

SINGLE PASS CONSTANT FLOW
WATER COOLED BUSHINGS[LINE NO : 3/4-517-L-GC ***-XX/N] THE (**-XX/N) INDICATED IN THIS DRAWING
MEAN THE LINE NUMBER

*.517-L-GC *** - XX /N

EQUIPMENT
CATEGORY
PLANT SYSTEM CODE
PIPE LINE SERIAL
LINE SIZE (INCH.)

INSULATION CLASS
V: FIBER GLASS WITH VAPOR BARRIER AND AL. JACKET FOR ANTI SWEAT
T: CALCIUM SILICATE WITH AL JACKET FOR HEAT TRACED PIPING
C: CALCIUM SILICATE WITH AL JACKET FOR HEAT RETENTION
A: CALCIUM SILICATE WITH AL JACKET FOR PERSONAL PROTECTION OR MINERAL
FIBER FOR TUBING LINE ONLY
N: NO INSULATION

[LINE NO : 3/4-517-L-GC ***-XX/N] THE (**-XX/N) INDICATED IN THIS DRAWING

*.517-L-GC *** - XX /N

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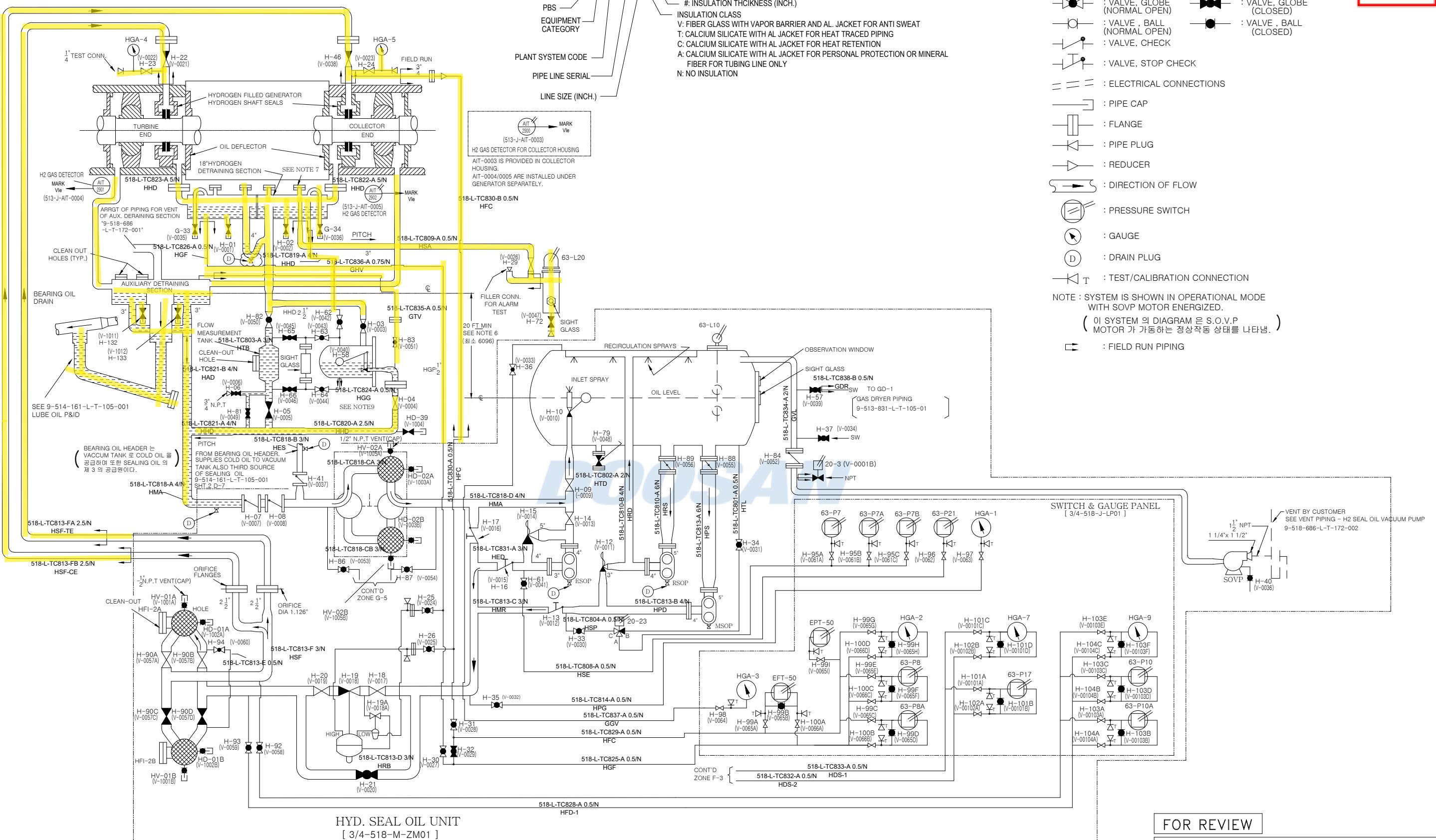
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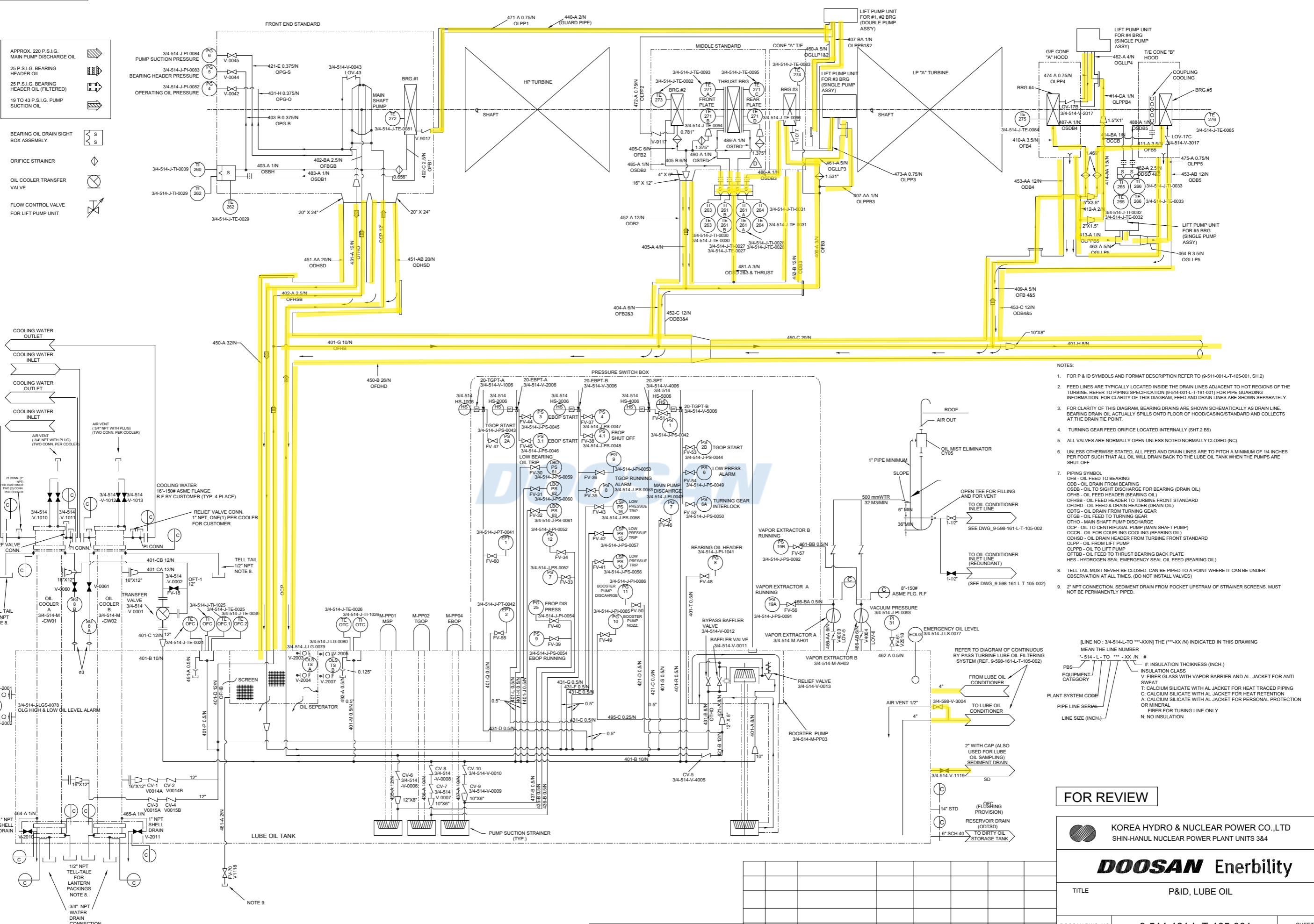
