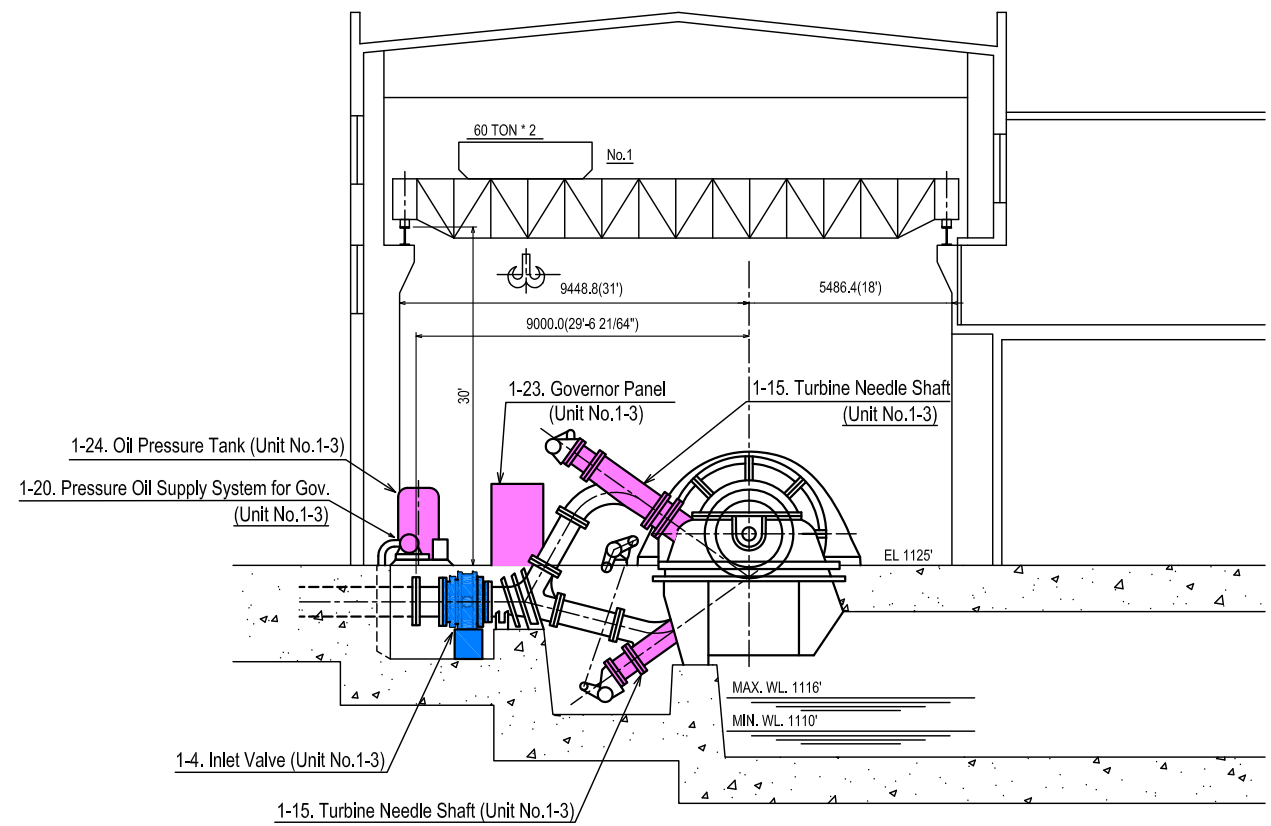


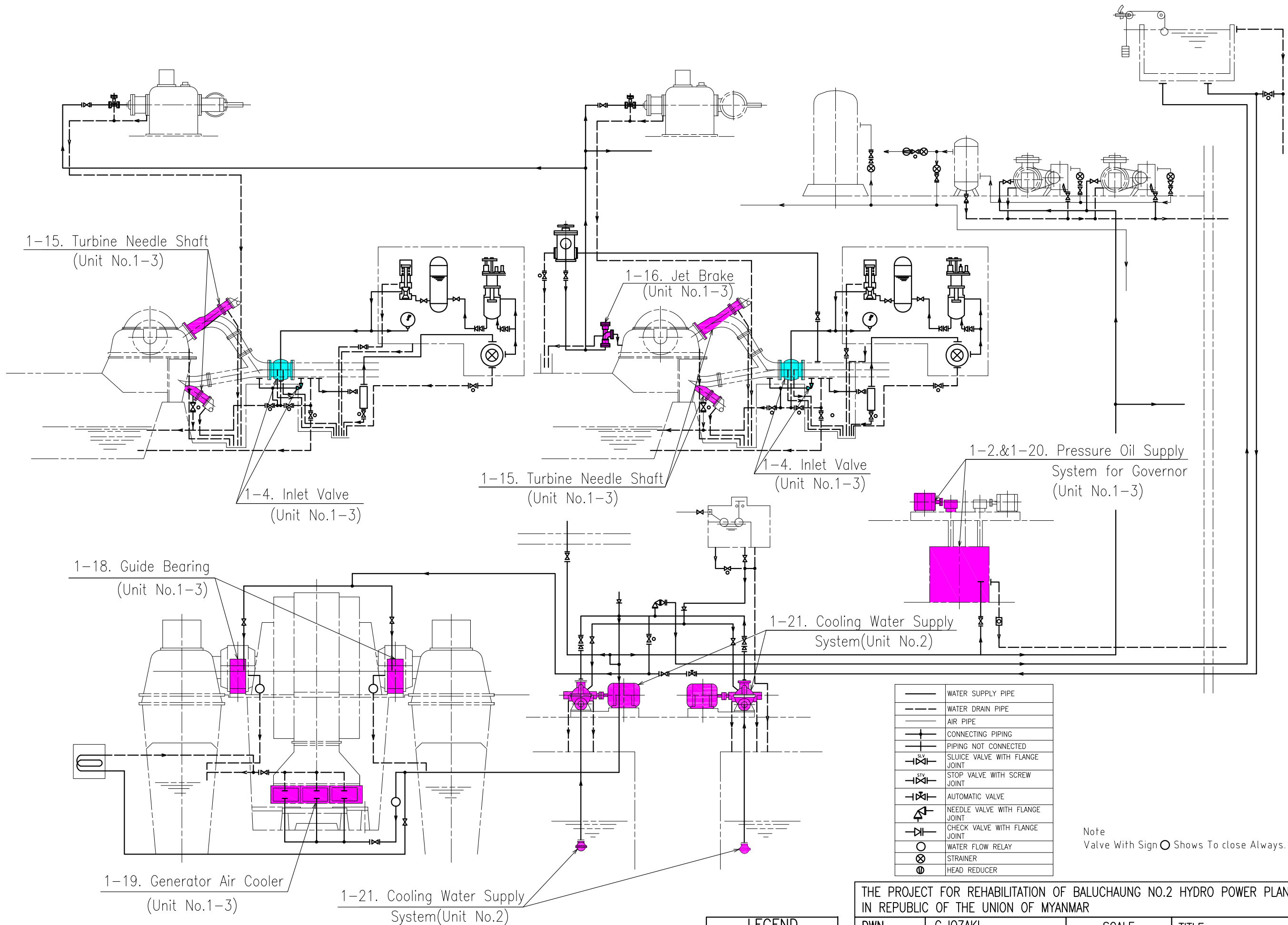
UNIT No.4~6



UNIT No.1~3

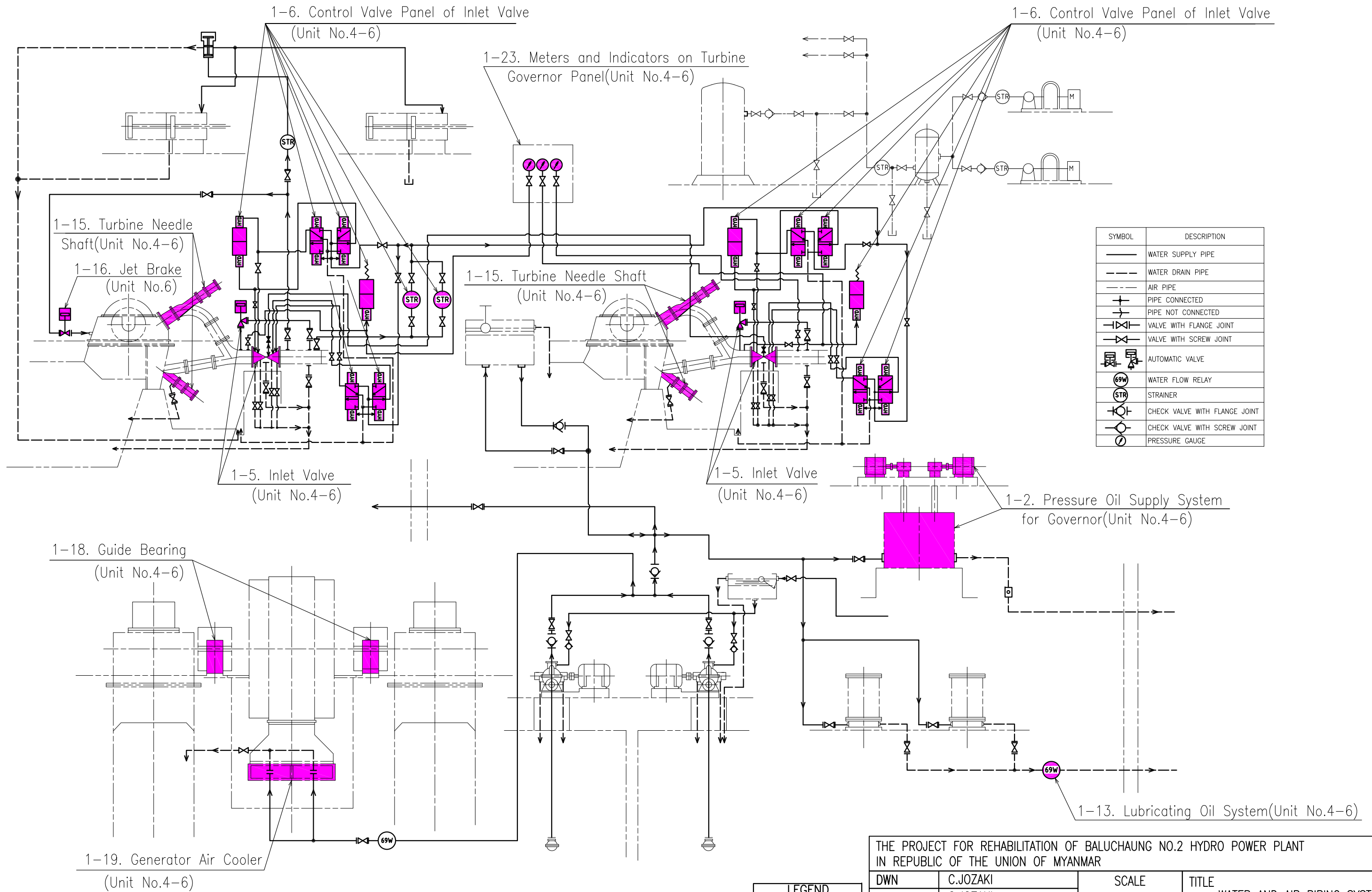
LEGEND	
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<span style="background-color: magenta; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span>	REPLACE
<span style="background-color: cyan; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span>	MODIFICATION

THE PROJECT FOR REHABILITATION OF BALUCHAUNG NO.2 HYDRO POWER PLANT IN REPUBLIC OF THE UNION OF MYANMAR			
DWN	C. JOZAKI	SCALE 1/100	TITLE SECTION OF BALUCHAUNG NO.2 HPS
CHKD	C. JOZAKI		
APPD	N. MATSUSHIMA	DATE December 2012	DWG NO BLC-005
NIPPON KOEI CO.,LTD. TOKYO ELECTRIC POWER COMPANY			



