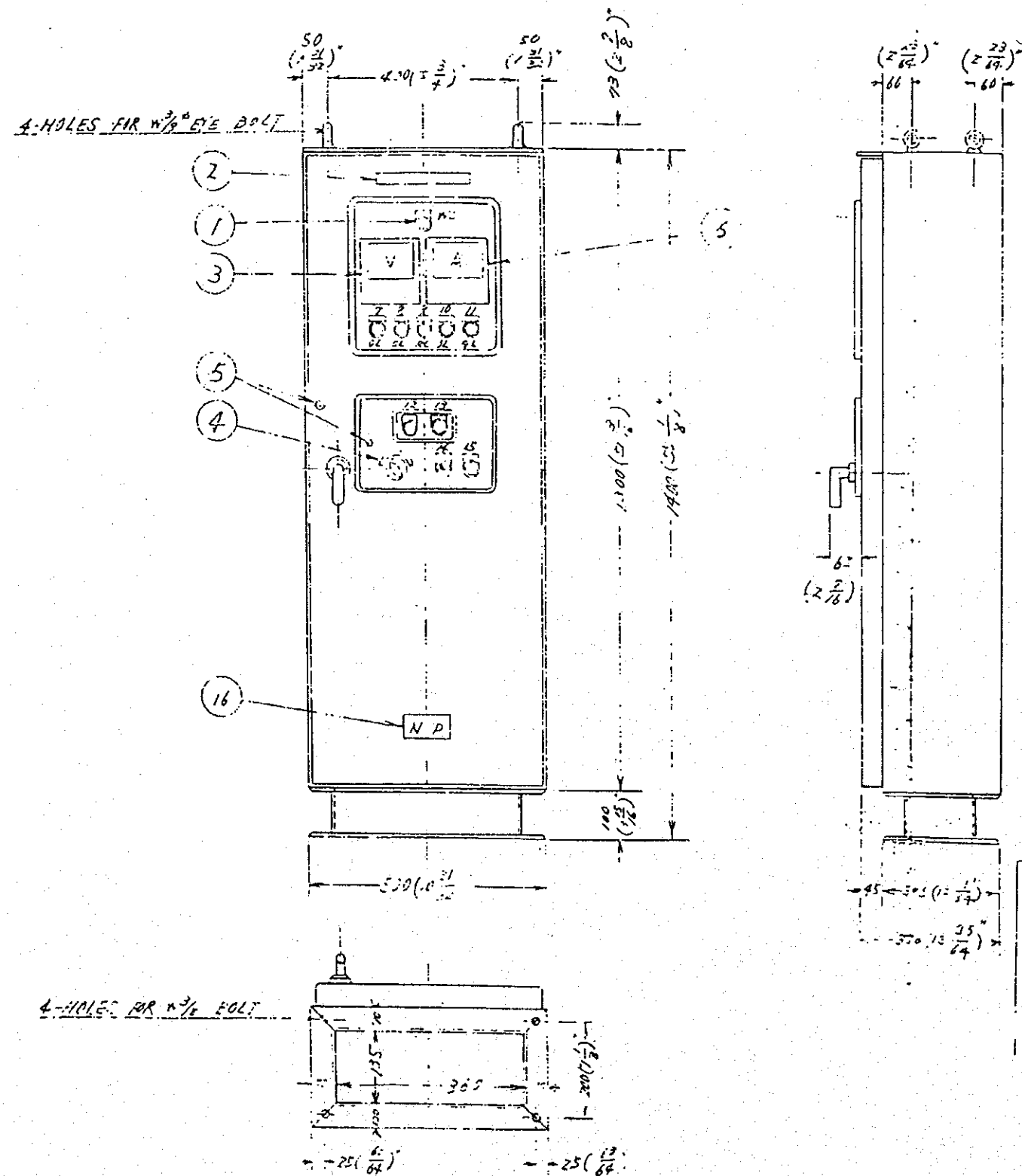
(注) 本表は概算工費計算に用いる。
 注: 0.7mm径の銅線表示は、0.7mm



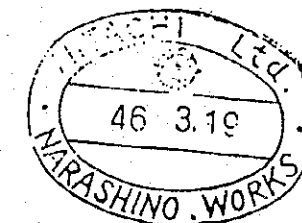
EXPLANATION OF SYMBOL	
22	FUSE FREE BRAKER
33	LIMIT SWITCH
43	CHANGE OVER SWITCH
49	THERMAL RELAY
52	MAGNETIC CONTACTOR
IM	INDUCTION MOTOR
MB	MAGNETIC BRAKE
PT	POTENTIAL TRANSFORMER
KS	KNIFE SWITCH
EF	ENCLOSED FUSE
A	A.C. AMMETER
V	A.C. VOLT METER
WL	WHITE LAMP
GL	GREEN LAMP
RL	RED LAMP
XL	AUX. MAGNETIC CONTACTOR
a	NORMAL OPEN
b	NORMAL CLOSE
BS	PUSH BUTTON SW. OF START
BSS	PUSH BUTTON SW. OF STOP



SEQUENCE DIAGRAM KE 53386

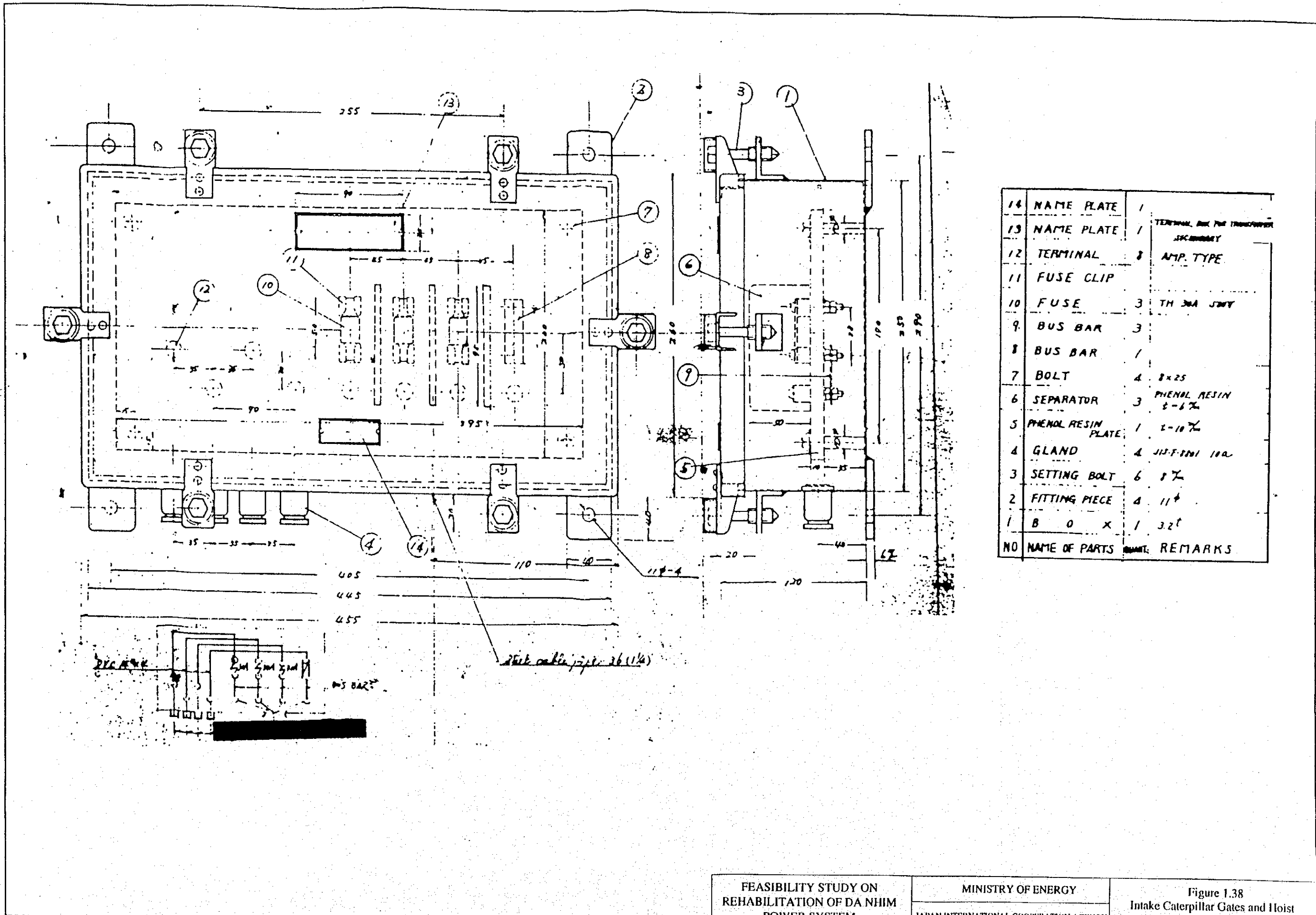


EXPLANATION OF SYMBOL	
1	CIRCUIT SOURCE (WHITE LAMP)
2	USE NAME PLATE
3	AC VOLT METER
4	CHANGE OVER SWITCH
5	KEY
6	AC AMPMETER
7	VALVE OPEN
8	ASCENT LIMIT
9	UPPER LIMIT
10	DESCENT LIMIT
11	LOWER LIMIT
12	ASCENT START
13	DESCENT START
14	CHANGE OVER SWITCH
15	PUSH BUTTON SW. OF STOP
16	NAME PLATE
17	
18	