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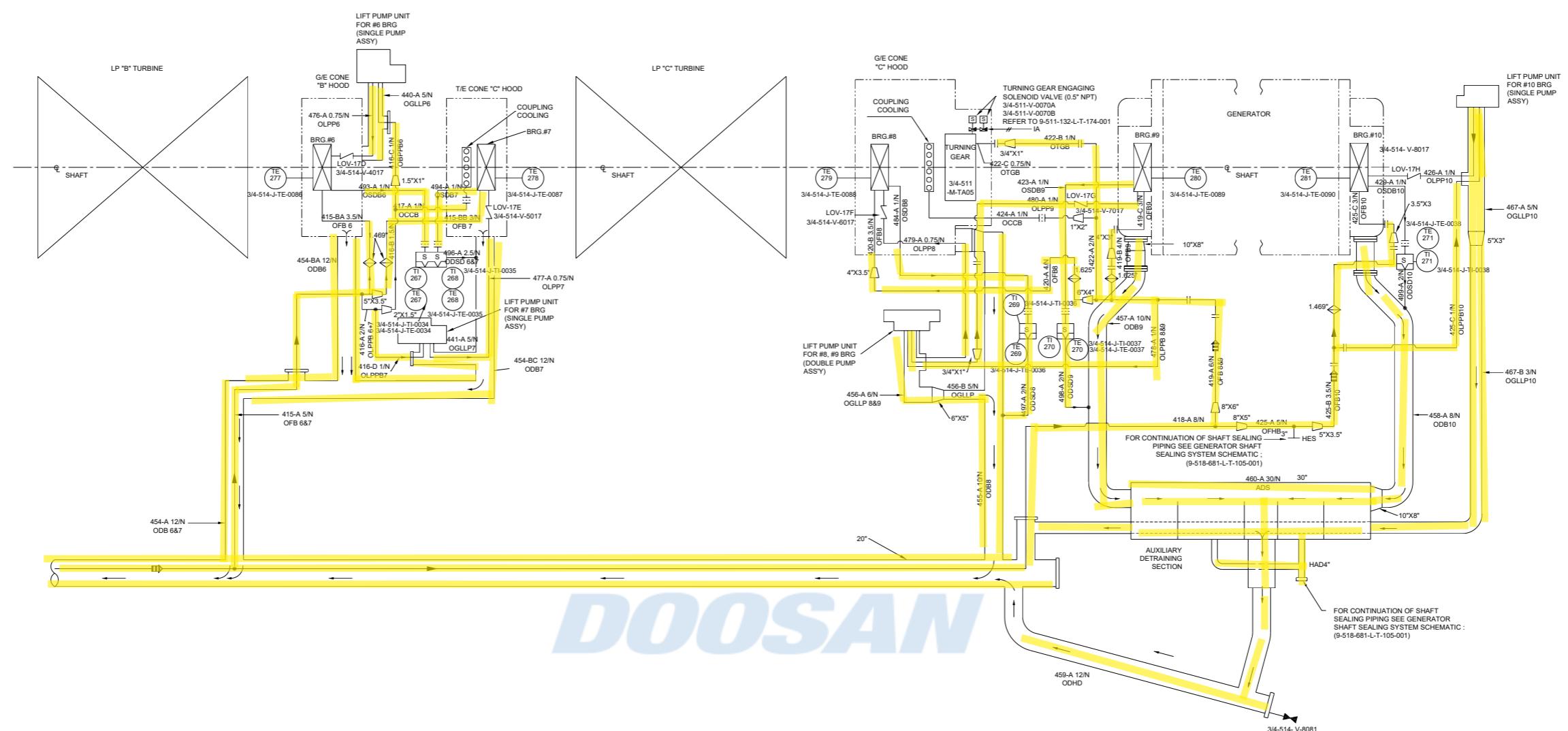
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FOR REVIEW									
KOREA HYDRO & NUCLEAR POWER CO.,LTD SHIN-HANUL NUCLEAR POWER PLANT UNITS 3&4					DOOSAN Enerbility				
TITLE GENERATOR SHAFT SEAL SYSTEM SCHEMATIC					DOOSAN DWG NO 9-518-681-L-T-105-001				
PROJECT DWG NO 9-518-681-L-T-105-001					SHEET 1 OF 2				
REV.	DATE	DESCRIPTION	DRN	DGN	CK	RV	APP	11C64	N/S



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NQ



FOR REVIEW

 KOREA HYDRO & NUCLEAR POWER CO., LTD
SHIN-HANUL NUCLEAR POWER PLANT UNITS 3&4
DOOSAN Enerbility

TITLE P&ID, LUBE OIL

DOOSAN DWG NO 9-514-161-L-T-105-001 SHEET

PROJECT DWG NO 9-514-161-L-T-105-001 2 OF 3

JOB NO. SAFETY CATEGORY AREA CODE SCALE REV.

