

Contractor No : T1-T-SHI-LNJ-00082

Dated : October 27, 2020

Received date : November 6, 2020

PLN Pusenlis No : 3835 /KIT.02.01/B29000000/2020

Dated : December 01, 2020

REVIEW FOR APPROVAL DRAWINGS / DOCUMENTS						CCR OUT	DATE
						000618	01/12/2020
DRAWING / DOCUMENT NUMBER						DRAWING / DOCUMENT TITLE	
No.	PLN	REV	CONTRACTOR	REV	STATUS		
1.	10163B-00-M-52-L-0001-00-	2	T1-SH-100-SYS-PID-00003	2	A	SYMBOLS IN P&ID	
2.	10163B-00-M-52-H-0001-00-	1	T1-SH-100-SYS-PID-00004	1	B	MAIN PI DIAGRAM - AIR AND FLUE GAS	
3.	10163B-00-M-52-HA-0022-00-	1	T1-SH-100-SYS-PID-00005	1	B	MAIN PI DIAGRAM – WATER AND STEAM	
4.	10163B-00-M-52-HA-0019-00-	2	T1-SH-100-SYS-PID-00010	2	A	P&ID – BOILER WATER	
5.	10163B-00-M-52-HCB-0002-00-	2	T1-SH-100-SYS-PID-00015	2	A	P&ID – STEAM SOOTBLOWING	
6.	10163B-00-M-52-HDA-0002-00-	2	T1-SH-100-SYS-PID-00020	2	B	P&ID – BOTTOM ASH REMOVAL SYSTEM	
7.	10163B-00-M-52-HHA-0002-00	2	T1-SH-100-SYS-PID-00030	2	B	P&ID – FURNACE AND SEPARATOR MEASUREMENTS	
8.	10163B-00-M-52-HHE-0002-00-	2	T1-SH-100-SYS-PID-00031	2	C	P&ID – FUEL FEEDING SYSTEM 1/2, SILOS	
9.	10163B-00-M-52-HHE-0003-00-	2	T1-SH-100-SYS-PID-00032	2	C	P&ID – FUEL FEEDING SYSTEM 2/2	
10.	10163B-00-M-52-HHH-0002-00-	2	T1-SH-100-SYS-PID-00033	2	C	P&ID – BED MATERIAL SYSTEM	
11.	10163B-00-M-52-HFB-0001-00-	1	T1-SH-100-SYS-PID-00034	1	C	P&ID - BED MATERIAL FEEDING, PNEUMATIC CONVEYOR	
12.	10163B-00-M-52-HHM-0002-00-	2	T1-SH-100-SYS-PID-00035	2	C	P&ID – WALL SEAL BLOWER	
13.	10163B-00-M-52-HHN-0001-00-	2	T1-SH-100-SYS-PID-00036	2	C	P&ID – INTREX AIR DISTRIBUTION 1/2	

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14.	10163B-00-M-52-HHN-0002-00-	2	T1-SH-100-SYS-PID-00037	2	C	P&ID – INTREX AIR DISTRIBUTION 2/2	
15.	10163B-00-M-52-HJ-0004-00-	2	T1-SH-100-SYS-PID-00040	2	B	P&ID – IGNITION SYSTEM	
16.	10163B-00-M-52-HJA-0001-00-	2	T1-SH-100-SYS-PID-00041	2	B	P&ID – START-UP BURNER 1, LIGHT OIL	
17.	10163B-00-M-52-HJA-0002-00-	2	T1-SH-100-SYS-PID-00042	2	B	P&ID – START-UP BURNER 2, LIGHT OIL	
18.	10163B-00-M-52-HJA-0003-00-	2	T1-SH-100-SYS-PID-00043	2	B	P&ID START-UP BURNER 3, LIGHT OIL	
19.	10163B-00-M-52-HLA-0001-00-	2	T1-SH-100-SYS-PID-00050	2	B	P&ID – PRIMARY AIR	
20.	10163B-00-M-52-HLE-0001-00-	2	T1-SH-100-SYS-PID-00051	2	B	P&ID – SECONDARY AIR	
21.	10163B-00-M-52-HN-0003-00-	2	T1-SH-100-SYS-PID-00052	2	B	P&ID – FLUE GAS SYSTEM 1/2	
22.	10163B-00-M-52-HN-0004-00-	2	T1-SH-100-SYS-PID-00053	2	A	P&ID – FLUE GAS SYSTEM 2/2	
23.	10163B-00-M-52-HRA-0002-00-	2	T1-SH-100-SYS-PID-00060	2	B	P&ID – AMMONIA SYSTEM 1/2, FURNACE	
24.	10163B-00-M-52-HRA-0003-00-	2	T1-SH-100-SYS-PID-00061	2	A	P&ID – AMMONIA SYSTEM 2/2, SEPARATOR	
25.	10163B-00-M-52-HRB-0002-00-	2	T1-SH-100-SYS-PID-00062	2	C	P&ID – LIMESTONE SILO	
26.	10163B-00-M-52-HRB-0003-00-	2	T1-SH-100-SYS-PID-00063	2	C	P&ID – LIMESTONE FEEDING	