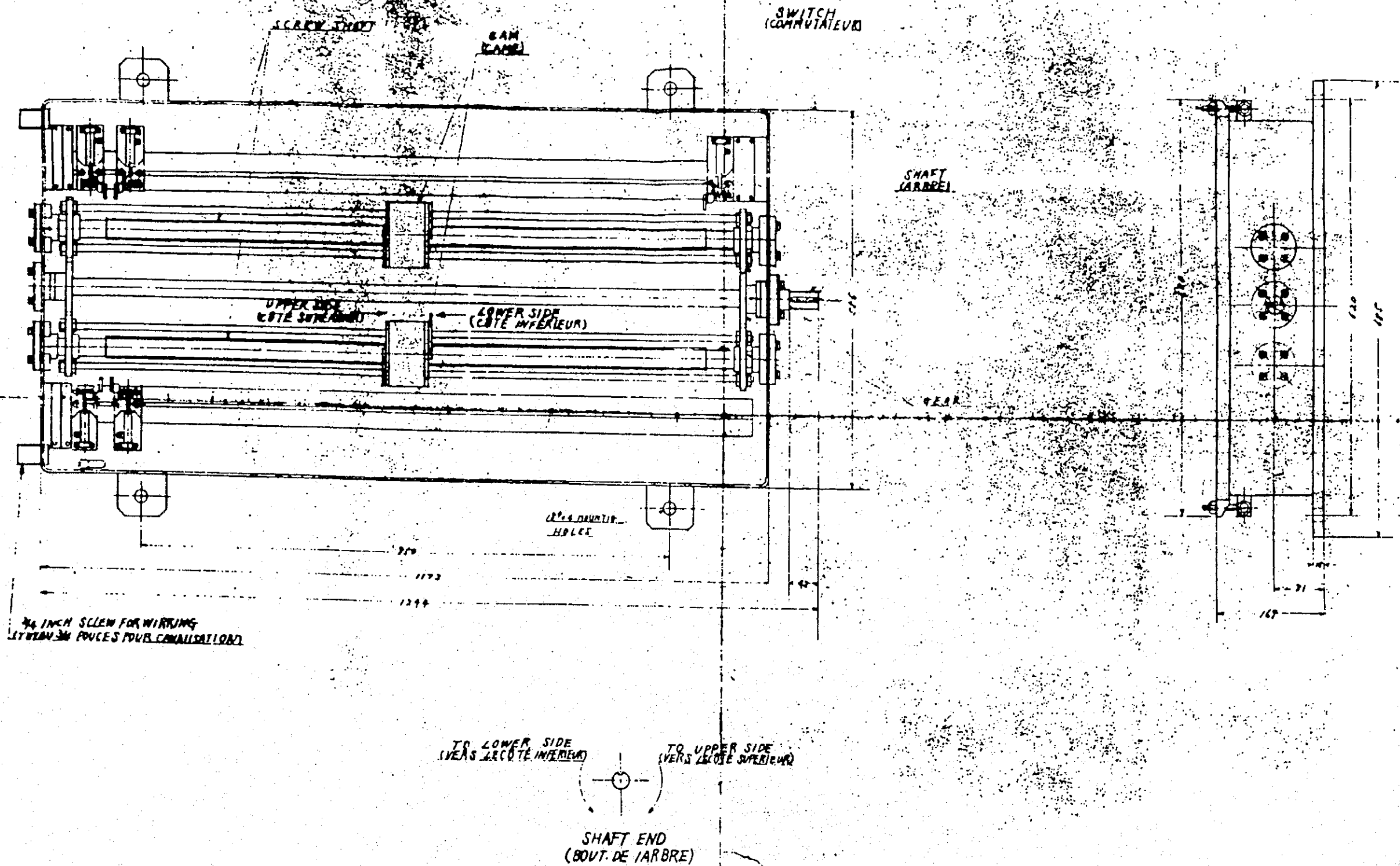
NOTICE
 ALL DIMENSION IN PARENTHESES ARE GIVEN APPROXIMATELY
 IN INCH UNIT AND ALSO SHOWN ACCURATELY IN MM.
 SYSTEM

THIRD ANGLE PROJECTION



14	NAME PLATE	1	
13	NAME PLATE	1	TERMINAL BOX FOR TRANSFORMER SECONDARY
12	TERMINAL	8	AMP. TYPE
11	FUSE CLIP		
10	FUSE	3	TH 30A JMT
9	BUS BAR	3	
8	BUS BAR	1	
7	BOLT	4	8x25
6	SEPARATOR	3	PHENOL RESIN 2-6%
5	PHENOL RESIN PLATE	1	2-10%
4	GLAND	4	JIS-F-100 100
3	SETTING BOLT	6	8%
2	FITTING PIECE	4	11%
1	B O X	1	32%
NO	NAME OF PARTS	QUANTITY	REMARKS

SCHEMATIC DIAGRAM OF SCREW TYPE LIMIT SWITCH (ZLT-SDS/10)



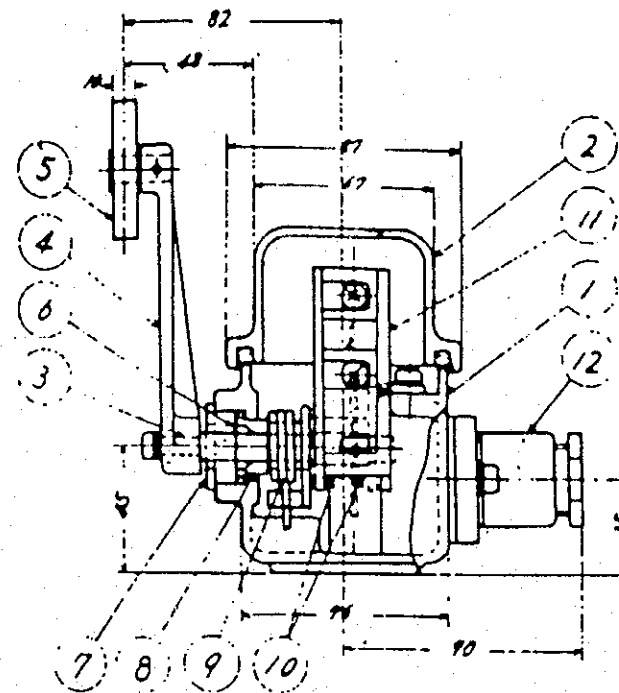
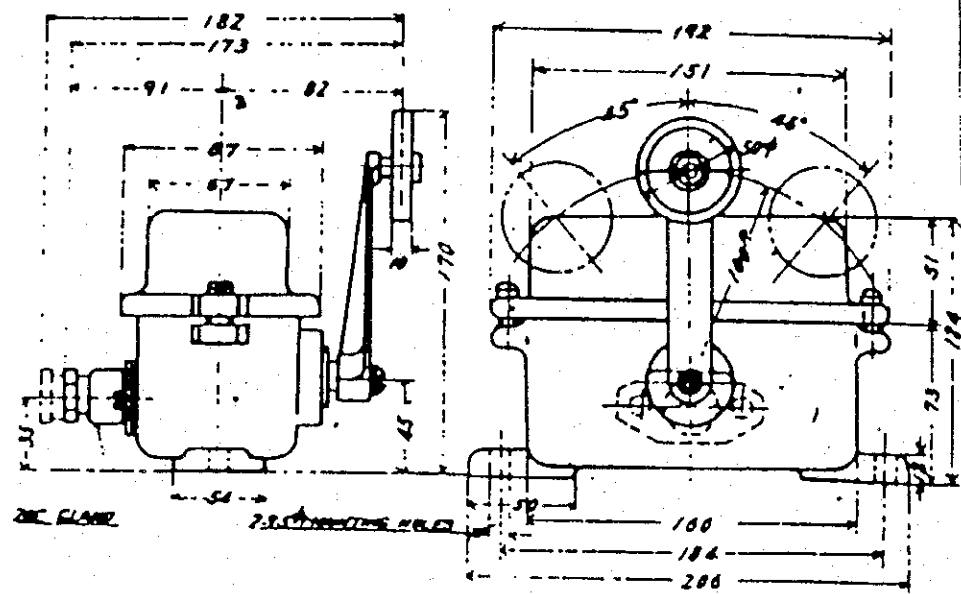
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POWER SYSTEM