LEGEND	
	REPAIR
	REPLACE
	MODIFICATION

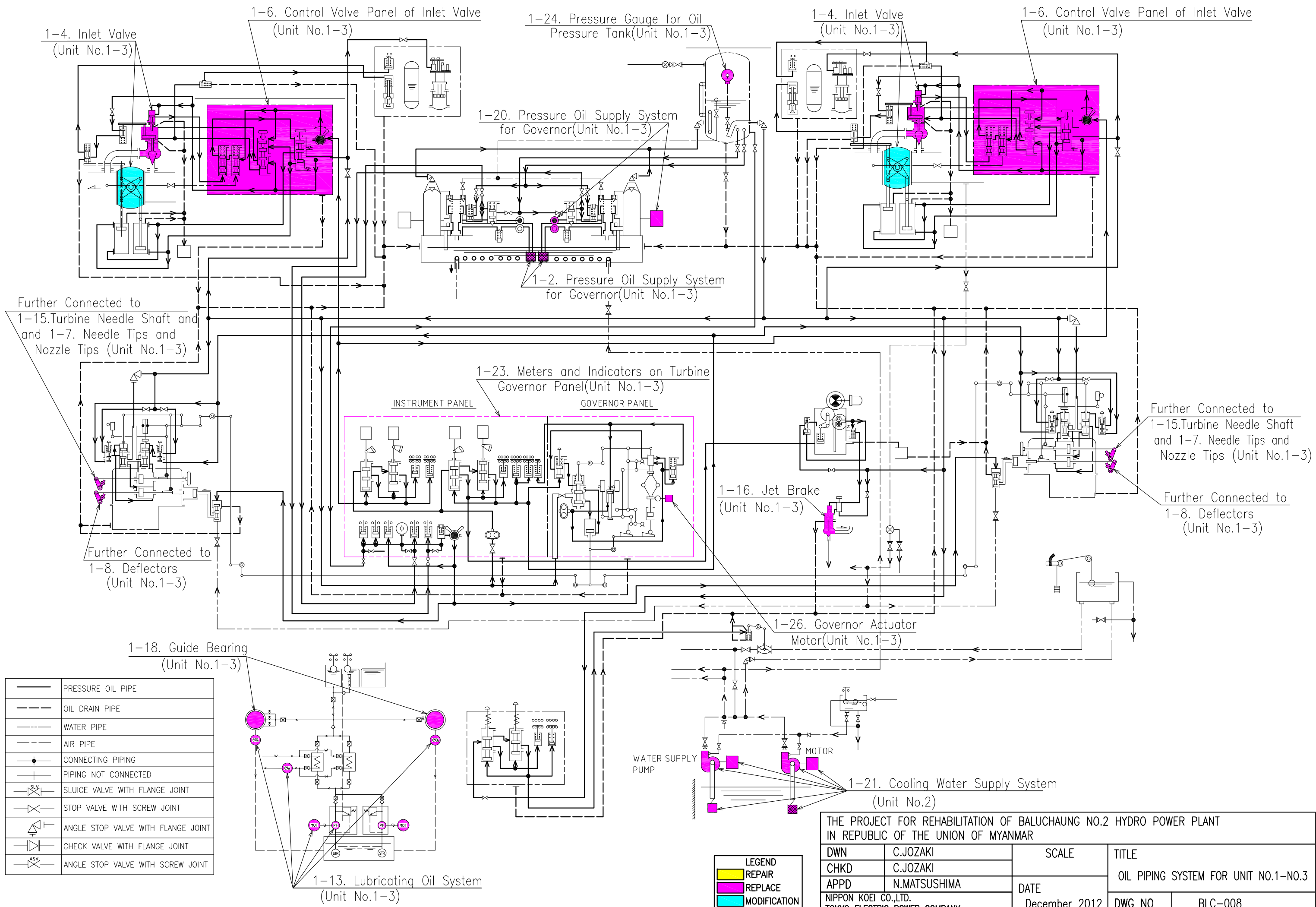
THE PROJECT FOR REHABILITATION OF BALUCHAUNG NO.2 HYDRO POWER PLANT IN REPUBLIC OF THE UNION OF MYANMAR			
DWN	C.JOZAKI	SCALE	TITLE
CHKD	C.JOZAKI		
APPD	N.MATSUSHIMA	DATE	DWG NO
NIPPON KOEI CO.,LTD. TOKYO ELECTRIC POWER COMPANY			



SYMBOL	DESCRIPTION
—	WATER SUPPLY PIPE
- - -	WATER DRAIN PIPE
- - -	AIR PIPE
+	PIPE CONNECTED
-	PIPE NOT CONNECTED
— —	VALVE WITH FLANGE JOINT
— —	VALVE WITH SCREW JOINT
⊕	AUTOMATIC VALVE
⊕	WATER FLOW RELAY
⊕	STRAINER
⊕	CHECK VALVE WITH FLANGE JOINT
⊕	CHECK VALVE WITH SCREW JOINT
⊕	PRESSURE GAUGE

LEGEND	
REPAIR	(Yellow)
REPLACE	(Pink)
MODIFICATION	(Cyan)