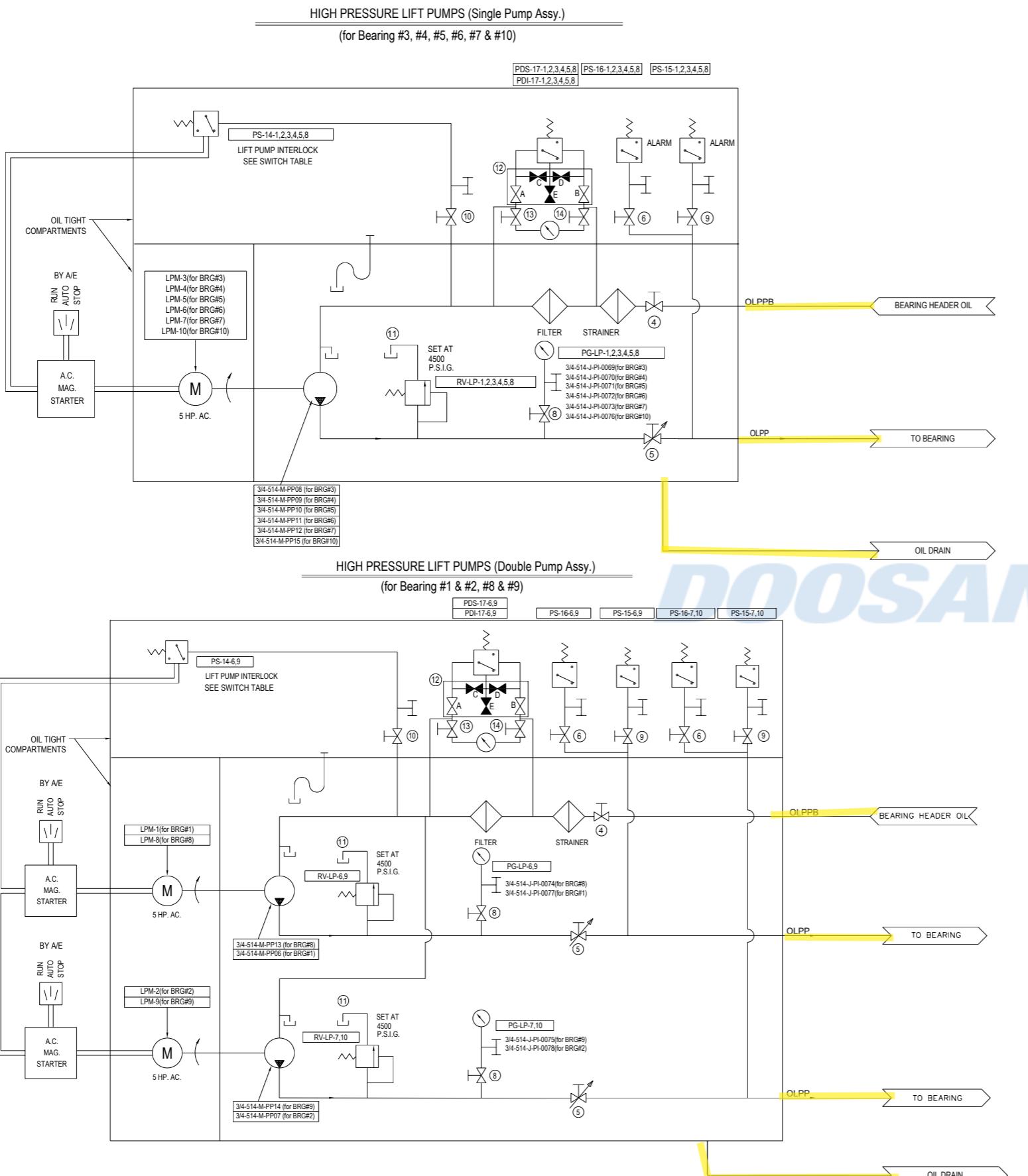
11C64 N N/S A

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REV.	DATE	DESCRIPTION	DRN	DGN	CK	RV	APP
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[CONFIDENTIAL] Byeongchan Jang / 2025-02-28 15:22 / swangtae Ha / 2025-03-05 07:38 / Sangyoub Lee / 2025-03-05 08:07 / Service/CCP Piping Engineering Team



MISCELLANEOUS REFERENCE INFORMATION			PRESSURE SWITCH NOTES		
ITEM	ENGLISH	MKS METRIC	PRESSURE SWITCH CONTACTS OPERATE AT PRESSURE (P.S.I.G.) INCREASE AND DECREASE AS FOLLOWS:		
LUBE OIL SYSTEM	18 PSIG	1.265 kg/cm ²	SWITCH	INCREASE	DECREASE
	25 PSIG	1.757 kg/cm ²	PS-14-1-9	5 (C)	3 (O)
	40 PSIG	2.812 kg/cm ²	PS-16-1- 9	HIGH 900 (O)	HIGH 840 (C)
	220 PSIG	15.467 kg/cm ²	PS-15-1- 9	LOW 325 (O)	LOW 265 (C)
PRESSURE RELIEF VALVES	4500 PSIG	316.388 kg/cm ²	PS-16-10	HIGH 550 (O)	HIGH 500 (C)
	5 HP	3.7 kW	PS-15-10	LOW 325 (O)	LOW 265 (C)
CONTACTS OPEN (O) - CLOSED (C) PS-15, PS-16 FOR LOW PRESS. ALARM (HIGH: HIGH PRESS SET, LOW: LOW PRESS SET.)					