MINISTRY OF ENERGY
JAPAN INTERNATIONAL COOPERATION AGENCY

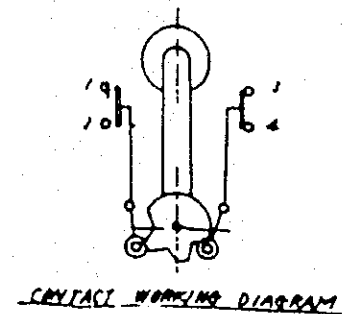
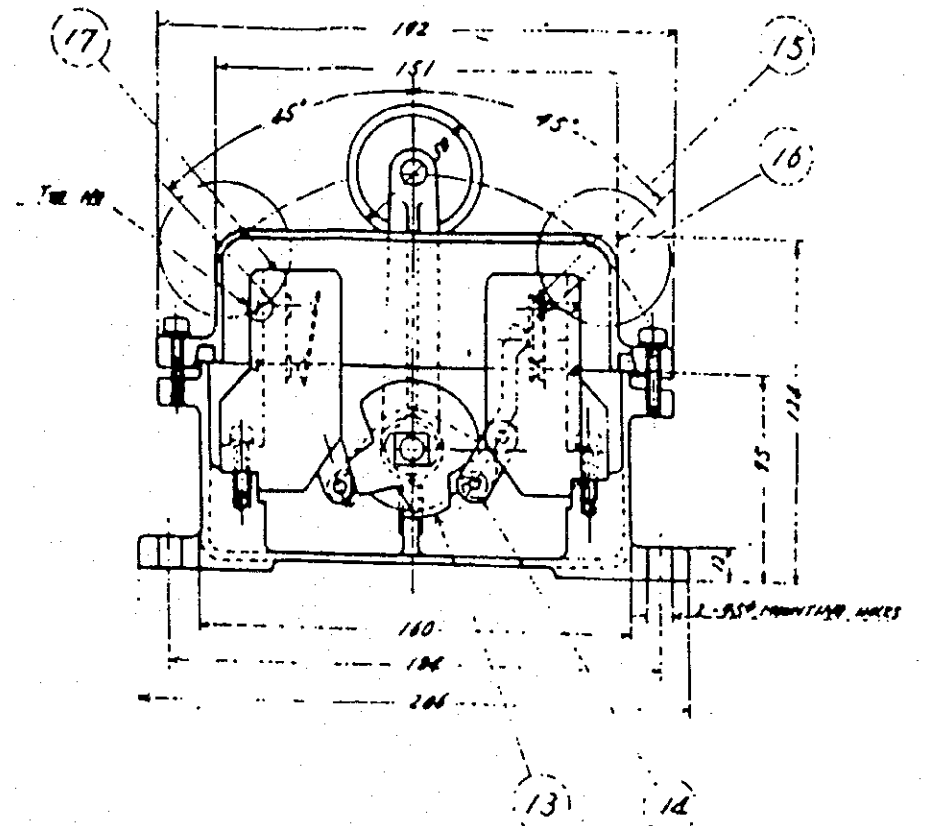
Figure 1.39
Intake Caterpillar Gates and Hoist
Limit Switch Box

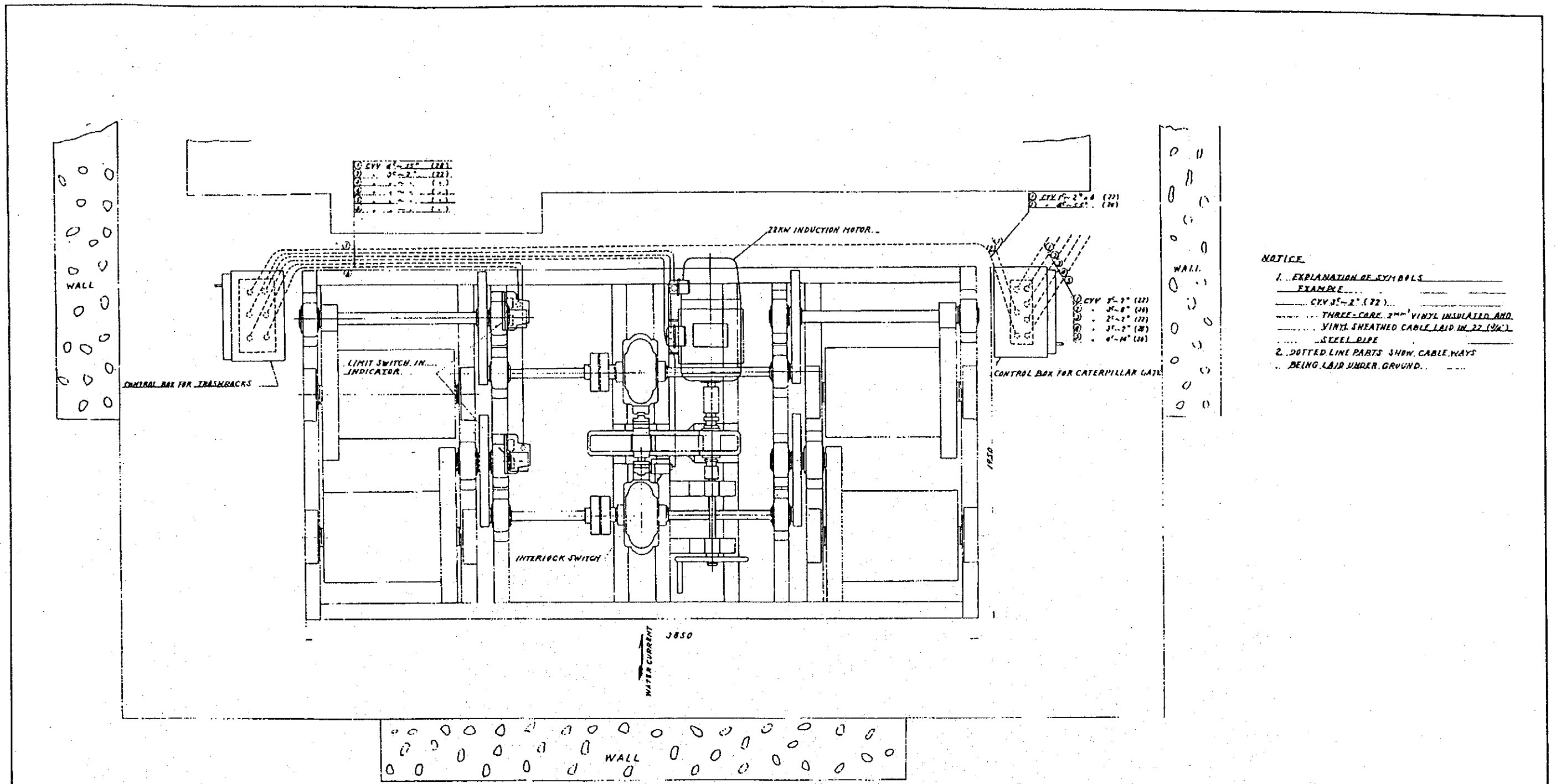
LIMIT SWITCH DIMENSIONS IN MM

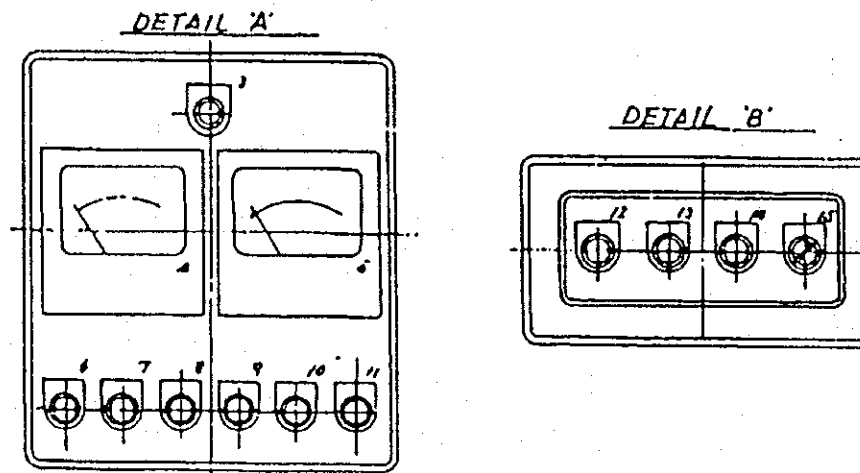
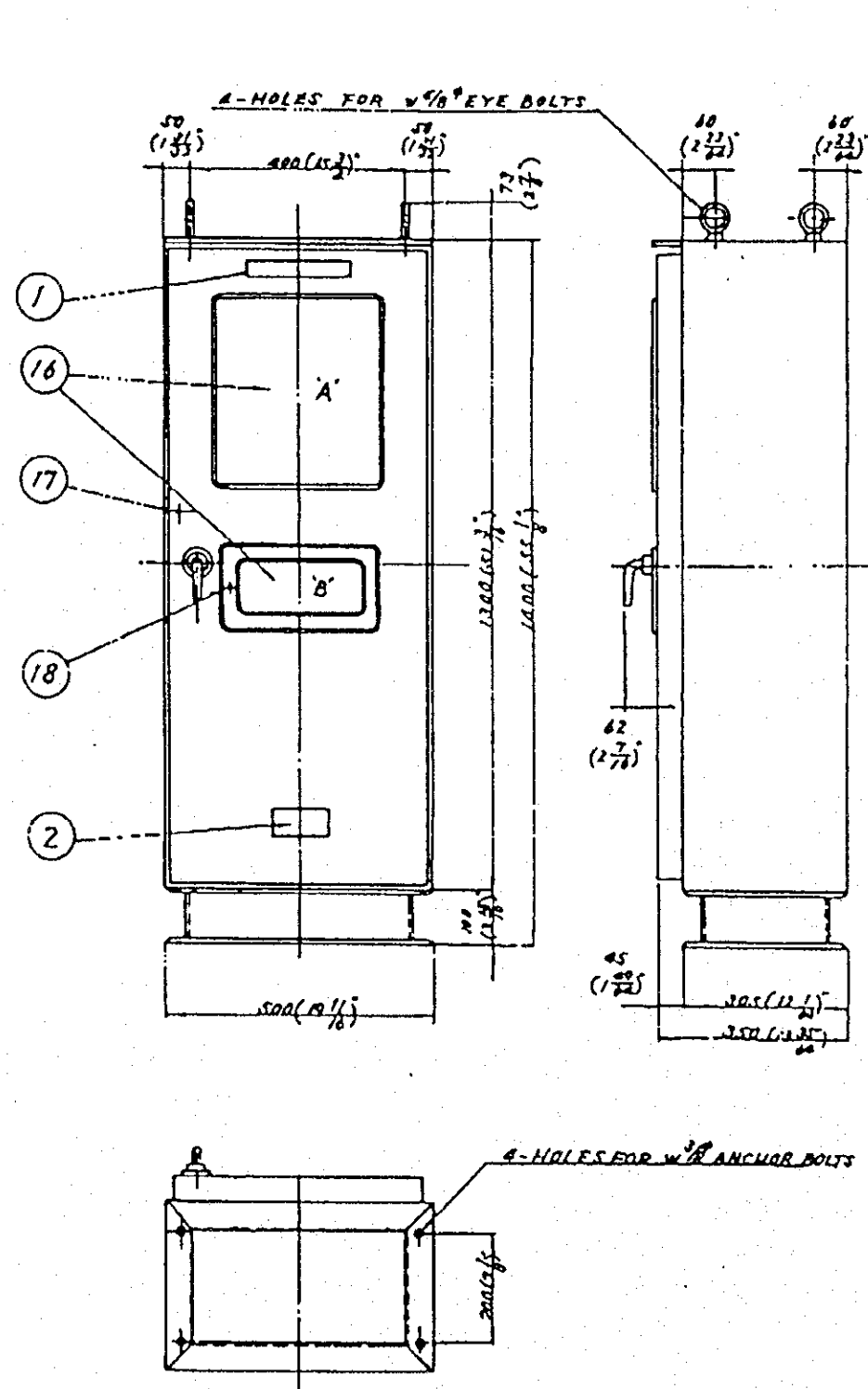
TYPE	FORM	VOLTS	AMPS	WEIGHT
ZRJ	SD-110	AC 600	3	4.2