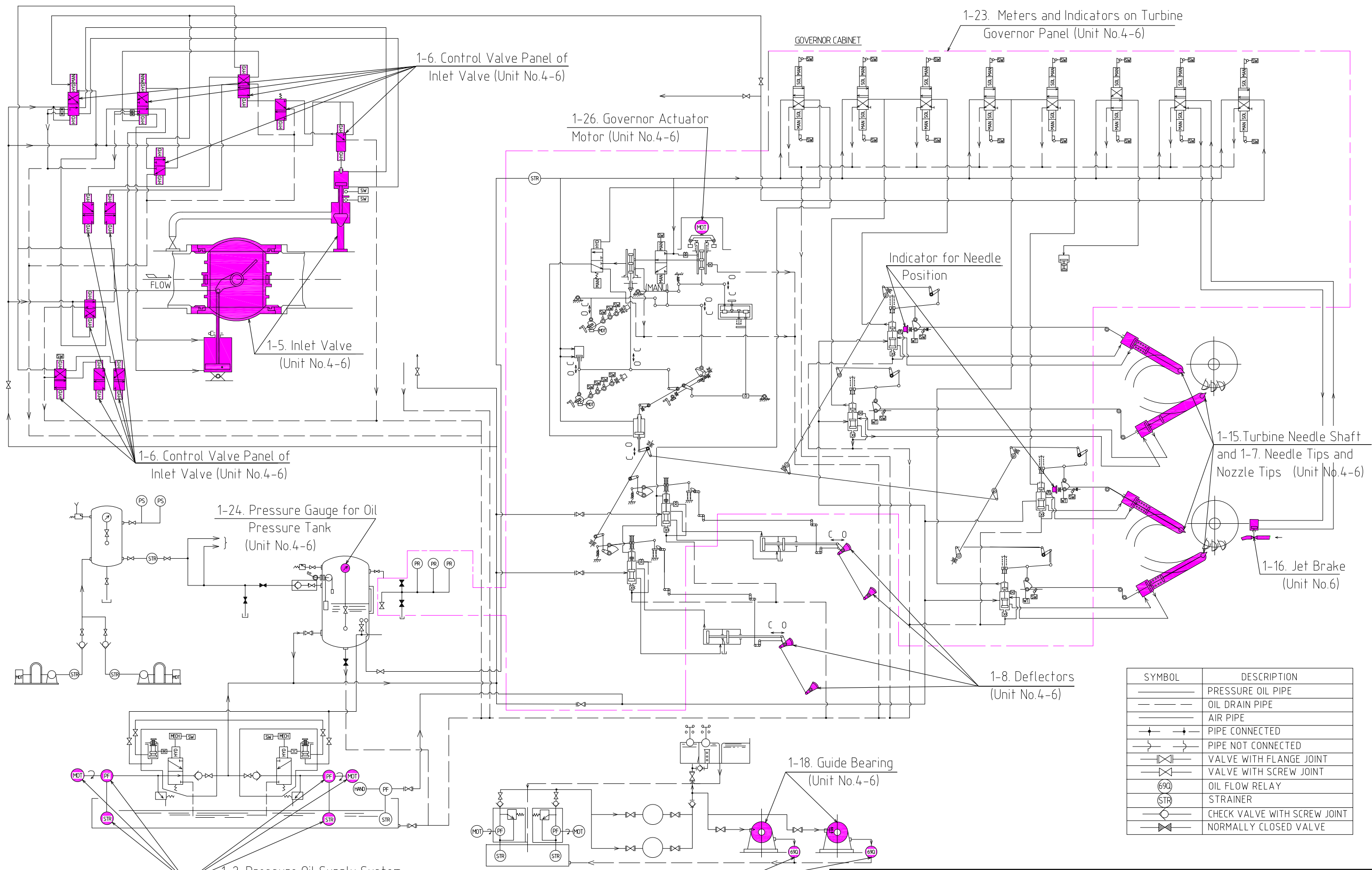
THE PROJECT FOR REHABILITATION OF BALUCHAUNG NO.2 HYDRO POWER PLANT IN REPUBLIC OF THE UNION OF MYANMAR			
DWN	C.JOZAKI	SCALE	TITLE WATER AND AIR PIPING SYSTEM FOR UNIT NO.4-NO.6
CHKD	C.JOZAKI	DATE	
APPD	N.MATSUSHIMA	December 2012	DWG NO
NIPPON KOEI CO.,LTD. TOKYO ELECTRIC POWER COMPANY			BLC-007



	PRESSURE OIL PIPE
	OIL DRAIN PIPE
	WATER PIPE
	AIR PIPE
	CONNECTING PIPING
	PIPING NOT CONNECTED
	SLUICE VALVE WITH FLANGE JOINT
	STOP VALVE WITH SCREW JOINT
	ANGLE STOP VALVE WITH FLANGE JOINT
	CHECK VALVE WITH FLANGE JOINT
	ANGLE STOP VALVE WITH SCREW JOINT

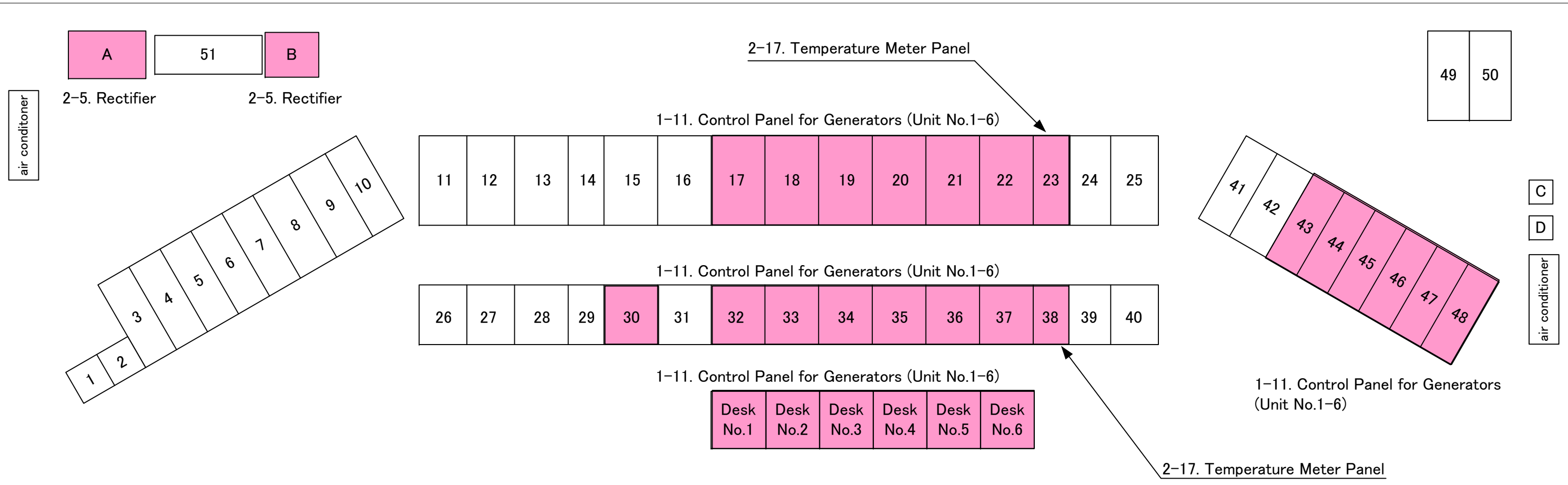
LEGEND	
	REPAIR
	REPLACE
	MODIFICATION

THE PROJECT FOR REHABILITATION OF BALUCHAUNG NO.2 HYDRO POWER PLANT IN REPUBLIC OF THE UNION OF MYANMAR			
DWN	C.JOZAKI	SCALE	TITLE
CHKD	C.JOZAKI		OIL PIPING SYSTEM FOR UNIT NO.1-NO.3
APPD	N.MATSUSHIMA	DATE	DWG NO
NIPPON KOEI CO.,LTD. TOKYO ELECTRIC POWER COMPANY		December 2012	BLC-008



LEGEND  
 REPAIR  
 REPLACE  
 MODIFICATION

THE PROJECT FOR REHABILITATION OF BALUCHAUNG NO.2 HYDRO POWER PLANT IN REPUBLIC OF THE UNION OF MYANMAR			
DWN	C.JOZAKI	SCALE NTS	TITLE OIL PIPING SYSTEM FOR UNIT NO.4-NO.6
CHKD	C.JOZAKI		
APPD	N.MATSUSHIMA	DATE December 2012	DWG NO BLC-009
NIPPON KOEI CO.,LTD. TOKYO ELECTRIC POWER COMPANY			



1. Transmission line panel (230kV S/L)
2. Transmission line panel (230kV S/L)
3. Station service panel (AC400V/DC230V)
4. Station service panel (AC400V/DC230V)
5. Station service panel (AC400V)
6. Station service panel (AC230V/AC400V)
7. Station service panel (Emergency light)
8. Station service panel (DC230V)
9. Station service panel (DC230V)
10. Station service panel (RECT)
11. Transmission line panel (33kV feeder)
12. Main transformer panel (IBTR, B/H1PS line)
13. Transmission line panel (11kV feeder)
14. Transmission line panel (11kV feeder)
15. Transmission line panel (132kV N/L)
16. Main transformer panel (230kV/132kV BTR)
17. Protection relay panel (No.1 Gen)
18. Protection relay panel (No.2 Gen)
19. Protection relay panel (No.3 Gen)
20. Protection relay panel (No.4 Gen)