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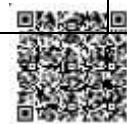
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27.	10163B-00-M-52-LAB-0005-00-	2	T1-SH-100-SYS-PID-00070	2	B	P&ID – FEED WATER, MAIN VALVE GROUP	
28.	10163B-00-M-52-LB-0003-00-	2	T1-SH-100-SYS-PID-00071	2	C	P&ID – MAIN STEAM	
29.	10163B-00-M-52-LC-0003-00-	2	T1-SH-100-SYS-PID-00072	2	C	P&ID – BLOW DOWN	
30.	10163B-00-M-52-LCL-0001-00-	2	T1-SH-100-SYS-PID-00073	2	B	P&ID – DRAIN COLLECTING	
31.	10163B-00-M-52-PG-0004-00-	2	T1-SH-100-SYS-PID-00080	2	B	P&ID – CLOSED COOLING WATER	
32.	10163B-00-M-52-PG-0007-00-	1	T1-SH-100-SYS-PID-00082	1	B	P&ID - CLOSED COOLING WATER FOR FAN	
33.	10163B-00-M-52-QFH-0001-00-	2	T1-SH-100-SYS-PID-00090	2	B	P&ID – INSTRUMENT AND PRESSURIZED AIR	
34.	10163B-00-M-52-QEB-0004-00-	0	T1-SH-100-SYS-PID-00091	0	C	P&ID – TRANSPORT AIR	

No.	PLN'S COMMENTS	No.	CONTRACTOR'S RESPONSE
0.	General Comment: 1. Contractor's Response no 2 Drawing is not completed with reference and coordinate drawing yet. Please provide. 2. Contractor's Response no 3 Please add the size for each ducting. Please revise in next revision. 3. Contractor's Response no 4 Please update drawing with title for each equipment.		

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1.	T1-SH-100-SYS-PID-00003 1. APPROVAL DOES NOT RELIEVE CONTRACTOR FROM RESPONSIBILITY FOR ERRORS OR DEVIATION FROM CONTRACT REQUIREMENTS.		
	T1-SH-100-SYS-PID-00004 1. Contractor's Response no 1 The tittle has been revise as the PFD, please inform the other detail PFD for inside Boiler.		
	T1-SH-100-SYS-PID-00005 1. Contractor's Response no 1 Please state the document number P&ID.		
	T1-SH-100-SYS-PID-00010 1. APPROVAL DOES NOT RELIEVE CONTRACTOR FROM RESPONSIBILITY FOR ERRORS OR DEVIATION FROM CONTRACT REQUIREMENTS.		
	T1-SH-100-SYS-PID-00015 1. APPROVAL DOES NOT RELIEVE CONTRACTOR FROM RESPONSIBILITY FOR ERRORS OR DEVIATION FROM CONTRACT REQUIREMENTS.		
	T1-SH-100-SYS-PID-00020 1. Contractor's Response no 2 What kind the system for draining the bottom ash on the intrex area? It is using transport air?		
	T1-SH-100-SYS-PID-00030 1. Contractor's Response no 1 As per submitted PID drawing, PLN not received the document (instrument list) yet.		
	T1-SH-100-SYS-PID-00031		

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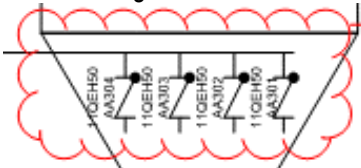