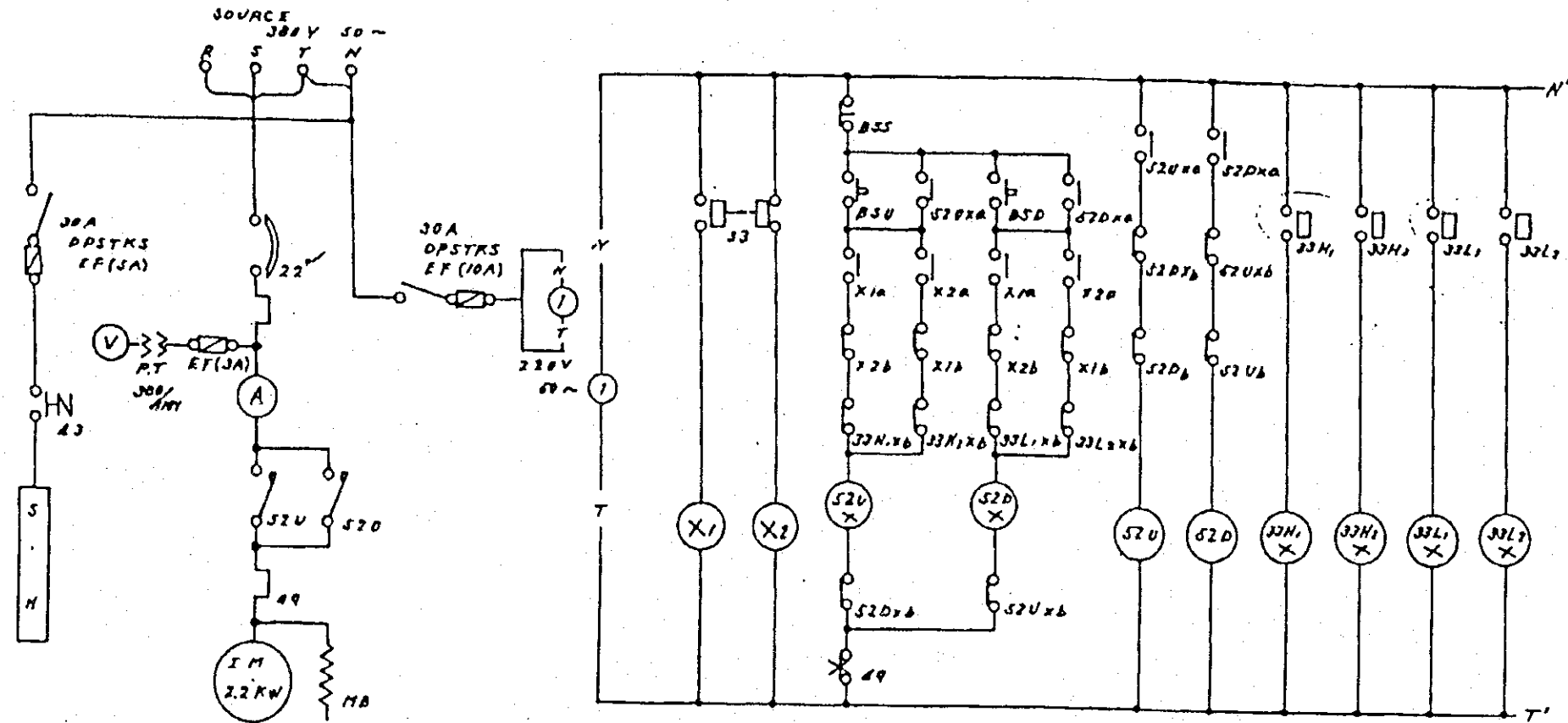
PARTS NO.	NAME OF PARTS	MATERIAL	REMARKS
1	CASE	CASTING IRON	
2	COVER	DITTO	
3	SPINDLE	STAINLESS	
4	LEVER	IRON	
5	ROLLER	DITTO	
6	PACKING	FELT	
7	BUSHING	BRASS	
8	DITTO	DITTO	
9	SPRING	STAINLESS	
10	DISTANT PIECE	IRON	
11	PLATE	MALDED RESIN	
12	ZINC GLAND	BRASS	
13	CAM	IRON	
14	ROLLER	DITTO	
15	MOVING CONTACT	BRASS (10 PARTS)	
16	FIXED CONTACT	DITTO	
17	BASE	MALDED RESIN	