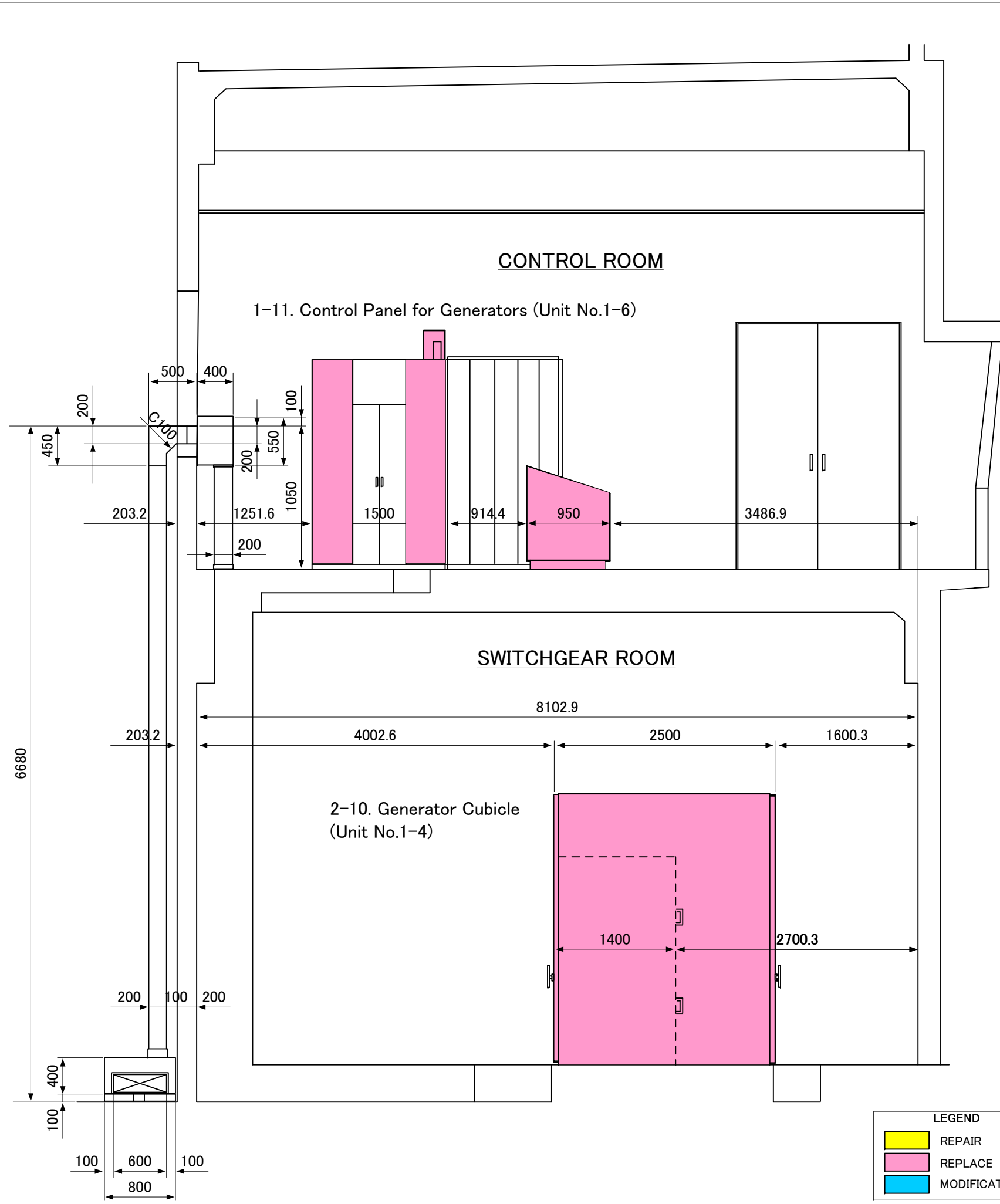
21. Protection relay panel (No.5 Gen)
22. Protection relay panel (No.6 Gen)
23. Thermometry panel (No.4-6 Gen)
24. Station service generator panel
25. Transmission line panel (230kV S/L)
26. Transmission line meter panel (33kV feeder)
27. Transmission line/transformer meter panel (IBTR, B/H1PS line)
28. Transmission line meter panel (11kV feeder)
29. Transmission line meter panel (11kV feeder)
30. Transmission line meter panel (132kV N/L)
31. Main transformer meter panel (230kV/132kV BTR)
32. Meter panel (No.1 Gen)
33. Meter panel (No.2 Gen)
34. Meter panel (No.3 Gen)
35. Meter panel (No.4 Gen)
36. Meter panel (No.5 Gen)
37. Meter panel (No.6 Gen)
38. Thermometry panel (No.1-3 Gen)
39. Station service generator switch panel
40. Transmission line meter panel (230kV S/L)

41. Automatic control panel (station service generator)
42. Automatic synchronizing panel
43. Automatic control panel (No.1 Gen)
44. Automatic control panel (No.2 Gen)
45. Automatic control panel (No.3 Gen)
46. Automatic control panel (No.4 Gen)
47. Automatic control panel (No.5 Gen)
48. Automatic control panel (No.6 Gen)
49. Transmission line protection panel (132kV B/H1 line)
50. Transmission line protection panel (132kV B/H1 line)
51. Transmission line protection panel (230kV S/L)

- A. No.1 Rectifier  
 B. No.2 Rectifier  
 C. No.3 P/S gate control panel  
 D. No.3 P/S gate control panel

LEGEND	
	REPAIR
	REPLACE
	MODIFICATION

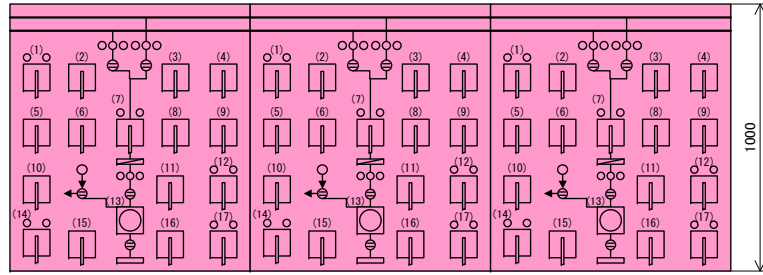
THE PROJECT FOR REHABILITATION OF BALUCHAUNG NO.2 HYDRO POWER PLANT IN REPUBLIC OF THE UNION OF MYANMAR			
DWN	Y. SHINDO	SCALE 1 / 50	TITLE LAYOUT DRAWING OF CONTROL ROOM
CHKD	Y. SHINDO		
APPD	N. MATSUSHIMA	DATE December 2012	DWG NO BLC-010
NIPPON KOEI CO.,LTD. TOKYO ELECTRIC POWER COMPANY			



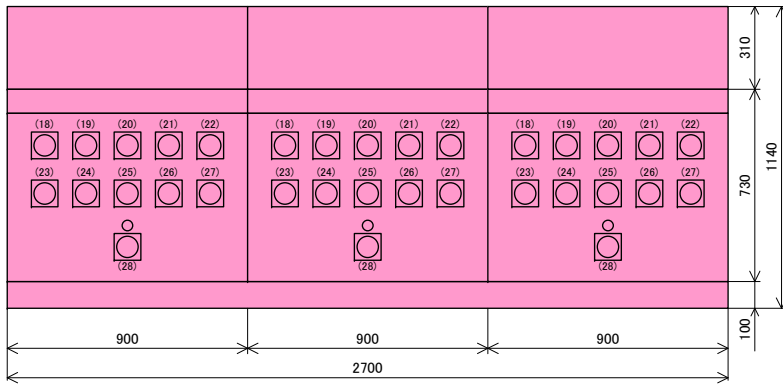
LEGEND	
REPAIR	(Yellow)
REPLACE	(Pink)
MODIFICATION	(Blue)

THE PROJECT FOR REHABILITATION OF BALUCHAUNG NO.2 HYDRO POWER PLANT IN REPUBLIC OF THE UNION OF MYANMAR			
DWN	Y. SHINDO	SCALE 1 / 50	TITLE LONGITUDINAL SECTION OF SWITCH GEAR ROOM AND CONTROL ROOM
CHKD	Y. SHINDO		
APPD	N. MATSUSHIMA	DATE December 2012	DWG NO   BLC-011
NIPPON KOEI CO.,LTD. TOKYO ELECTRIC POWER COMPANY			