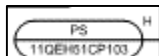
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	<p>Please clarify If there is a block in one of the lines, how to find out which line the blocking occurs. One of the FT functions on each line is to indicate blocking. PLN already has the design in one of PLN's power plants.</p> <p>The flow transmittal shall be located on each line, with this design, the operator will easily notice and take action to the blockage one.</p>		
	<p>T1-SH-100-SYS-PID-00033</p> <p>1. Contractor's Response no 2</p> <p>please confirm the pneumatic valve which indicate as 11HHH11AA301 is double acting actuator.</p>  <p>2. Please clarify the location for check valve it shall be surrounding the bed silo.</p>		
	<p>T1-SH-100-SYS-PID-00034</p> <p>1. Contractor's Response no 5</p>  <p>Please clarify the quantity PS are 3 for separate condition.</p> <p>2. Please provide all pipe sizing after get vendor data.</p> <p>3.</p> 		

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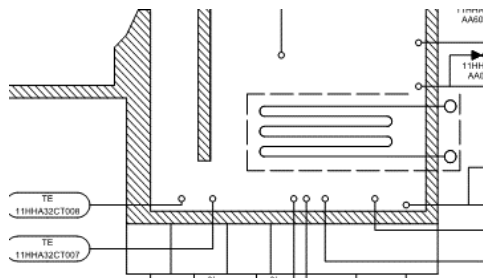
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	Please revise to HH		
	<p>T1-SH-100-SYS-PID-00035</p>  <p>1. Please provide limit switch to indicate the valve status.</p>  <p>2. Please provide TI for bearing blower and bearing motor</p>		
	<p>T1-SH-100-SYS-PID-00036</p> <p>1. Contractor's Response no 3 There is no indicated note in P&ID. Please clarify the air shall be taken from service air for purging.</p> <p>2. Contractor's Response no 4 Please indicate sectional drawing title.</p>		
	<p>T1-SH-100-SYS-PID-00037</p> <p>1. Contractor's Response no 4 Please indicate sectional drawing title.</p>  <p>2.</p>		

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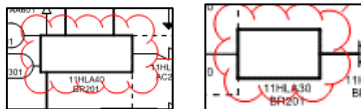
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	Please explain how to remove the bed material when the bed material was accumulate because of MFT condition		
	T1-SH-100-SYS-PID-00040 1. Contractor's Response no 1 Please clarify for pressure at 11HJF20AT202 can be read if PI not moved to after and before the branch. 2. Contractor's Response no 2 Please clarify to achieve sufficient pressure into burner, meanwhile the pipe sizing return line is bigger than burner line.		
	T1-SH-100-SYS-PID-00041 1. Contractor's Response no 2 Please explain for using 4 way valve however the drawing indicate 3 connection.		
	T1-SH-100-SYS-PID-00042 1. Contractor's Response no 2 Please explain for using 4 way valve however the drawing indicate 3 connection.		
	T1-SH-100-SYS-PID-00043 1. Contractor's Response no 2 Please explain for using 4 way valve however the drawing indicate 3 connection.		
	T1-SH-100-SYS-PID-00050 1. Contractor's Response no 3 Please elaborate the answer which drawing will be updated. 2. 		

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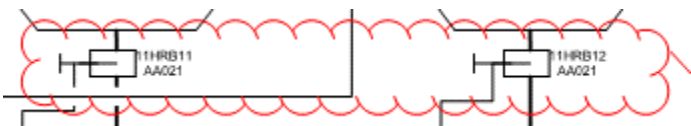
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	Please clarify this equipment and add to symbol & legend		
	T1-SH-100-SYS-PID-00051 1. Contractor's Response no 2 PLN not received the Burner GA drawing, Please provide.		
	T1-SH-100-SYS-PID-00052 1. Contractor's Response no 2 Please explain, the regulation limit is under 200 mg/Nm ³ , however the design shall be less than 200, please specified the design NOx emission and explain to avoid higher than 5% from average daily monitoring in 3 months.		
	T1-SH-100-SYS-PID-00053 1. <i>APPROVAL DOES NOT RELIEVE CONTRACTOR FROM RESPONSIBILITY FOR ERRORS OR DEVIATION FROM CONTRACT REQUIREMENTS.</i>		
	T1-SH-100-SYS-PID-00060 1. Contractor's Response no 1 There is no ball valves 11HRA50AA011 & 11HRA50AA012 in P&ID. Please clarify		
	T1-SH-100-SYS-PID-00061 1. <i>APPROVAL DOES NOT RELIEVE CONTRACTOR FROM RESPONSIBILITY FOR ERRORS OR DEVIATION FROM CONTRACT REQUIREMENTS.</i>		
	T1-SH-100-SYS-PID-00062 1. Please compare with limestone storage silo (IKPT scope). It is using piston/knocker vibrator instead of fluidizing to avoid any clogging.  2.		