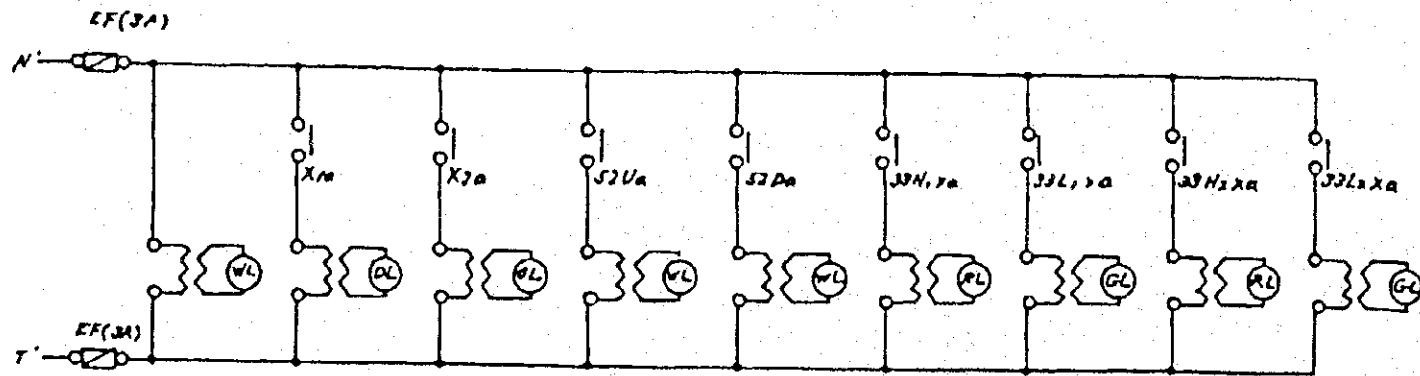




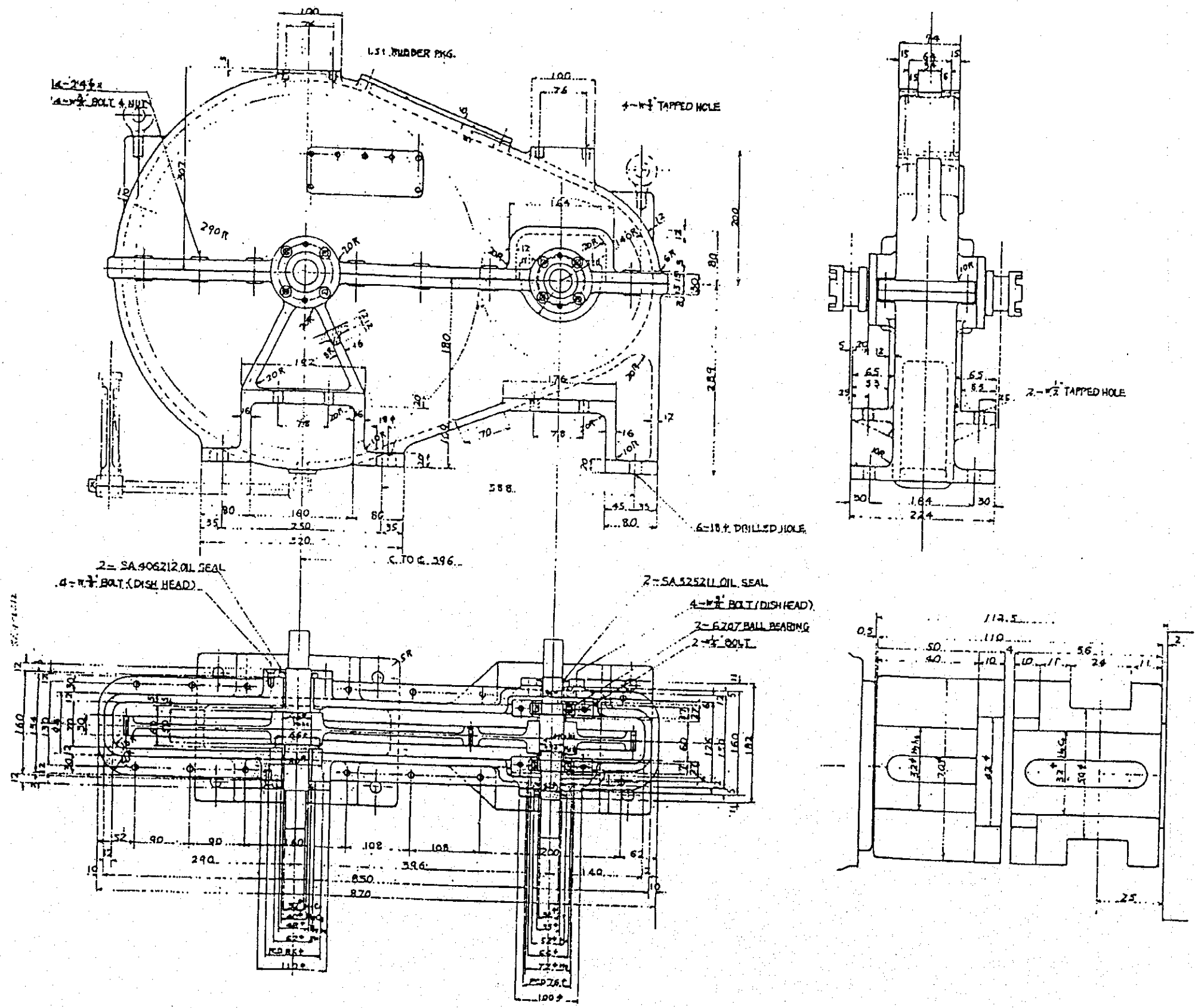
ITEM	DESCRIPTION
1	NAME PLATE
2	NAME PLATE
3	PILOT LAMP
4	VOLTAGE METER
5	AMMETER
6	SIGNAL FOR FRONT TRASH (ORANGE LAMP)
7	SIGNAL FOR REAR TRASH (ORANGE LAMP)
8	ASCENT LIMIT (RED LAMP)
9	DESCENT LIMIT (GREEN LAMP)
10	ASCENT LIMIT (RED LAMP)
11	DESCENT LIMIT (GREEN LAMP)
12	PUSH BUTTON (RISE)
13	PUSH BUTTON (CLOSE)
14	PUSH BUTTON (STOP)
15	SWITCH FOR HEATER
16	GLASS WINDOW
17	KEY
18	KEY

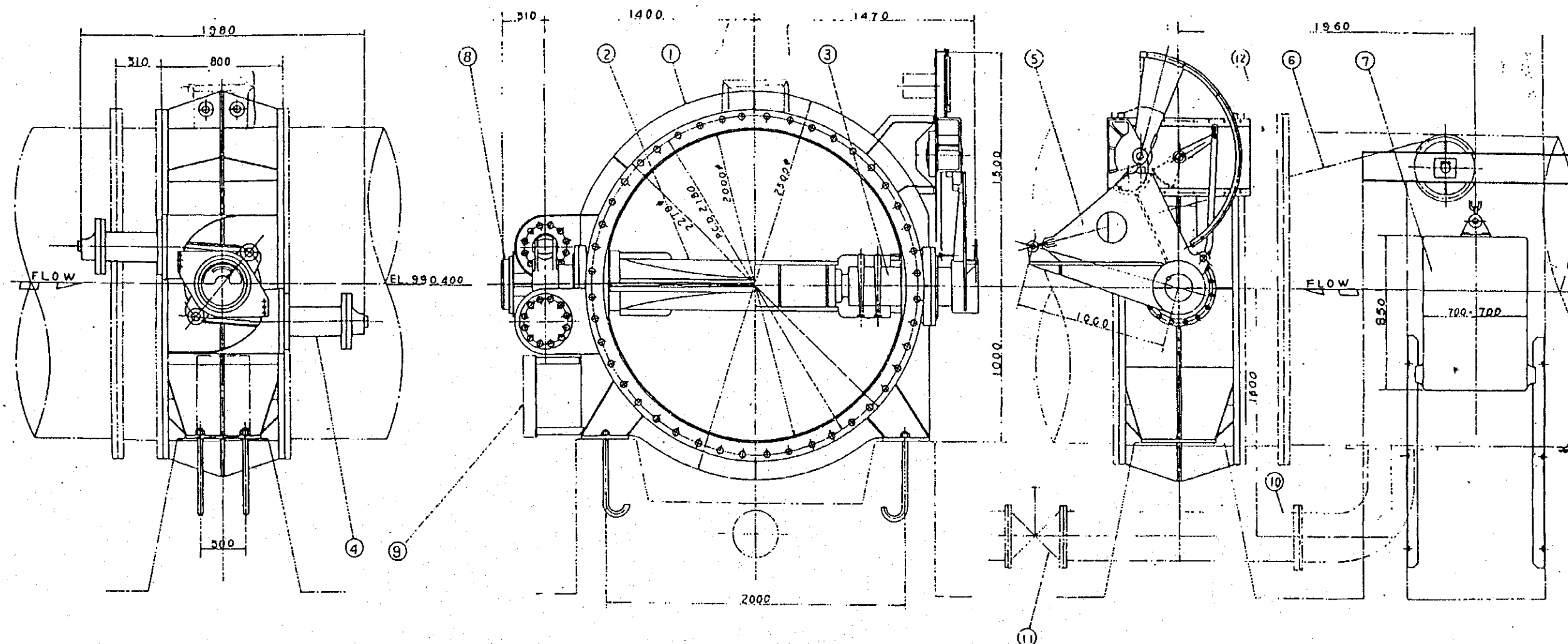


EXPLANATION OF SYMBOL:	
22	NO FUSE CIRCUIT BRAKER
J3	LIMIT SWITCH
43	SWITCH FOR HEATER
49	THERMAL RELAY
S2	MAGNETIC CONTACTOR
MB	MAGNETIC BRAKE
PT	POTENTIAL TRANSFORMER
KS	KNIFE SWITCH
EF	ENCLOSED FUSE
(A)	AMMETER
(V)	VOLTAGE METER
(WL)	WHITE LAMP
(RL)	RED LAMP
(GL)	GREEN LAMP
(OL)	ORANGE LAMP
a	CONTACT OF NORMAL OPEN
b	CONTACT OF NORMAL CLOSE
BS	PUSH BUTTON (RISE CLOSE)
BS	PUSH BUTTON (STOP)
IM	INDUCTION MOTOR
X	ADK. MAGNETIC CONTACTOR