1-11. Control Panel for Generators (Unit No.1-3)

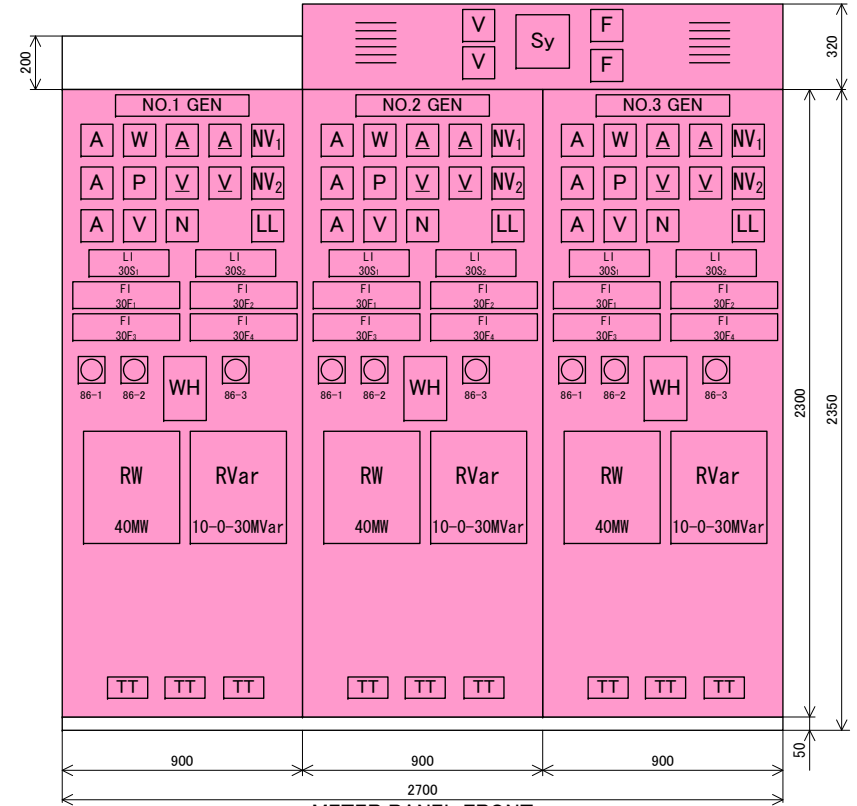


SLOPING PANEL FRONT VIEW



VERTICAL PANEL FRONT VIEW

1-11. Control Panel for Generators (Unit No.1-3)



METER PANEL FRONT VIEW

LIST OF SWITCHES

MARK	LETTER OF MARK PLATES	MARK OF HANDLE
(1)	CONTROL SWITCH FOR OIL PUMP ON MAIN TRANSFORMER, STOP - START	BT
(2)	CONTROL SWITCH FOR No.1 THRUST BEARING OIL PUMP, STOP - START	
(3)	CONTROL SWITCH FOR No.2 THRUST BEARING OIL PUMP, STOP - START	
(4)	MANUAL EMERGENCY STOP SWITCH	5E
(5)	CONTROL SWITCH FOR No.1 PRESSURE OIL PUMP, STOP - START	Q1
(6)	CONTROL SWITCH FOR No.2 PRESSURE OIL PUMP, STOP - START	Q2
(7)	CONTROL SWITCH FOR CIRCUIT BREAKER IN PARALLEL, OPEN - CLOSE	52
(8)	CONTROL SWITCH FOR No.1 WATER SUPPLY PUMP, STOP - START	W1
(9)	CONTROL SWITCH FOR No.2 WATER SUPPLY PUMP, STOP - START	W2
(10)	CONTROL SWITCH FOR JACK PUMP, STOP - START	72Q
(11)	CHANGEOVER SWITCH FOR SOLENOID VALVE	WVC
(12)	CONTROL SWITCH FOR AVR, LOWER - RAISE	90R
(13)	MASTER CHANGEOVER SWITCH FOR SEQUENCE CONTROLLER, OFF - STOP - VALVE - START - EXCITE - SYNCHRO - LOAD	1
(14)	CONTROL SWITCH FOR MAIN EXCITER VOLTAGE, LOWER - RAISE	70E
(15)	CONTROL SWITCH FOR TURBINE SPEED AND LOAD SETTING, LOWER - RAISE	65
(16)	CONTROL SWITCH FOR LOAD LIMITER SETTING, LOWER - RAISE	77
(17)	CONTROL SWITCH FOR SUB EXCITER VOLTAGE, LOWER - RAISE	70S
(18)	CHANGEOVER SWITCH FOR GENERATOR VOLTAGE METER, 0 - RS - ST - TR - 0	V
(19)	CHANGEOVER SWITCH FOR DC VOLTAGE METER, SUB - OFF - MAIN	DV
(20)	CHANGEOVER SWITCH FOR THRUST BEARING OIL PUMP, No.1 - No.2	
(21)	CHANGEOVER SWITCH FOR GENERATOR SYNCHRONIZING CONTROL MODE, MANUAL - AUTOMATIC	25
(22)	CHANGEOVER SWITCH FOR SYNCHRONIZER, No.1 - No.2	VF
(23)	CHANGEOVER SWITCH FOR PRESSURE OIL PUMP, No.1 - No.2	43Q
(24)	CHANGEOVER SWITCH FOR CHARGE ADJUSTING, NORMAL - CHARGE	CH
(25)	CHANGEOVER SWITCH FOR TURBINE SELECTOR, No.1 - No.2	97
(26)	CHANGEOVER SWITCH FOR AVR, STOP - START - OPERATION	90
(27)	CHANGEOVER SWITCH FOR WATER SUPPLY PUMP, No.1 - No.2	43W
(28)	CHANGEOVER SWITCH FOR CONTROL SOURCE, OFF - ON	8

30S<sub>1</sub> (LAMP INDICATOR)

WATER PUMP No.1	OIL PUMP No.1	LUB PUMP No.1	AVR	MAIN T OIL PUMP
WATER PUMP No.2	OIL PUMP No.2	LUB PUMP No.2	JACK PUMP	

30S<sub>2</sub> (LAMP INDICATOR)

VALVE	START	EXCITE	SYN	LOAD
				STOP

#1 & #2 unit

30F <sub>1</sub> (TARGET TYPE INDICATOR)							
87-1	64N	87T	96-2	5E	12	45	69W3

30F <sub>2</sub> (TARGET TYPE INDICATOR)								
63Q2	69Q1	69W3	33QMB	38D	88QB	49D	76	57

#3 unit

30F <sub>1</sub> (TARGET TYPE INDICATOR)							
87-1	64N	87T	96-2	5E	12	45	

30F <sub>2</sub> (TARGET TYPE INDICATOR)							
63Q3	81MP	38	33QLB	51	59	51T	69W3

30F <sub>3</sub> (TARGET TYPE INDICATOR)							
63Q3	81MP	38	33QLB	51	59	51T	

30F <sub>4</sub> (TARGET TYPE INDICATOR)							
33WC-3	33PW	96-1	26D	69TW	69TQ	63TN	33TQ

30F <sub>5</sub> (TARGET TYPE INDICATOR)							
63Q3	81MP	38	33QLB	51	59	51T	69W3

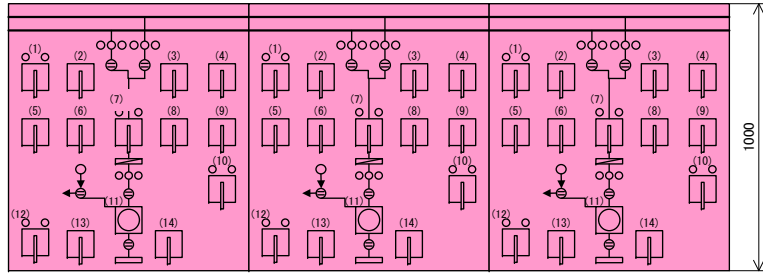
30F <sub>6</sub> (TARGET TYPE INDICATOR)							
33WC-3	33PW	96-1	26D	69TW	69TQ	63TN	33TQ

LEGEND	
<span style="background-color: yellow; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span>	REPAIR
<span style="background-color: pink; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span>	REPLACE
<span style="background-color: cyan; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span>	MODIFICATION