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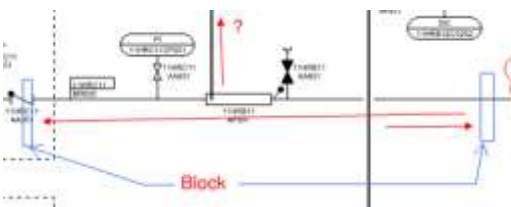
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	Please clarify why SHI change the damper? Please remind the damper shall be more reliable than actuator.		
	<p>T1-SH-100-SYS-PID-00063</p>  <p>1. Please clarify for apply equal system with bed material.</p>  <p>2. Please explain if the block is happen, how to avoid back pressure into denseveyor.</p>		
	<p>T1-SH-100-SYS-PID-00070</p> <p>1. Contractor's Response no 1 Please submit pipe list document.</p>		
	<p>T1-SH-100-SYS-PID-00071</p> <p>1. Contractor's Response no 1 Please clarify, as per T1-SH-100-SYS-PID-00014 item number 11LBA10CT201 & 11LBA10CT202 is for TIC.</p>		
	<p>T1-SH-100-SYS-PID-00072</p> <p>1. Contractor's Response no 1</p>		

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	For continuous blow down shall be use control valve, because if using inching valve the deviation set point will be high.		
	T1-SH-100-SYS-PID-00073 1. Contractor's Response no 1 Please clarify drain from furnace front wall will be dumped?		
	T1-SH-100-SYS-PID-00080 1. Contractor's Response no 1 Please indicate the sight glass. 2. Contractor's Response no 2 & 3 Please provide terminal point list document.		
	T1-SH-100-SYS-PID-00082 1. Contractor's Response no 2 Please clarify attach the MoM, because PLN didn't any meeting schedule in Dec 09, 2020.		
	T1-SH-100-SYS-PID-00090 1. Contractor's Response no 1 Please attach the drawing to ensure the instrument air for SNCR system.		
	T1-SH-100-SYS-PID-00091 1. If there any changes regarding transport air system in boiler, the drawing shall be updated and info with cloud mark and triangle revision symbol.		

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P&ID - BOILER WATER

Timor-1 Coal Fired Steam Power Plant 2 X 50 MW (Timor-1 CFSPP Project)



Consortium of
PT IKPT - PT PP (Persero) Tbk. - ITOCHU Corporation -
Sumitomo Heavy Industries, Ltd. - PT Medco Power Indonesia