NOTE
ALL DIMENSION IN INCH ARE SHOWN APPROXIMATELY



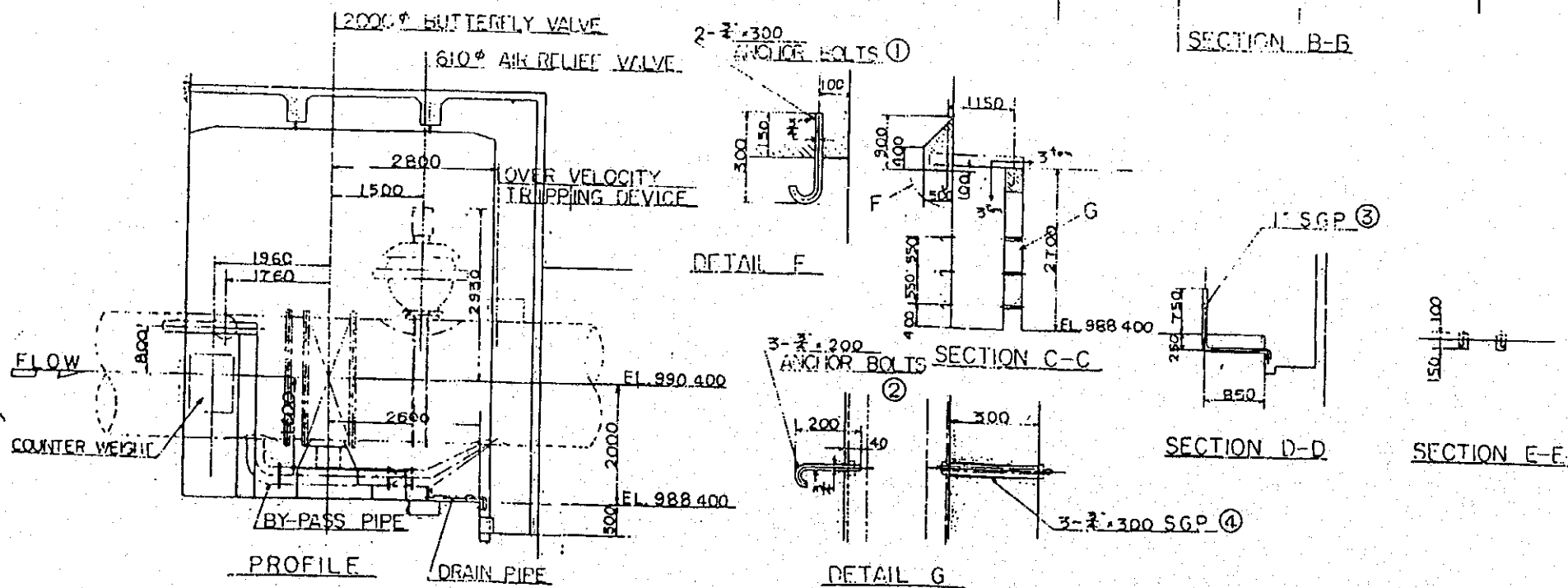
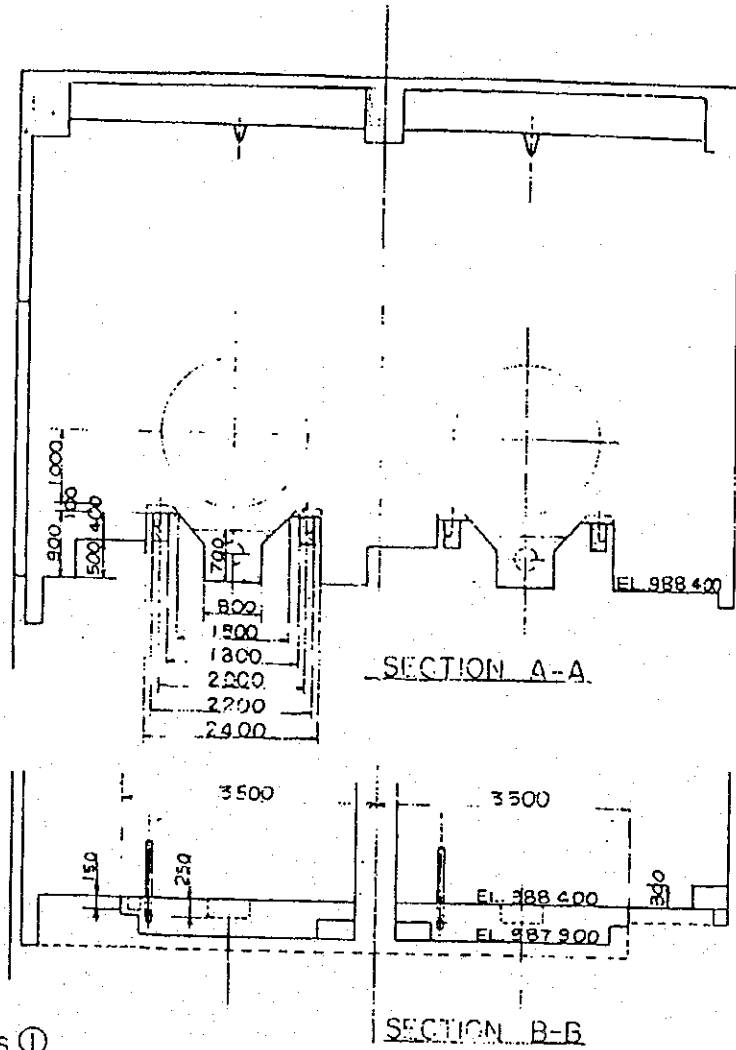
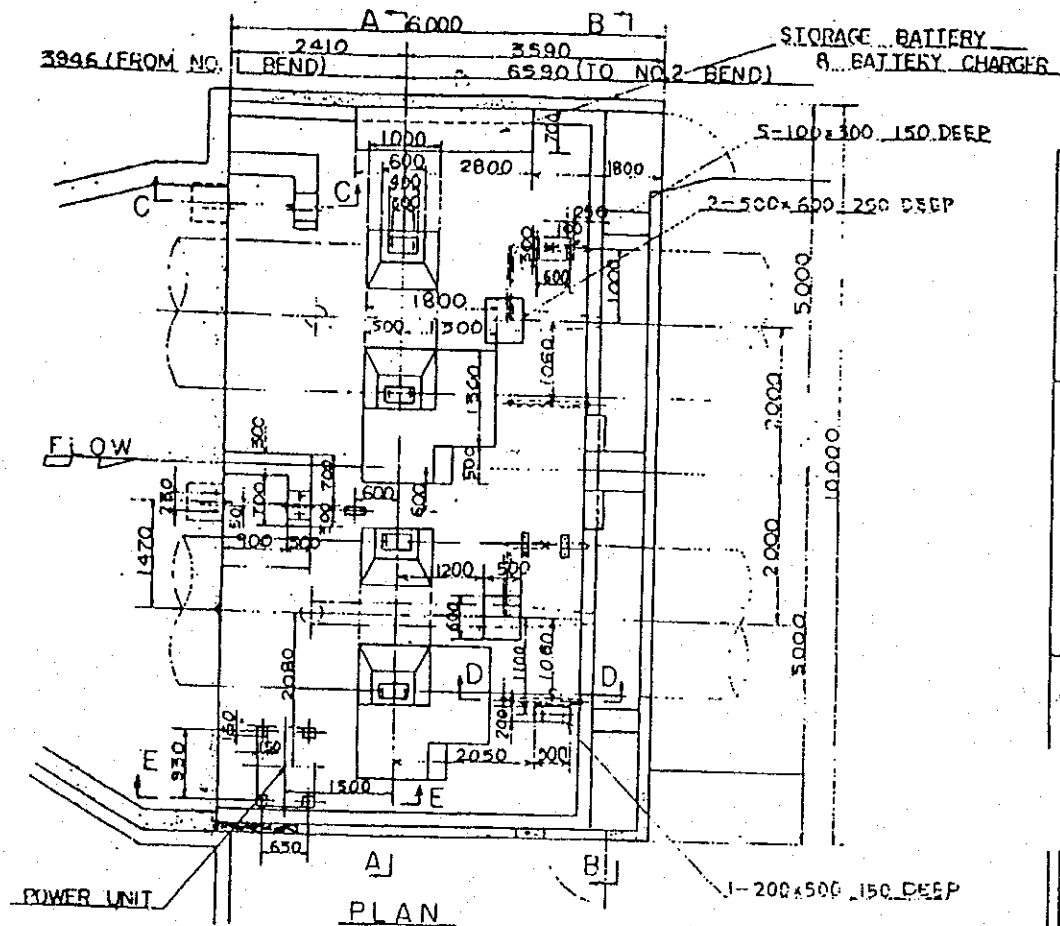


LIST OF MATERIALS TO BE APPLIED

ITEM	DESCRIPTION	MATERIAL	REMARK
①	VALVE BODY	MILD STEEL	JIS SM41B
②	VALVE LEAF	MILD STEEL	JIS SM41B
③	SHAFT	FORGED STEEL	JIS SF50
④	CYLINDER	STEEL PIPE	JIS STP38
⑤	LEVER	MILD STEEL	JIS SM41B
⑥	CHAIN		
⑦	COUNTER WEIGHT	CAST IRON	JIS FC15
⑧	INDICATOR		
⑨	CONTROL UNIT		
⑩	BY-PASS PIPE	STEEL PIPE	JIS STP38
⑪	BY-PASS VALVE	CAST STEEL	JIS SC46
⑫	DISMANTLING JOINT	MILD STEEL	JIS SM41B