PRESSURE SWITCHES					
SWITCH ID	LIFT PUMP NO.	BRG NO.	ENGLISH		MKS METRIC
			INCREASE	DECREASE	INCREASE
PS-14-1	3/4-514-J-PS-0062	#3	#3 BRG	5 P.S.I.G.	3 P.S.I.G.
PS-14-2	3/4-514-J-PS-0063	#4	#4 BRG	5 P.S.I.G.	3 P.S.I.G.
PS-14-3	3/4-514-J-PS-0064	#5	#5 BRG	5 P.S.I.G.	3 P.S.I.G.
PS-14-4	3/4-514-J-PS-0065	#6	#6 BRG	5 P.S.I.G.	3 P.S.I.G.
PS-14-5	3/4-514-J-PS-0066	#7	#7 BRG	5 P.S.I.G.	3 P.S.I.G.
PS-14-6	3/4-514-J-PS-0067	#8,9	#8,9 BRG	5 P.S.I.G.	3 P.S.I.G.
PS-14-8	3/4-514-J-PS-0068	#10	#10 BRG	5 P.S.I.G.	3 P.S.I.G.
PS-14-9	3/4-514-J-PS-0079	#1,2	#1,2 BRG	5 P.S.I.G.	3 P.S.I.G.
PS-16-1(HIGH)	3/4-514-J-PS-0069	#3	#3 BRG	900 P.S.I.G.	840 P.S.I.G.
PS-16-2(HIGH)	3/4-514-J-PS-0070	#4	#4 BRG	900 P.S.I.G.	840 P.S.I.G.
PS-16-3(HIGH)	3/4-514-J-PS-0071	#5	#5 BRG	900 P.S.I.G.	840 P.S.I.G.
PS-16-4(HIGH)	3/4-514-J-PS-0072	#6	#6 BRG	900 P.S.I.G.	840 P.S.I.G.
PS-16-5(HIGH)	3/4-514-J-PS-0073	#7	#7 BRG	900 P.S.I.G.	840 P.S.I.G.
PS-16-6(HIGH)	3/4-514-J-PS-0074	#8	#8 BRG	900 P.S.I.G.	840 P.S.I.G.
PS-16-7(HIGH)	3/4-514-J-PS-0075	#9	#9 BRG	900 P.S.I.G.	840 P.S.I.G.
PS-16-8(HIGH)	3/4-514-J-PS-0076	#10	#10 BRG	900 P.S.I.G.	840 P.S.I.G.
PS-16-9(HIGH)	3/4-514-J-PS-0077	#1	#1 BRG	900 P.S.I.G.	840 P.S.I.G.
PS-16-10(HIGH)	3/4-514-J-PS-0078	#2	#2 BRG	550 P.S.I.G.	500 P.S.I.G.
PS-15-1(LOW)	3/4-514-J-PS-0080	#3	#3 BRG	325 P.S.I.G.	265 P.S.I.G.
PS-15-2(LOW)	3/4-514-J-PS-0081	#4	#4 BRG	325 P.S.I.G.	265 P.S.I.G.
PS-15-3(LOW)	3/4-514-J-PS-0082	#5	#5 BRG	325 P.S.I.G.	265 P.S.I.G.
PS-15-4(LOW)	3/4-514-J-PS-0083	#6	#6 BRG	325 P.S.I.G.	265 P.S.I.G.
PS-15-5(LOW)	3/4-514-J-PS-0084	#7	#7 BRG	325 P.S.I.G.	265 P.S.I.G.
PS-15-6(LOW)	3/4-514-J-PS-0085	#8	#8 BRG	325 P.S.I.G.	265 P.S.I.G.
PS-15-7(LOW)	3/4-514-J-PS-0086	#9	#9 BRG	325 P.S.I.G.	265 P.S.I.G.
PS-15-8(LOW)	3/4-514-J-PS-0087	#10	#10 BRG	325 P.S.I.G.	265 P.S.I.G.
PS-15-9(LOW)	3/4-514-J-PS-0088	#1	#1 BRG	325 P.S.I.G.	265 P.S.I.G.
PS-15-10(LOW)	3/4-514-J-PS-0089	#2	#2 BRG	325 P.S.I.G.	265 P.S.I.G.
PDS-17-1	3/4-514-J-PDS-0162	#3	#3 BRG		
PDS-17-2	3/4-514-J-PDS-0163	#4	#4 BRG		
PDS-17-3	3/4-514-J-PDS-0164	#5	#5 BRG		
PDS-17-4	3/4-514-J-PDS-0165	#6	#6 BRG		
PDS-17-5	3/4-514-J-PDS-0166	#7	#7 BRG		
PDS-17-6	3/4-514-J-PDS-0167	#8,9	#8,9 BRG		
PDS-17-8	3/4-514-J-PDS-0168	#10	#10 BRG		
PDS-17-9	3/4-514-J-PDS-0169	#1,2	#1,2 BRG		

LP NO.	(4)	(5)	(6)	(8)	(9)	(10)	(11)	(12)	Remarks
#3	3/4-514-V-1014	3/4-514-V-1015	3/4-514-V-1016	3/4-514-V-1018	3/4-514-V-1019	3/4-514-V-1020	3/4-514-V-1301	3/4-514-V-1039	Bearing #3
#4	3/4-514-V-2014	3/4-514-V-2015	3/4-514-V-2016	3/4-514-V-2118	3/4-514-V-2019	3/4-514-V-2020	3/4-514-V-1302	3/4-514-V-2030	Bearing #4
#5	3/4-514-V-3014	3/4-514-V-3015	3/4-514-V-3016	3/4-514-V-3018	3/4-514-V-3019	3/4-514-V-3020	3/4-514-V-1303	3/4-514-V-3030	Bearing #5
#6	3/4-514-V-4014	3/4-514-V-4015	3/4-514-V-4016	3/4-514-V-4018	3/4-514-V-4019	3/4-514-V-4020	3/4-514-V-1304	3/4-514-V-4030	Bearing #6
#7	3/4-514-V-5014	3/4-514-V-5015	3/4-514-V-5016	3/4-514-V-5018	3/4-514-V-5019	3/4-514-V-5020	3/4-514-V-1305	3/4-514-V-5030	Bearing #7
#8	3/4-514-V-6014	3/4-514-V-6015	3/4-514-V-6016	3/4-514-V-6018	3/4-514-V-6019	3/4-514-V-6020	3/4-514-V-1306	3/4-514-V-6030	Bearing #8
#9	3/4-514-V-7014	3/4-514-V-7015	3/4-514-V-7016	3/4-514-V-7018	3/4-514-V-7019	3/4-514-V-1307			Bearing #9
#10	3/4-514-V-8014	3/4-514-V-8015	3/4-514-V-8016	3/4-514-V-8018	3/4-514-V-8019	3/4-514-V-8020	3/4-514-V-1308	3/4-514-V-8030	Bearing #10
#1	3/4-514-V-9014	3/4-514-V-9015	3/4-514-V-9016	3/4-514-V-9018	3/4-514-V-9019	3/4-514-V-9020	3/4-514-V-1309	3/4-514-V-9030	Bearing #1
#2	3/4-514-V-9114	3/4-514-V-9115	3/4-514-V-9116	3/4-514-V-9118	3/4-514-V-9119	3/4-514-V-1310			Bearing #2

LP NO.	(13)	(14)	Remarks
#3	3/4-514-V-1013	3/4-514-V-1022	Bearing #3
#4	3/4-514-V-2013	3/4-514-V-2022	Bearing #4
#5	3/4-514-V-3013	3/4-514-V-3022	Bearing #5
#6	3/4-514-V-4013	3/4-514-V-4022	Bearing #6
#7	3/4-514-V-5013	3/4-514-V-5022	Bearing #7
#8	3/4-514-V-6013	3/4-514-V-6022	Bearing #8
#10	3/4-514-V-8013	3/4-514-V-8022	Bearing #10
#1	3/4-514-V-9013	3/4-514-V-9022	Bearing #1