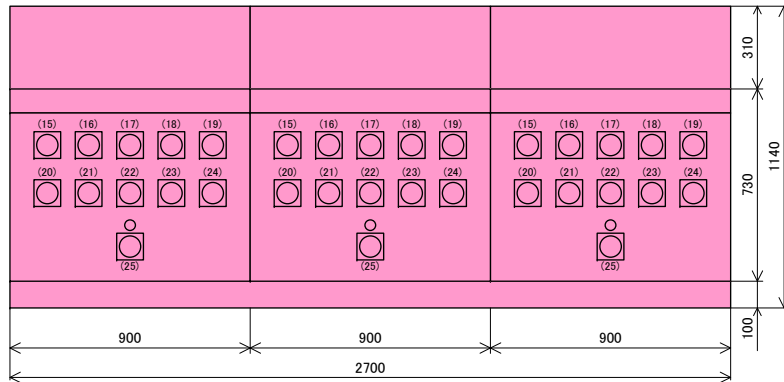
THE PROJECT FOR REHABILITATION OF BALUCHAUNG NO.2 HYDRO POWER PLANT IN REPUBLIC OF THE UNION OF MYANMAR			
DWN	Y. SHINDO	SCALE 1 / 20	TITLE FRONT VIEW OF METER PANEL, SLOPING PANEL AND VERTICAL PANEL FOR UNIT NO.1-3
CHKD	Y. SHINDO		
APPD	N. MATSUSHIMA	DATE December 2012	DWG NO BLC-012
NIPPON KOEI CO.,LTD. TOKYO ELECTRIC POWER COMPANY			



1-11. Control Panel for Generators (Unit No.4-6)

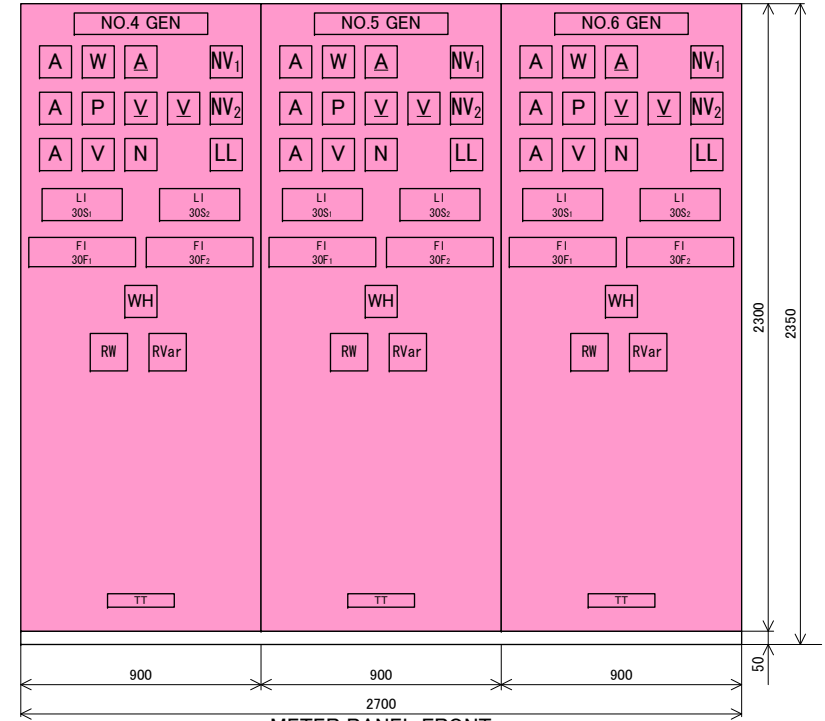


SLOPING PANEL FRONT VIEW



VERTICAL PANEL FRONT VIEW

1-11. Control Panel for Generators (Unit No.4-6)



METER PANEL FRONT VIEW

LIST OF SWITCHES

MARK	LETTER OF MARK PLATES	MARK OF HANDLE
(1)	CONTROL SWITCH FOR OIL PUMP ON MAIN TRANSFORMER, STOP - START	8T
(2)	CONTROL SWITCH FOR LUBRICATING OIL PUMP, STOP - START	
(3)	CONTROL SWITCH FOR THRUST BEARING OIL PUMP, STOP - START	
(4)	MANUAL EMERGENCY STOP SWITCH	5E
(5)	CONTROL SWITCH FOR No.1 PRESSURE OIL PUMP, STOP - START	Q1
(6)	CONTROL SWITCH FOR No.2 PRESSURE OIL PUMP, STOP - START	Q2
(7)	CONTROL SWITCH FOR CIRCUIT BREAKER IN PARALLEL, OPEN - CLOSE	52
(8)	CONTROL SWITCH FOR No.1 WATER SUPPLY PUMP, STOP - START	W1
(9)	CONTROL SWITCH FOR No.2 WATER SUPPLY PUMP, STOP - START	W2
(10)	CONTROL SWITCH FOR AVR, LOWER - RAISE	90R
(11)	MASTER CHANGEOVER SWITCH FOR SEQUENCE CONTROLLER, OFF - STOP - VALVE - START - EXCITE - SYNCHRO - LOAD	1
(12)	CONTROL SWITCH FOR MAIN EXCITER VOLTAGE, LOWER - RAISE	70E
(13)	CONTROL SWITCH FOR TURBINE SPEED AND LOAD SETTING, LOWER - RAISE	65
(14)	CONTROL SWITCH FOR LOAD LIMITER SETTING, LOWER - RAISE	77
(15)	CHANGEOVER SWITCH FOR GENERATOR VOLTAGE METER, 0 - RS - ST - TR - 0	V
(16)	CHANGEOVER SWITCH FOR LUBRICATING OIL PUMP, No.2 - OFF - No.1	DV
(17)	CHANGEOVER SWITCH FOR NEEDLE SELECTOR, 1 - 2 - 3 - 4	
(18)	CHANGEOVER SWITCH FOR SYNCHRONIZER, MANUAL - AUTOMATIC	25
(19)	CHANGEOVER SWITCH FOR SYNCHRONIZING SELECTION, No.1 - No.2	VF
(20)	CHANGEOVER SWITCH FOR PRESSURE OIL PUMP, No.1 - No.2	43Q
(21)	CHANGEOVER SWITCH FOR CHARGE ADJUSTING, NORMAL - CHARGE	CH
(22)	CHANGEOVER SWITCH FOR TURBINE SELECTOR, MAIN - AUTO.A - AUTO.B	97
(23)	CHANGEOVER SWITCH FOR AVR, STOP - START - OPERATION	90
(24)	CHANGEOVER SWITCH FOR WATER SUPPLY PUMP, No.1 - No.2	43W
(25)	CHANGEOVER SWITCH FOR CONTROL SOURCE, OFF - ON	8

LEGEND	
<span style="background-color: yellow; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span>	REPAIR
<span style="background-color: pink; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span>	REPLACE
<span style="background-color: cyan; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span>	MODIFICATION

30S<sub>1</sub> (LAMP INDICATOR)

WATER PUMP No.1	OIL PUMP No.1	LUB PUMP No.1	OIL LIFTER
WATER PUMP No.2	OIL PUMP No.2	LUB PUMP No.2	

30S<sub>2</sub> (LAMP INDICATOR)

		SYNCHRO	LOAD
	AVR		

30F<sub>1</sub> (TARGET TYPE INDICATOR)

87-1	64N	64D	87T	96-2	26	12	45E	38
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30F<sub>2</sub> (TARGET TYPE INDICATOR)

330B Lb	63Q3	27G	5E	51	59	51T	57	86G
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30F<sub>3</sub> (TARGET TYPE INDICATOR)