DESIGN CONDITION

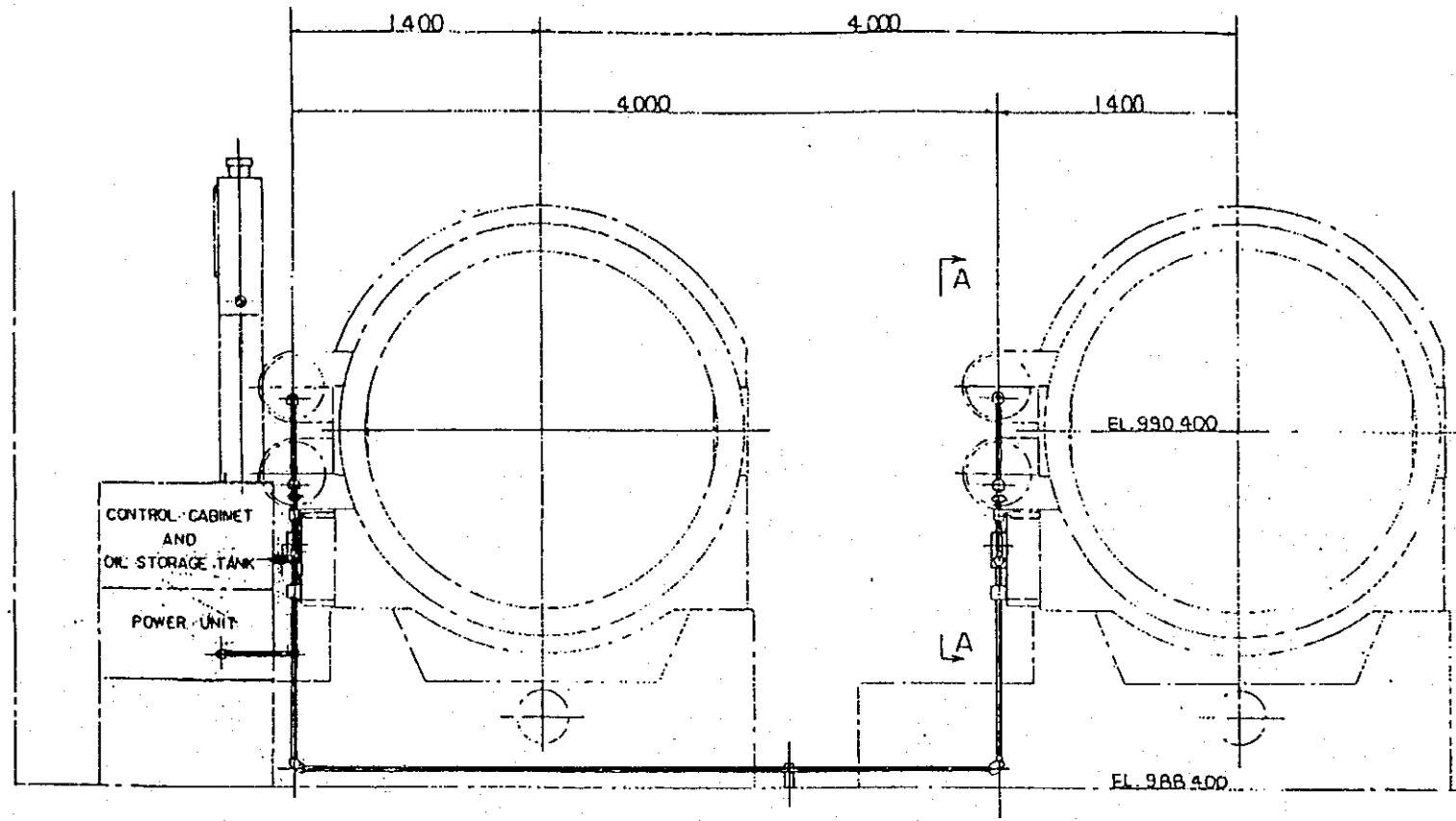
INSIDE DIAMETER	2000 φ mm
REQ'D NO. OF SETS	2 Sets
NORMAL WORKING HEAD	60.0 m
MAXIMUM DISCHARGE	13.2 m ³ /sec
OPENING TIME	5~5 min.
CLOSING TIME	1~2 min.
OPENING OPERATION	OIL PRESSURE
CLOSING OPERATION	COUNTER WEIGHT



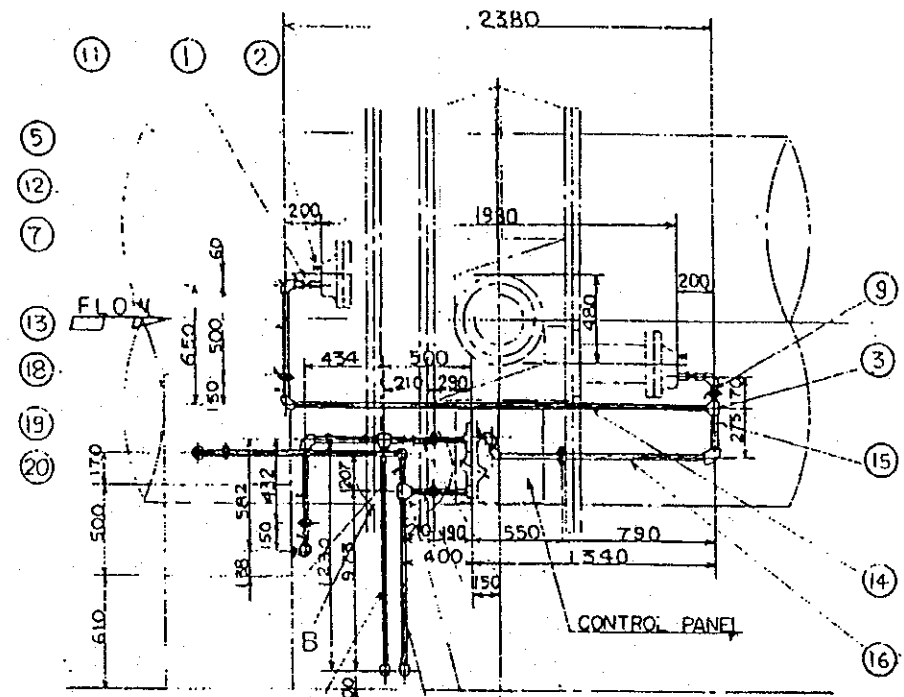
NOTES

1. [] PORTION SHOWS THE SECTION OF INITIAL CONCRETE.
2. [] SHOWS THE PORTION TO BE CONCRETED AFTER ERECTION OF VALVES.
3. ANCHOR BOLTS ① ② AND STEEL GAS PIPES ③ ④ SHALL BE SET IN INITIAL CONCRETE.
4. GIRDERS (1300 × 150 × 10) ARE NOT SUPPLIED BY THE BUTTERFLY VALVE MANUFACTURER.

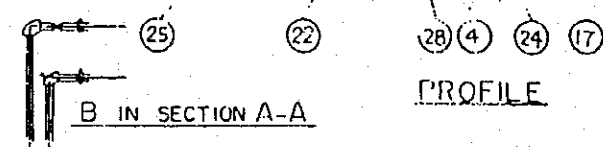
FEASIBILITY STUDY ON REHABILITATION OF DA NIIM POWER SYSTEM	MINISTRY OF ENERGY	Figure 1.46
	JAPAN INTERNATIONAL COOPERATION AGENCY	2,000 mm Butterfly Valve Foundation of Valve House