FOR REVIEW

KOREA HYDRO & NUCLEAR POWER CO., LTD

SHIN-HANUL NUCLEAR POWER PLANT UNITS 3&4

DOOSAN Enerbility

TITLE P&ID, LUBE OIL

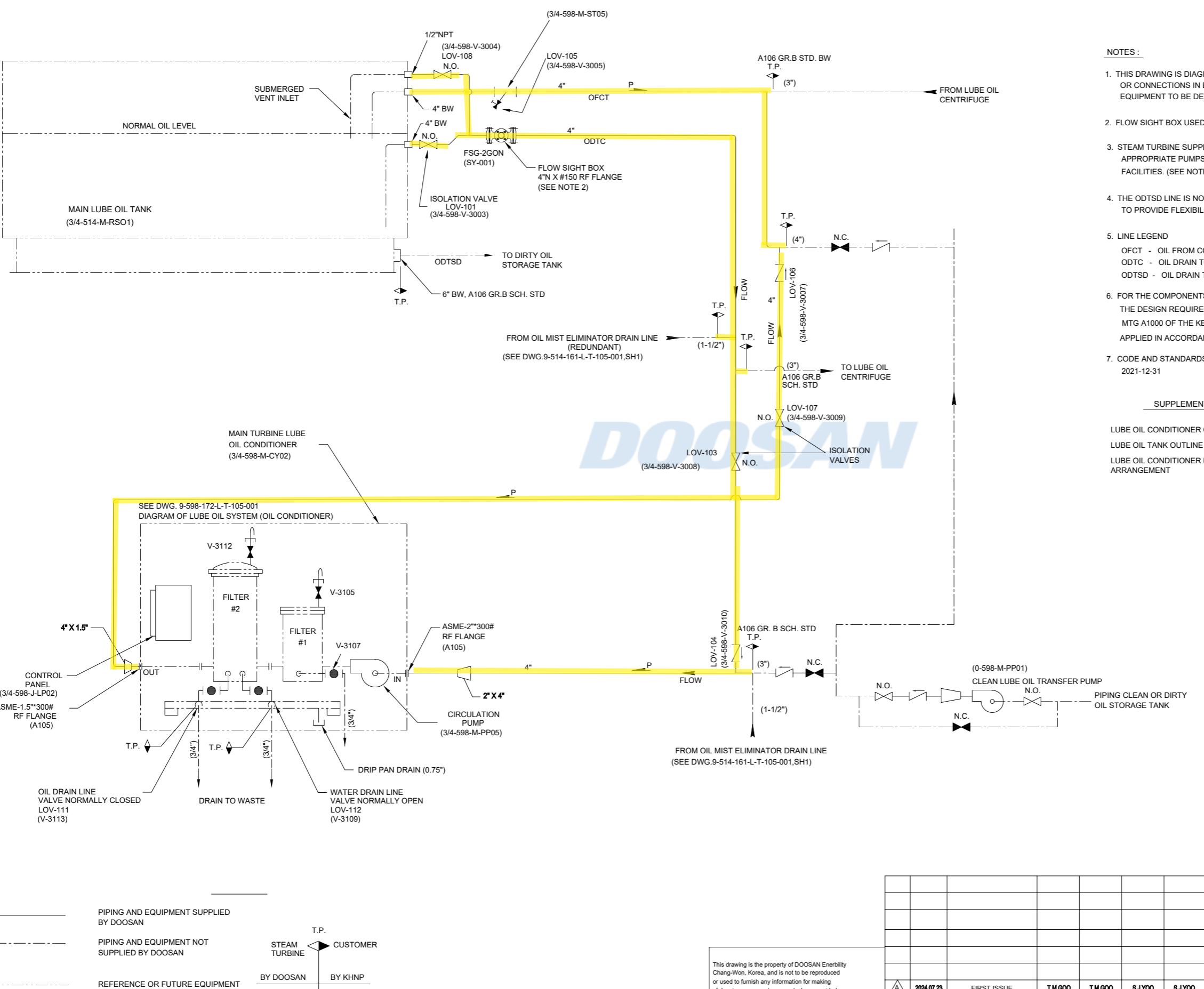
DOOSAN DWG NO 9-514-161-L-T-105-001 SHEET

PROJECT DWG NO 9-514-161-L-T-105-001 3 OF 3

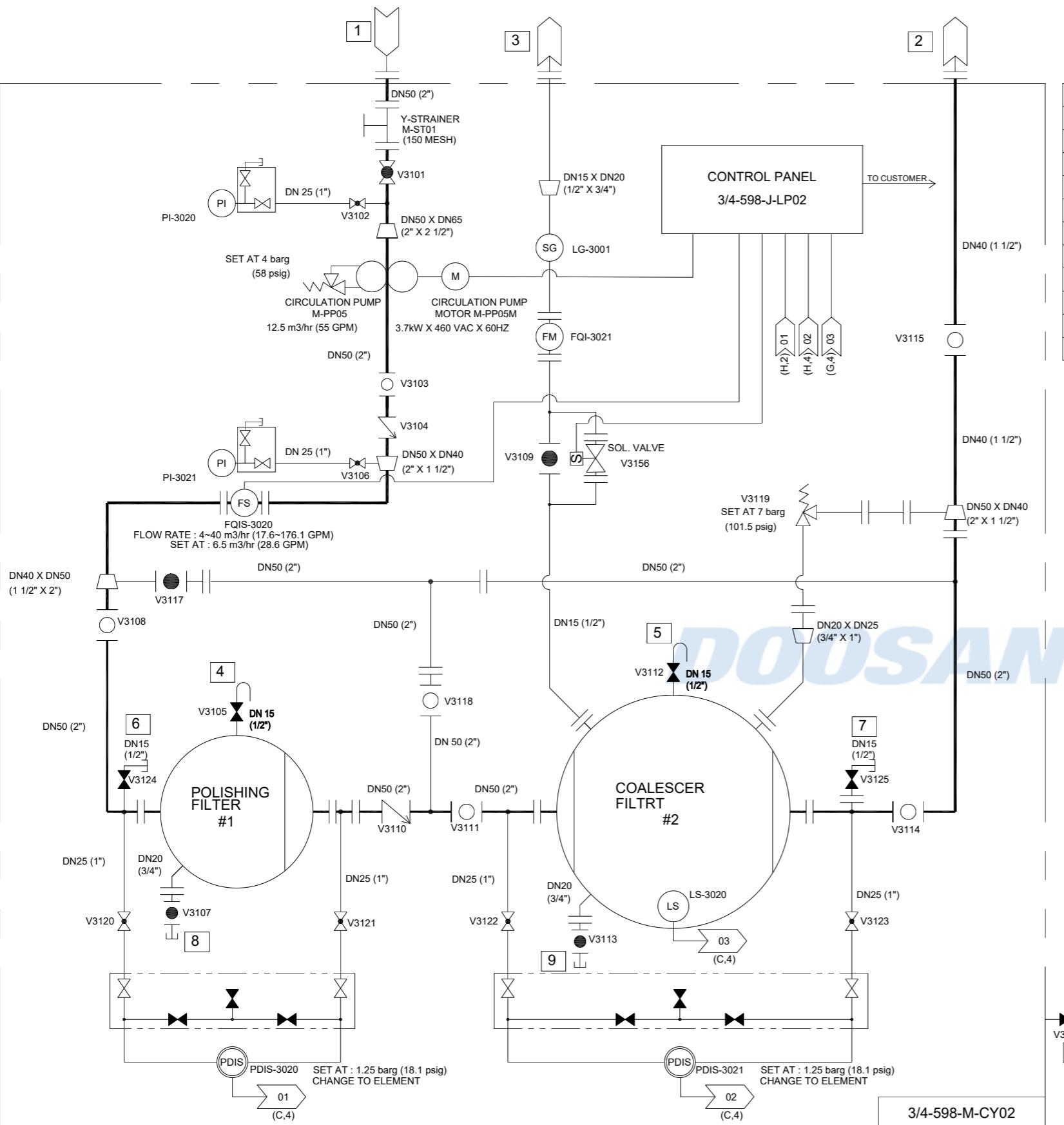
JOB NO. SAFETY CATEGORY AREA CODE SCALE REV.