86R	63Q2	33QP ma	33QP mb	69Q 1-2	69W1	69W2	38D 1-2	49AD 1-2
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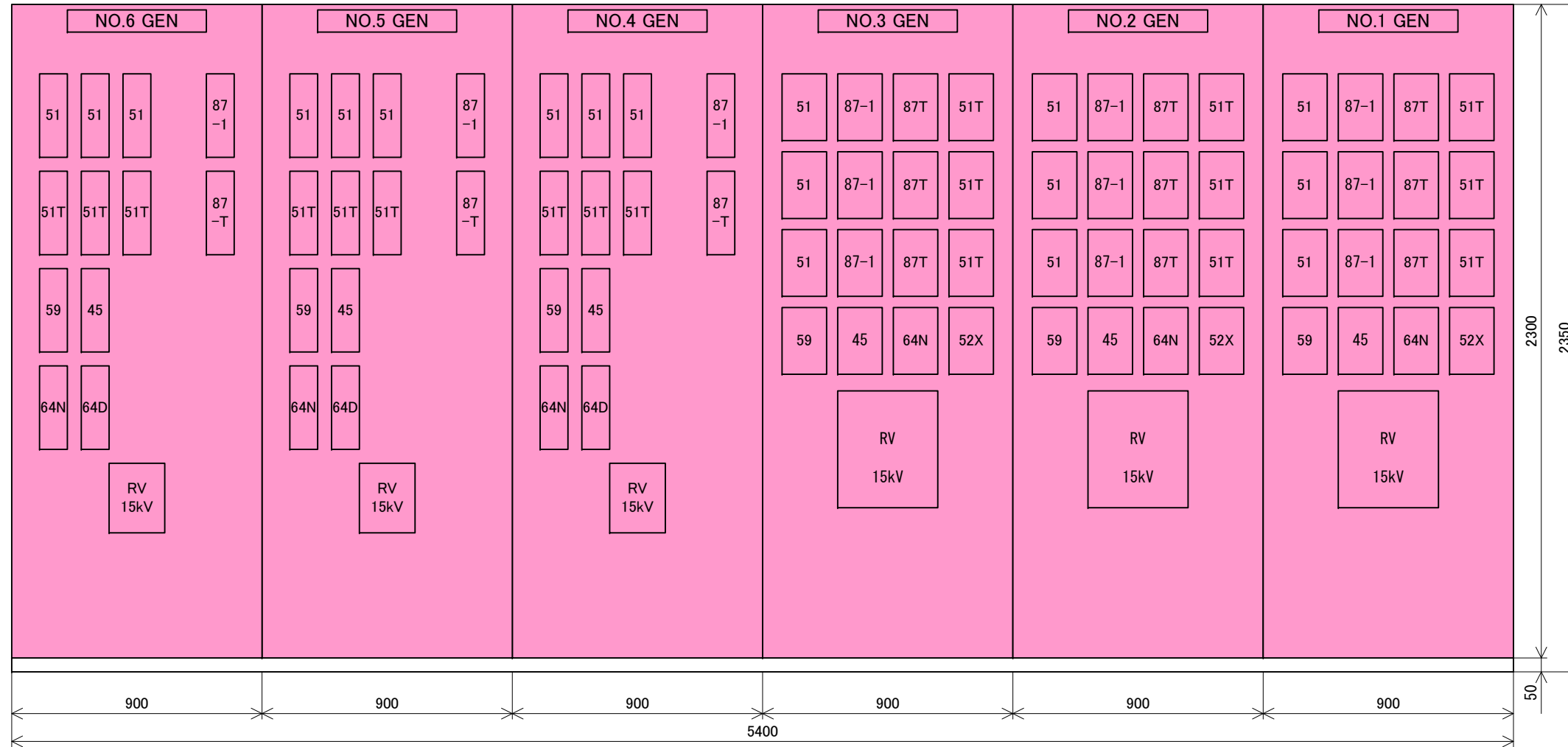
30F<sub>4</sub> (TARGET TYPE INDICATOR)

96-1	38DT	69TW	69QT	33QT mb	63N	30FQT	68QB	33QB
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THE PROJECT FOR REHABILITATION OF BALUCHAUNG NO.2 HYDRO POWER PLANT IN REPUBLIC OF THE UNION OF MYANMAR

DWN	Y. SHINDO	SCALE	TITLE FRONT VIEW OF METER PANEL, SLOPING PANEL AND VERTICAL PANEL FOR UNIT NO.4-6
CHKD	Y. SHINDO	1 / 20	
APPD	N. MATSUSHIMA	DATE	DWG NO
NIPPON KOEI CO.,LTD. TOKYO ELECTRIC POWER COMPANY		December 2012	BLC-013

1-11. Control Panel for Generators (Unit No.1-6)

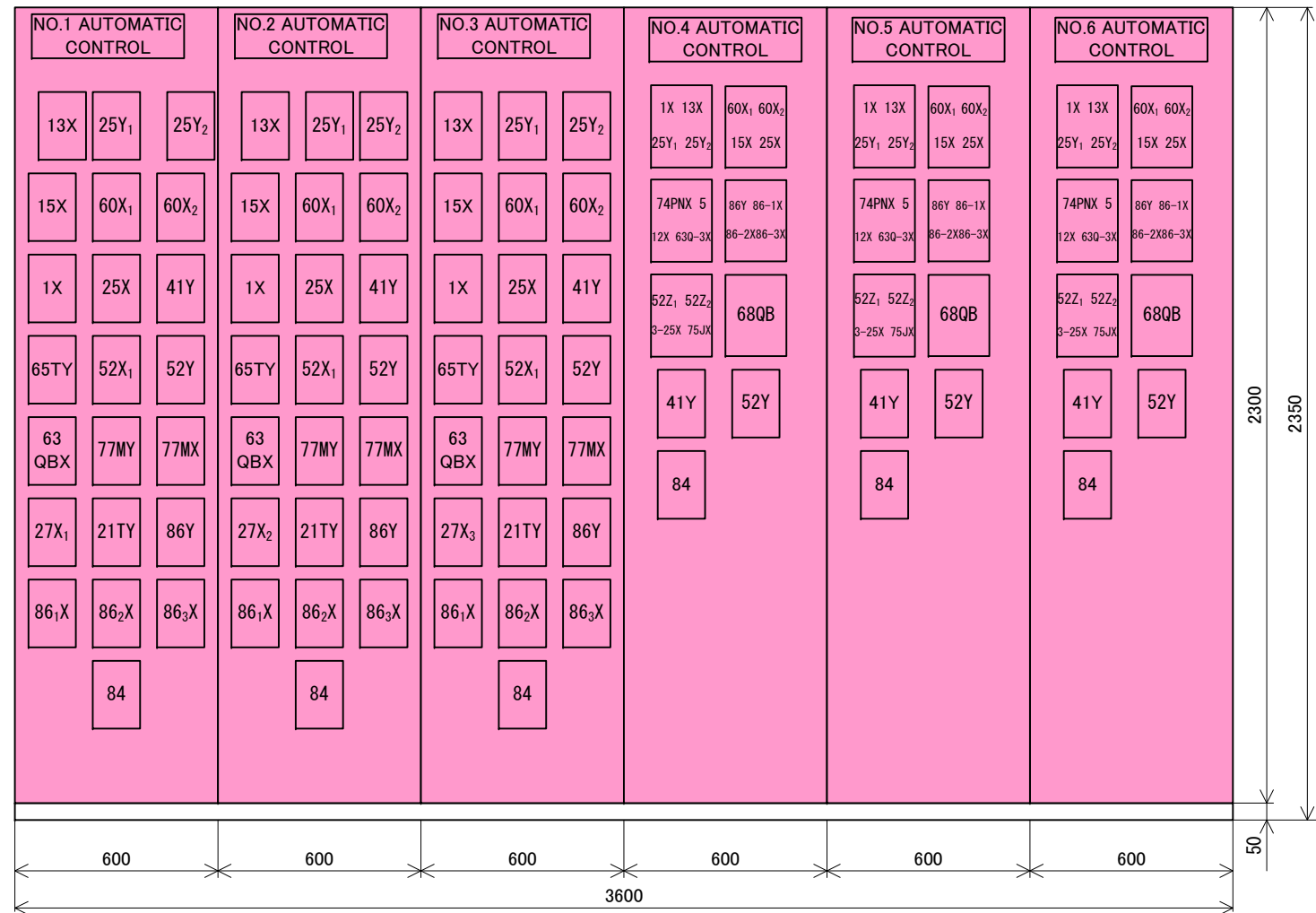


RELAY PANEL FRONT VIEW

LEGEND	
	REPAIR
	REPLACE
	MODIFICATION

THE PROJECT FOR REHABILITATION OF BALUCHAUNG NO.2 HYDRO POWER PLANT IN REPUBLIC OF THE UNION OF MYANMAR			
DWN	Y. SHINDO	SCALE 1 / 20	TITLE FRONT VIEW OF RELAY PANEL FOR UNIT NO.1-6
CHKD	Y. SHINDO		
APPD	N. MATSUSHIMA	DATE December 2012	DWG NO BLC-014
NIPPON KOEI CO.,LTD. TOKYO ELECTRIC POWER COMPANY			