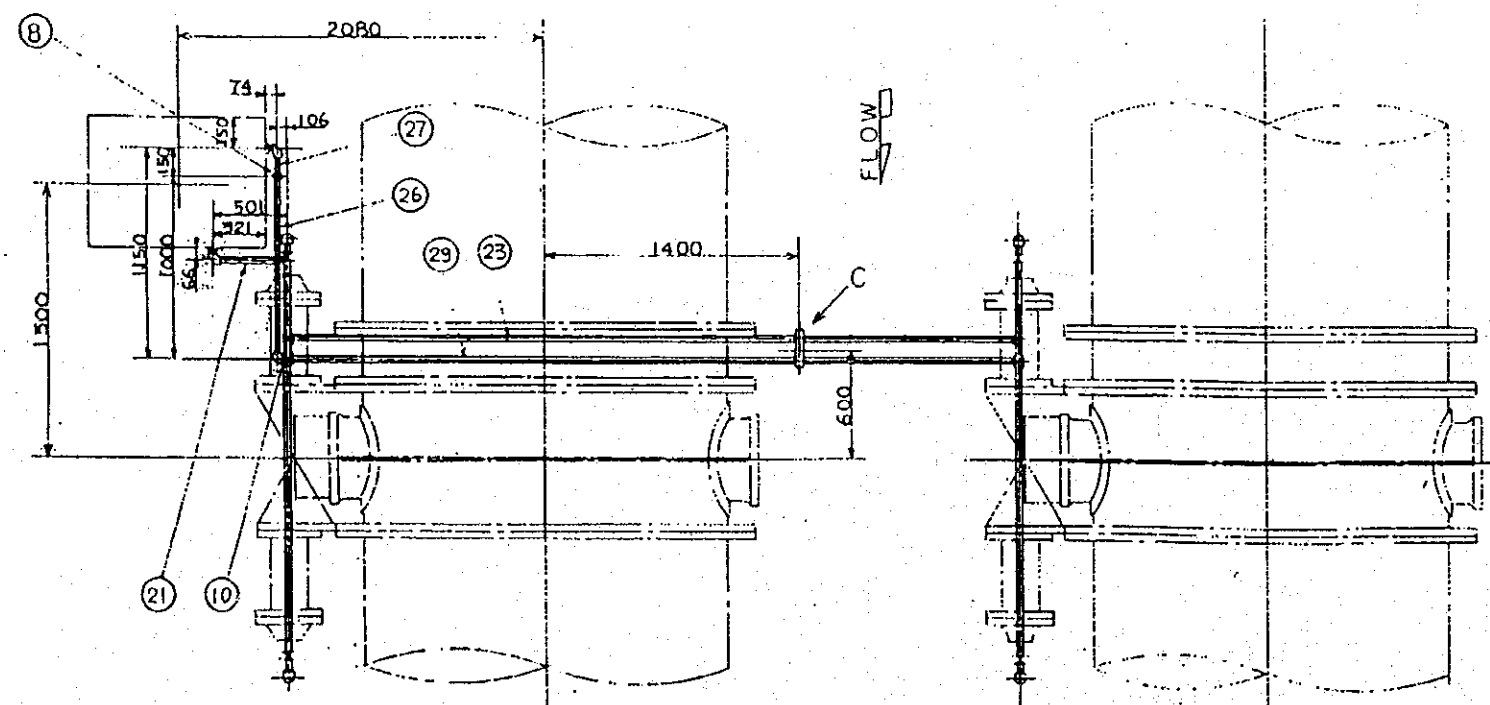
ELEVATION



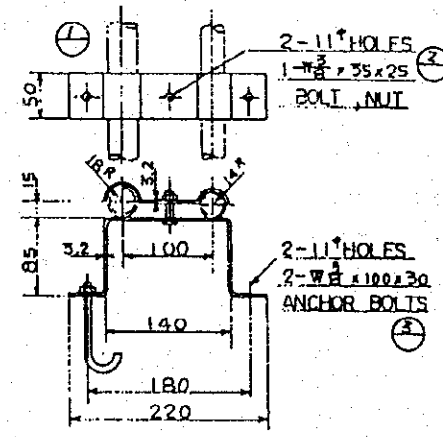
PROFILE



B IN SECTION A-A

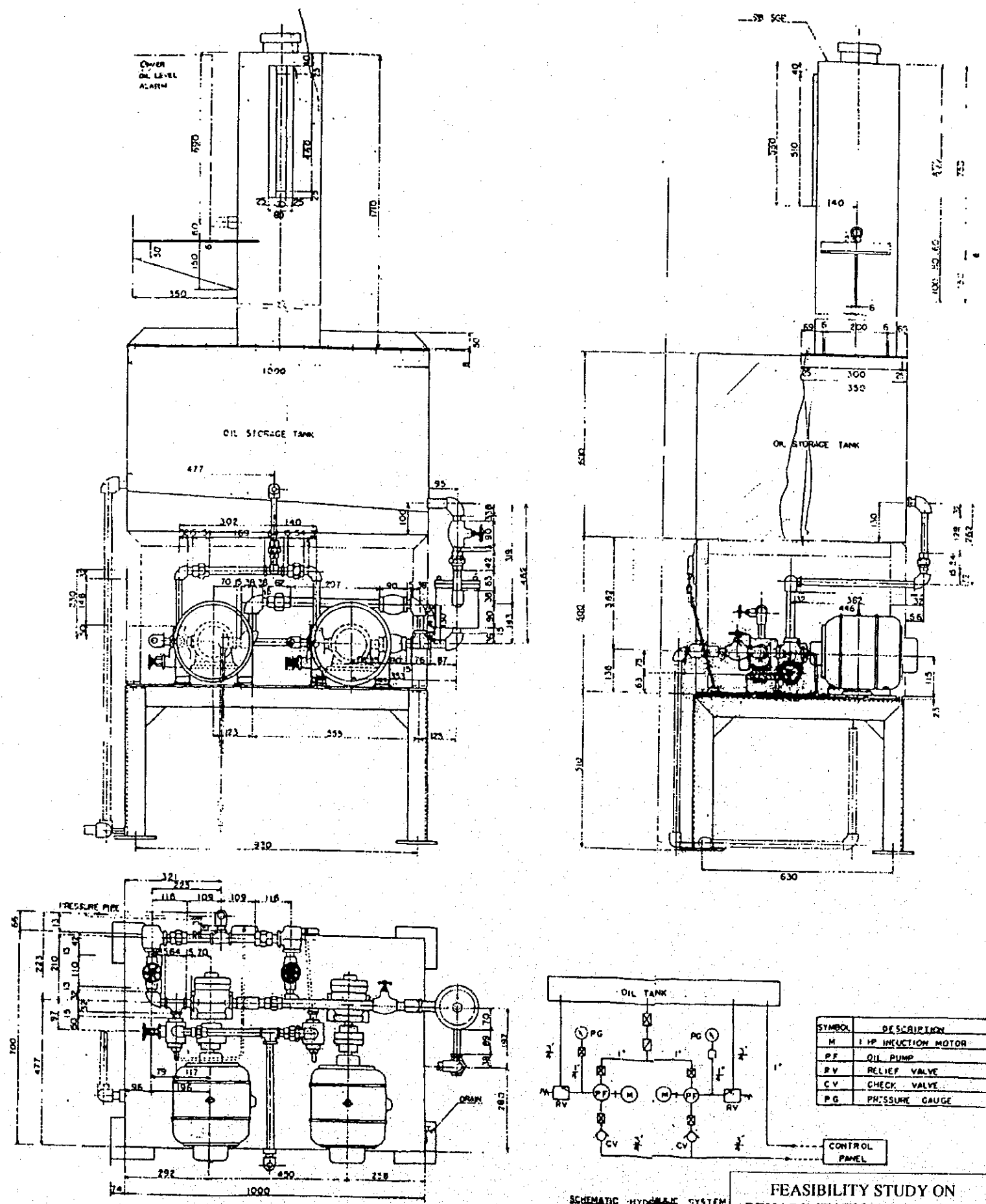


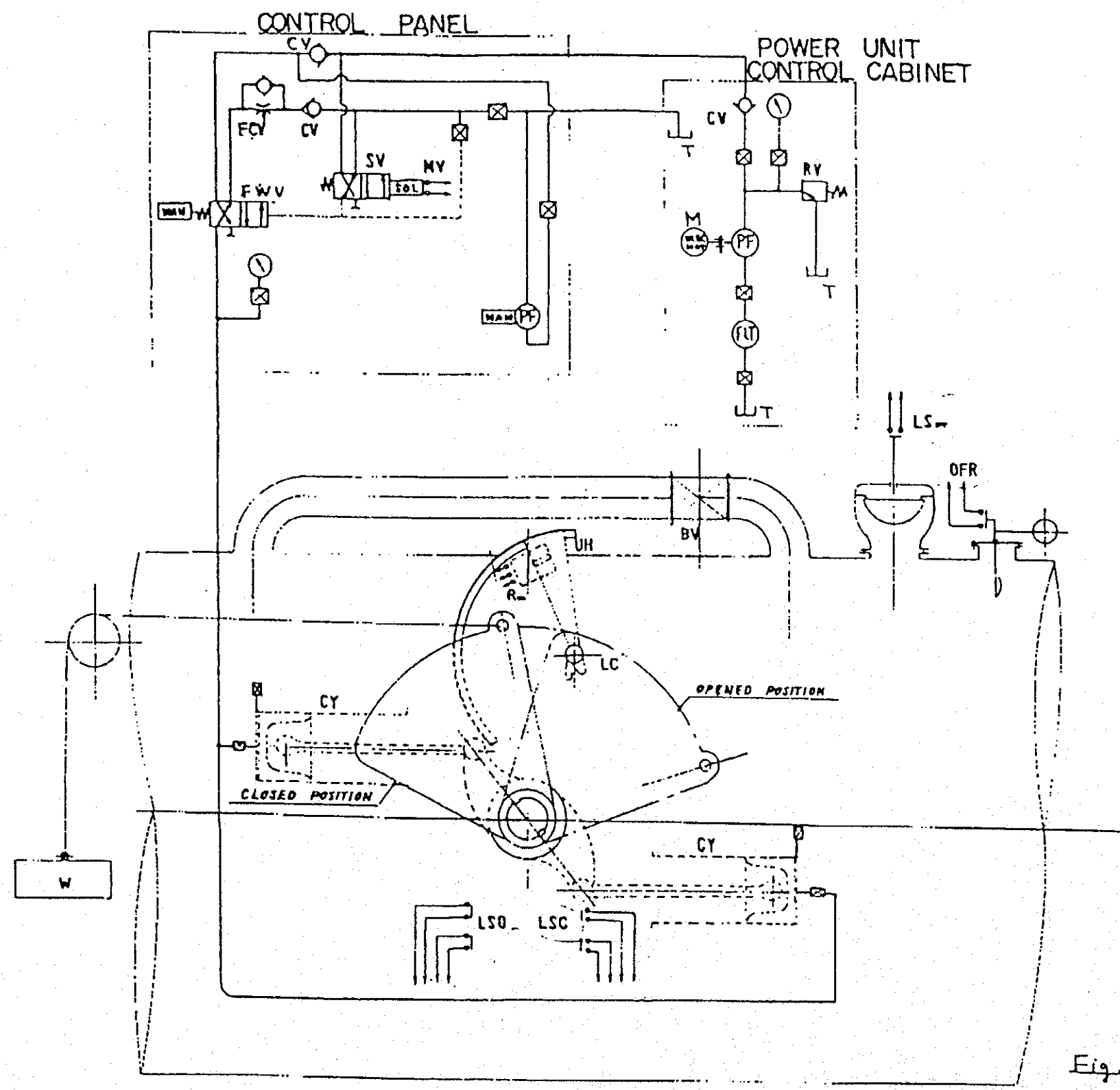
PLAN



DETAIL C
(PIPE CLIP)

NOTE
FOR MATERIALS (1) ~ (29)
SEE DWG. 14028





BY	BY-PASS VALVE
LS _{PF}	LIMIT SWITCH FOR PRESSURE BALANCE
LS _{OLSC}	LIMIT SWITCH
OFR	LIMIT SWITCH FOR OVER FLOW CONDITION
W	COUNTER WEIGHT
R _M	ELECTRIC MAGNET FOR UNLOCKING HAMMER
UH	HAMMER
LC	LOCKING CLAW
CY	CYLINDER
FCV	SLOW RETURN WITH CHECK VALVE
MY	ELECTRIC MAGNET FOR SV
SV	SOLENOID VALVE
FWV	PILOT OPERATED CONTROL VALVE
PF _{MAN}	MANUALLY OPERATED PUMP
CV	CHECK VALVE
RV	RELIEF VALVE
T	OIL STORAGE TANK
FLT	FILTER
PF	SINGLE STAGE BALANCED WAFFLE TYPE OIL PUMP
M	1 HP INDUCTION MOTOR FOR OIL PUMP

Fig. 2