REV. DATE DESCRIPTION DRN DGN CK RV APP 11C64 N N/S A

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NOZZLE DATA (Refer to NO.)

NO.	DESCRIPTION	SIZE	Q'TY	MATERIAL	REMARKS
1	CONDITIONER SUCTION	ASME #150 x DN50 (2") -SW(RF)	1	A105	-
2	CONDITIONER DISCHARGE	ASME #150 x DN40 (1 1/2") -SW(RF)	1	A105	-
3	CONDITIONER WATER DRAIN	ASME #150 x DN20 (3/4") -SW(RF)	1	A105	-
4	POLISHING FILTER AIR VENT	ASME #150 x DN15 (1/2") PIPING	1	A106-B	-
5	COALESCER FILTER AIR VENT	ASME #150 x DN15 (1/2") PIPING	1	A106-B	-
6	DIRTY SAMPLING VALVE	ASME #150 x DN15 (1/2")-NPT	1	A105	-
7	CLEAN SAMPLING VALVE	ASME #150 x DN15 (1/2")-NPT	1	A105	-
8	POLISHING FILTER OIL DRAIN VALVE	ASME #150 x DN20 (3/4")-SW	1	A105	-
9	COALESCER FILTER OIL DRAIN VALVE	ASME #150 x DN20 (3/4")-SW	1	A105	-
10	SIKD DRAIN VALVE	ASME #150 x DN20 (3/4")-SW	1	A105	-

NOTE:

1. PROCESS FLOW SYMBOLS PER ANSI Y32.11 ARE USED ON THIS SCHEMATIC.
2. ABBREVIATION
S - NORMALLY CLOSED SOLENOID VALVE
M- MOTOR
PI- PRESSURE INDICATOR
PDIS - DIFFERENTIAL PRESSURE INDICATOR SWITCH
LS - LEVEL SWITCH
FM - FLOW METER
SG - SIGHT GLASS
FS - FLOW SWITCH
3. TAG NO
- VALVE : 3/4-598-#
- INSTRUMENT : 3/4-598-J-#
- ELECTRIC PANEL : 3/4-598-J-LP02
4. REFERENCE DRAWING
- 9-598-172-L-T-174-001 : LUBE OIL CONDITIONER OUTLINE
- 9-514-172-L-T-144-001 : LUBE OIL CONDITIONER WIRING DIAGRAM
5. VALVE SYMBOL (CONNECTION TYPE)
|○| : BALL VALVE (SW)
☒ : GLOBE VALVE (SW)
☒ : GATE VALVE (SW)
☒ : CHECK VALVE (SW)
☒ : RELIEF VALVE

FOR REVIEW

KOREA HYDRO & NUCLEAR POWER CO., LTD
SHIN-HANUL NUCLEAR POWER PLANT UNITS 3&4
DOOSAN EnerbilityTITLE DIAGRAM OF LUBE OIL SYSTEM
(OIL CONDITIONER)

DWG. NO. 9-598-172-L-T-105-001

SHEET

PROJECT DWG NO. 9-598-172-L-T-105-001

1 OF 1

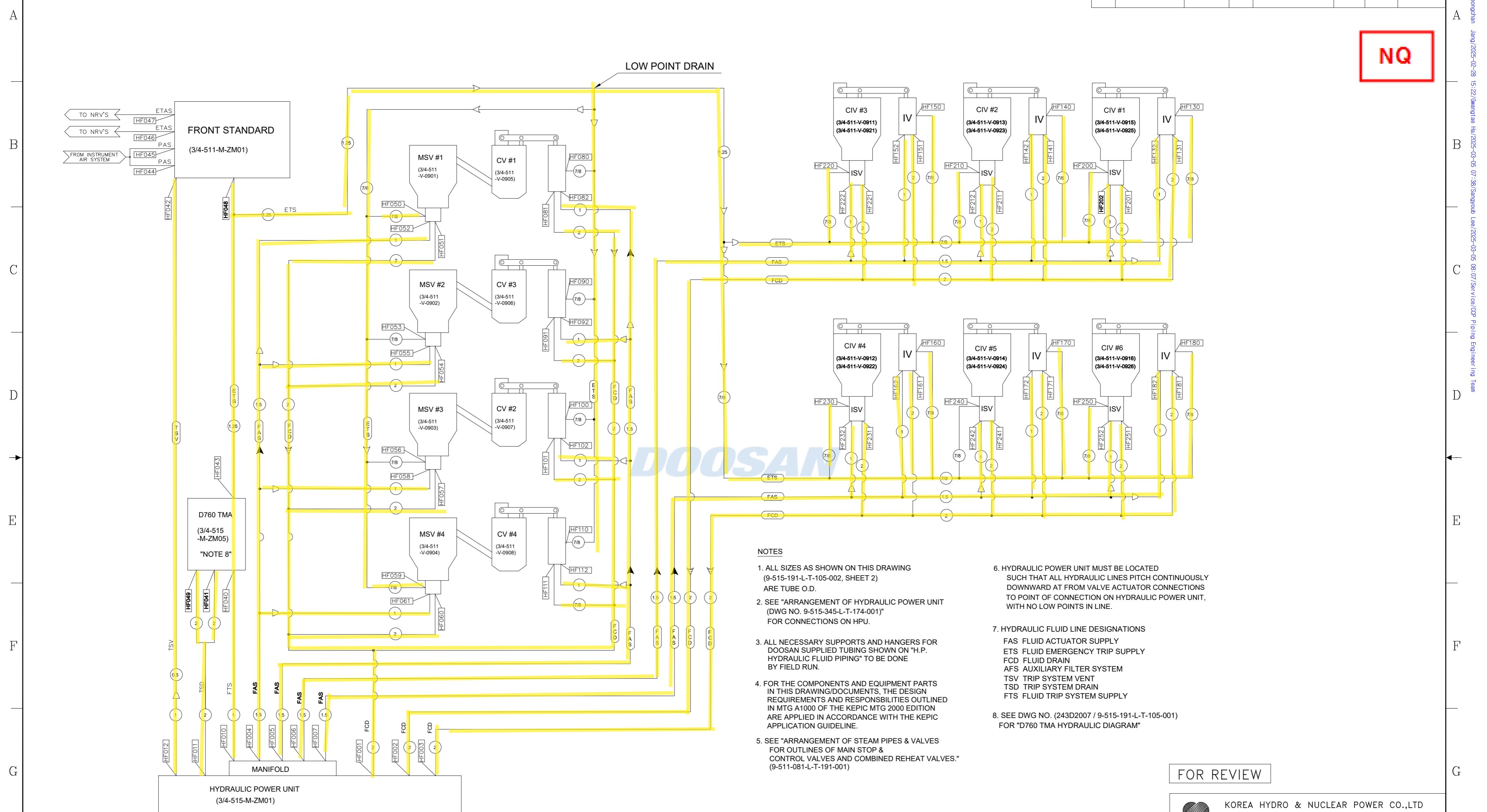
REV. 2024.07.23 FIRST ISSUE T.M.GOO T.M.GOO S.J.YOO S.J.YOO K.H.KIM JOB NO.