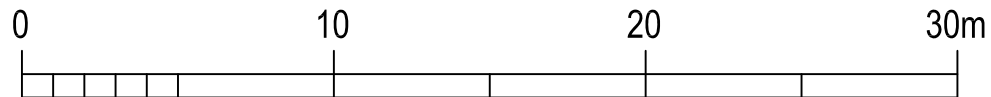
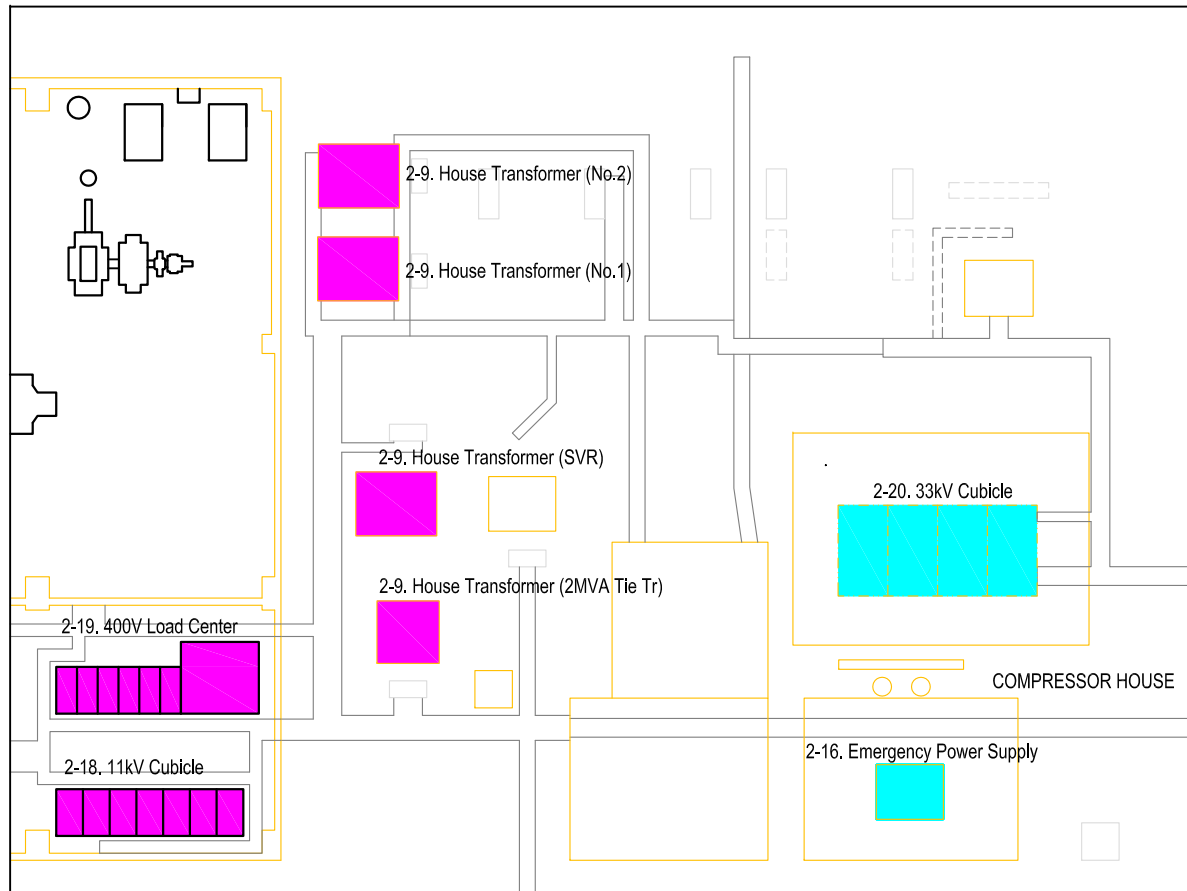
1-11. Control Panel for Generators (Unit No.1-6)



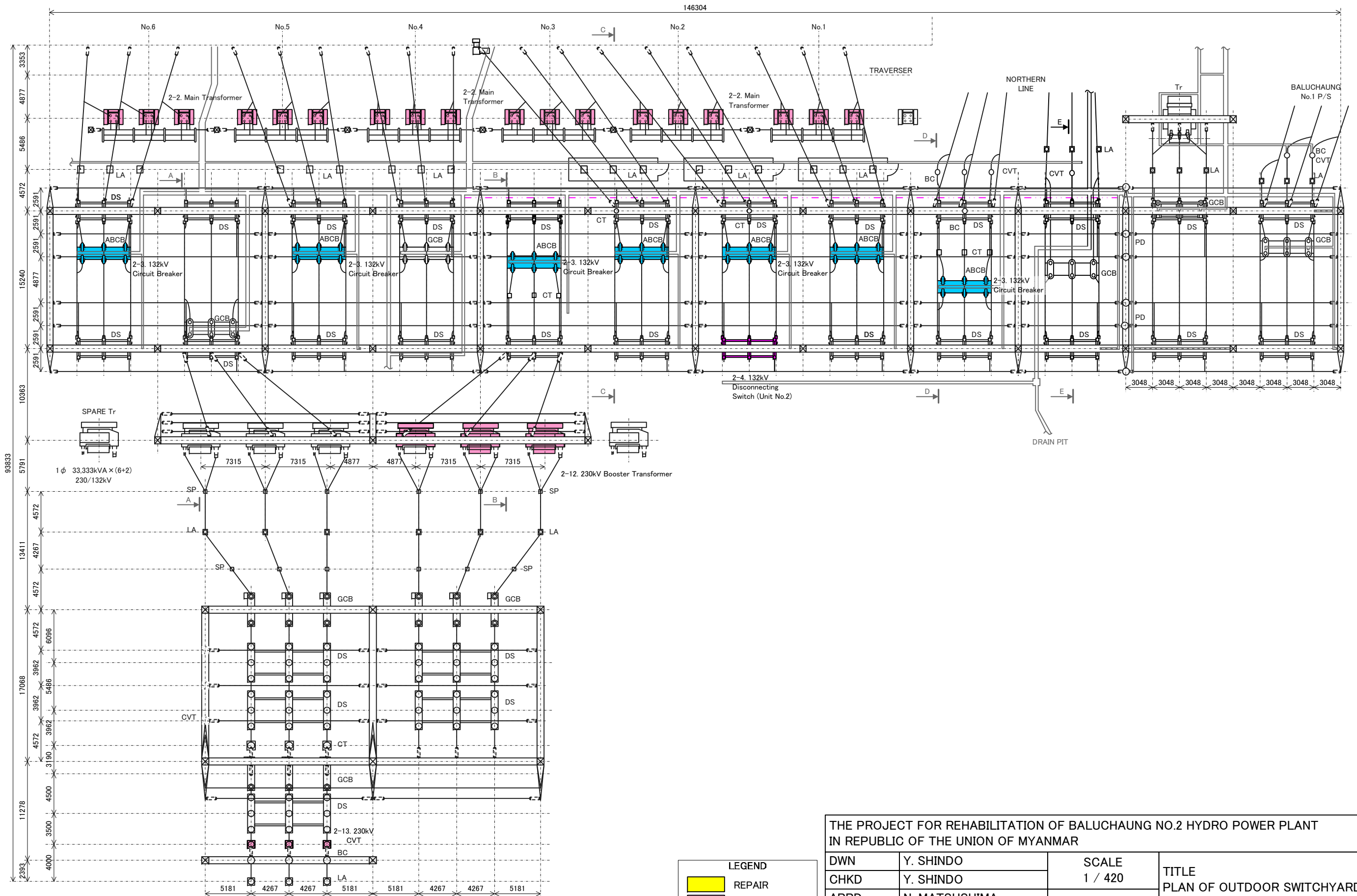
AUTOMATIC CONTROL PANEL FRONT VIEW

THE PROJECT FOR REHABILITATION OF BALUCHAUNG NO.2 HYDRO POWER PLANT IN REPUBLIC OF THE UNION OF MYANMAR			
DWN	Y. SHINDO	SCALE 1 / 20	TITLE FRONT VIEW OF AUTOMATIC CONTROL PANEL FOR UNIT NO.1-6
CHKD	Y. SHINDO		
APPD	N. MATSUSHIMA	DATE December 2012	DWG NO   BLC-015
NIPPON KOEI CO.,LTD. TOKYO ELECTRIC POWER COMPANY			

LEGEND	
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THE PROJECT FOR REHABILITATION OF BALUCHAUNG NO.2 HYDRO POWER PLANT IN REPUBLIC OF THE UNION OF MYANMAR			
DWN	Y. SHINDO	SCALE 1 / 300	TITLE PLAN OF HOUSE TRANSFORMER AND 33KV CUBICLE
CHKD	Y. SHINDO		
APPD	N. MATSUSHIMA	DATE	
NIPPON KOEI CO., LTD. TOKYO ELECTRIC POWER COMPANY		December 2012	DWG NO   BLC-016



**LEGEND**

	REPAIR
	REPLACE
	MODIFICATION

<b>THE PROJECT FOR REHABILITATION OF BALUCHAUNG NO.2 HYDRO POWER PLANT IN REPUBLIC OF THE UNION OF MYANMAR</b>			
DWN	Y. SHINDO	SCALE 1 / 420	TITLE PLAN OF OUTDOOR SWITCHYARD
CHKD	Y. SHINDO		
APPD	N. MATSUSHIMA	DATE December 2012	DWG NO BLC-017
NIPPON KOEI CO.,LTD. TOKYO ELECTRIC POWER COMPANY			