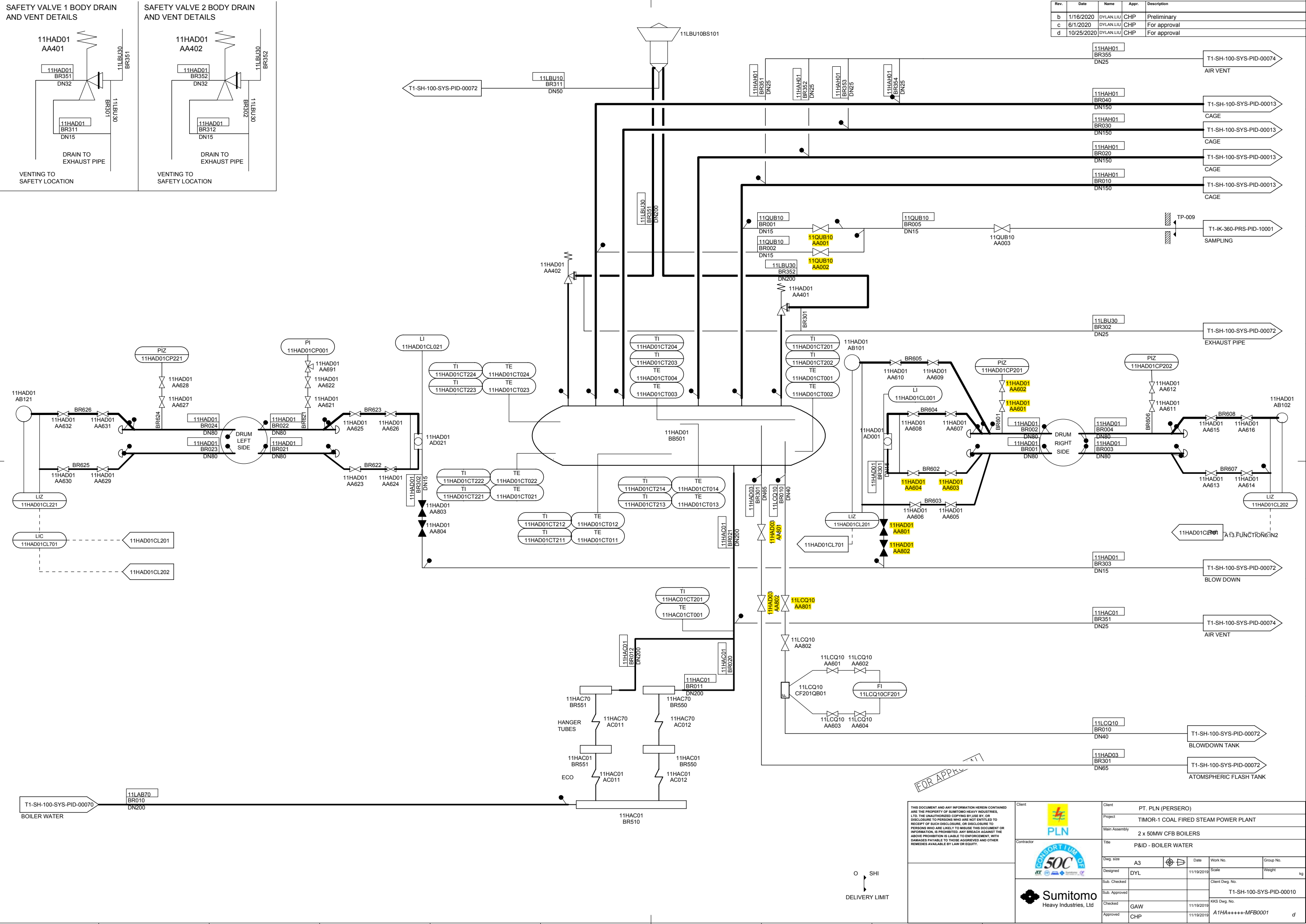
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B <input type="checkbox"/> APPROVED AS NOTED	I & C				
C <input type="checkbox"/> NOT APPROVED	SUPPORT				
I <input type="checkbox"/> INFORMATION		DISTRIBUTION	PLN UIP NUSRA (HO)		
REVIEWED DOES NOT RELIEVE CONTRACTOR FROM RESPONSIBILITY FOR ERROR OR DEVIATIONS FROM CONTRACT REQUIREMENTS			PLN UPP TIMOR		
			PLN PUSENLIS (JKT)		
			JAYA CM (SITE)		
By:	Date:			CONTRACTOR (JKT)	
Log out	Date:			CONTRACTOR (SITE)	
Comm No:				Note:	

PLN DOC. NO. :
10163B-00-M-52-HA-0019-00-2

CONTRACTOR DOC. NO. :
T1-SH-100-SYS-PID-00010

CONTRACT NO. :
0389.PJ/DAN.02.01/010000/2019

2	2020-10-23	For Approval	DL	GW	CP	CP
1	2020-06-01	For Approval	DL	GW	CP	CP
0	2020-01-17	For Approval	DL	GW	CP	CP
-	2019-11-20	Preliminary	DL	GW	CP	CP
REV	DATE	PURPOSE OF ISSUE	PREPARED	CHECKED	APPROVED	AUTHORIZED



Rev.	Date	Name	Appr.	Description
b	1/16/2020	DYLAN.LIU	CHP	Preliminary
c	6/1/2020	DYLAN.LIU	CHP	For approval
d	10/25/2020	DYLAN.LIU	CHP	For approval

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Client

PT. PLN (PERSERO)

Project

TIMOR-1 COAL FIRED STEAM POWER PLANT

Main Assembly

2 x 50MW CFB BOILERS

Contractor

P&ID - BOILER WATER

Dwg. size

A3

Date

11/19/2019

Work No.

Group No.

Designed

DYL

Scale

Weight

kg

Sub. Checked

Sub. Approved

Checked

GAW

11/19/2019

Approved

CHP

11/19/2019

Client Dwg. No.

T1-SH-100-SYS-PID-00010

KKS Dwg. No.

A1HA+++++MFB0001

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