REV. DATE DESCRIPTION DRN DGN CK RV APP 11C64 SAFETY CATEGORY AREA CODE SCALE REV.

N/S N/A

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DWG. NO. 9-515-191-L-T-105-002 (2/9)



FOR REVIEW

KOREA HYDRO & NUCLEAR POWER CO., LTD
SHIN-HANUL NUCLEAR POWER PLANT UNITS 3&4**DOOSAN** EnerbilityTITLE
DIAGRAM OF HYDRAULIC SYSTEM

DOOSAN DWG NO. 9-515-191-L-T-105-002 SHEET

PROJECT DWG NO. 9-515-191-L-T-105-002 2 OF 9

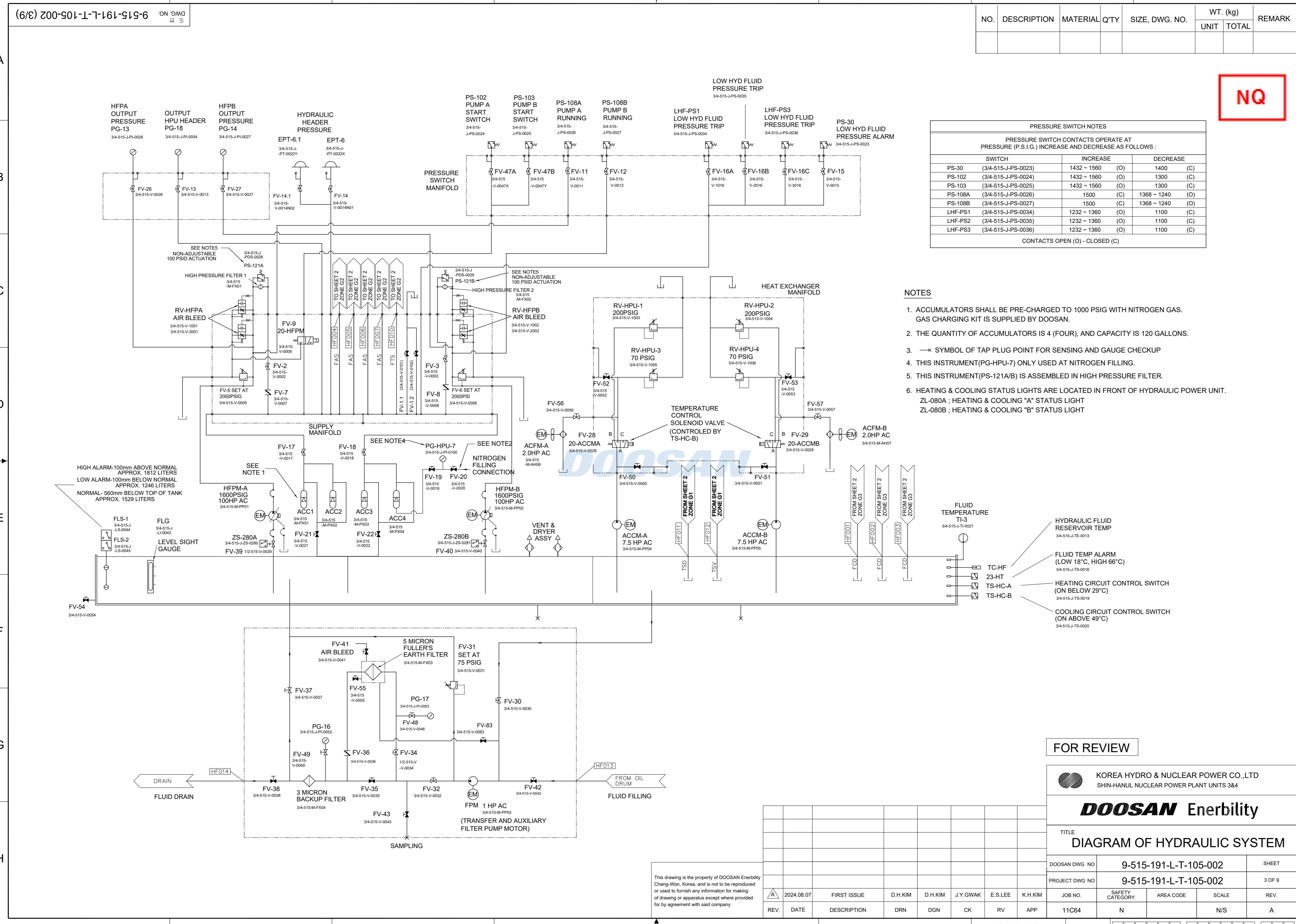
REV. A

SAFETY CATEGORY AREA CODE SCALE

N/S A

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REV.	DATE	DESCRIPTION	DRN	DGN	CK	RV	APP	JOB NO.	Safety Category	Area Code	Scale	Rev.
A	2024.08.07	FIRST ISSUE	D.H.KIM	D.H.KIM	J.Y.GWAK	E.S.LEE	K.H.KIM	11C64	N			A

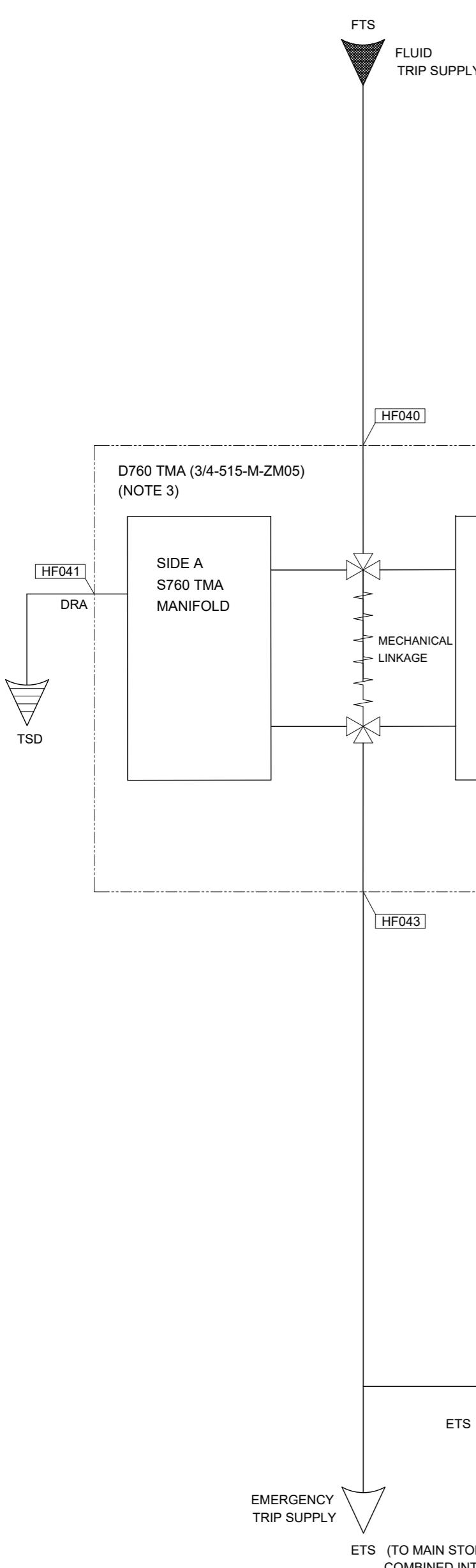


NQ

DWG. NO. 9-515-191-L-T-105-002 (4/9)

NO.	DESCRIPTION	MATERIAL	Q'TY	SIZE, DWG. NO.	WT. (kg)		REMARK
					UNIT	TOTAL	

(EMERGENCY TRIP SYSTEM)

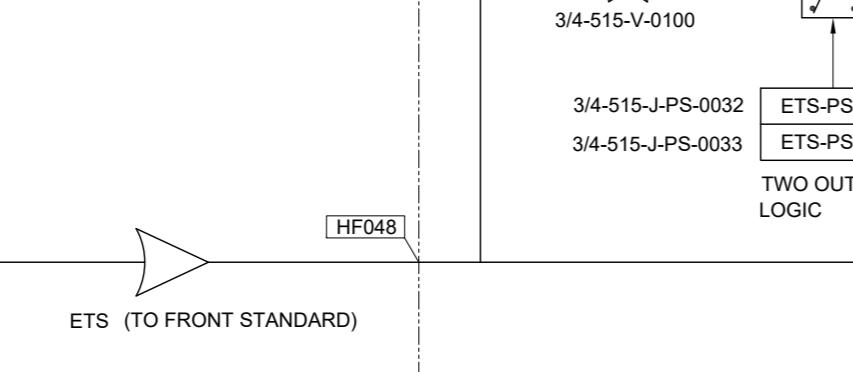
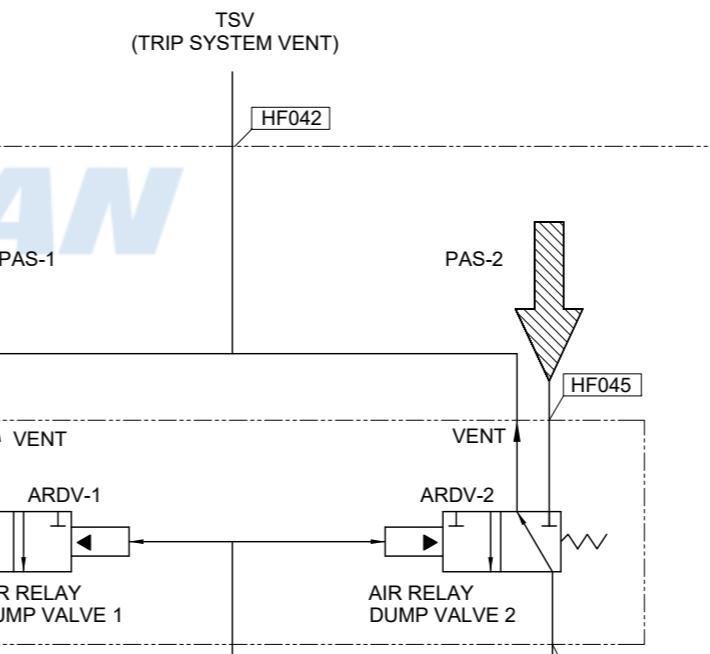


NOTE

1. TAP PLUG FOR TEST (—X)
2. CRITICAL CHECK VALVES IN THE HIGH ENERGY CONTAINED IN THE EXTRACTION SYSTEM (HP TURBINE EXTRACTION) PROVIDE OVERSPEED PROTECTION AND PARTIAL WATER INDUCTION PROTECTION.
TO KEEP THE PROBABILITY HIGH THAT THE VALVES WILL WORK PROPERLY, FUNCTION TESTING IS REQUIRED ACCORDING TO GEK72349C WHICH IS INCLUDED IN 9-510-001-L-T-431-001 (T/G INSTRUCTION BOOK).
3. SEE DWG NO. (243D2007 / 9-515-191-L-T-105-001)
FOR "D760 TMA HYDRAULIC DIAGRAM"

FRONT STANDARD (3/4-511-M-ZM01)

DOOSAN



PRESSURE SWITCH NOTES		
PRESSURE SWITCH CONTACTS OPERATE AT PRESSURE (P.S.I.G.) INCREASE AND DECREASE AS FOLLOWS:		
SWITCH	INCREASE *	DECREASE
ETS-PS3 (3/4-515-J-PS-0032)	650 (0)	400 (C)
ETS-PS4 (3/4-515-J-PS-0033)	650 (0)	400 (C)

* DIFFERENTIAL IS NOT ADJUSTABLE.
INCREASING PRESSURE SETTINGS ARE APPROXIMATE.

CONTACTS OPEN (O) - CLOSE (C)

FOR REVIEW

KOREA HYDRO & NUCLEAR POWER CO., LTD
SHIN-HANUL NUCLEAR POWER PLANT UNITS 3&4

DOOSAN Enerbility

TITLE
DIAGRAM OF HYDRAULIC SYSTEM

DOOSAN DWG NO. 9-515-191-L-T-105-002 SHEET

PROJECT DWG NO. 9-515-191-L-T-105-002 4 OF 9

REV. A

DATE 2024.08.07 FIRST ISSUE D.H.KIM D.H.KIM J.Y.GWAK E.S.LEE K.H.KIM JOB NO.

REV. DATE DESCRIPTION DRN DGN CK RV APP 11C64 SAFETY CATEGORY AREA CODE SCALE

REV. N/N/S/A

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REV. DATE DESCRIPTION DRN DGN CK RV APP 11C64

REV. N/N/S/A

1 2 3 4 5 6 7 8 A B C D E F G H A B C D E F G H

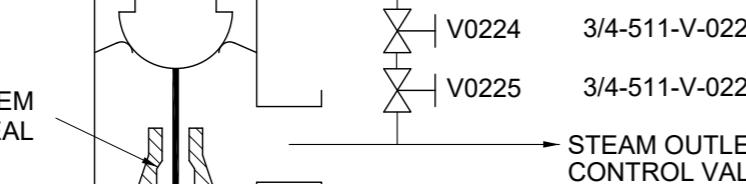
DWG. NO. 9-515-191-L-T-105-002 (5/9)

MAIN STOP VALVE

(SV-1) 3/4-511-V-0901
(SV-3) 3/4-511-V-0903
(SV-4) 3/4-511-V-0904

STEAM INLET

STEM SEAL

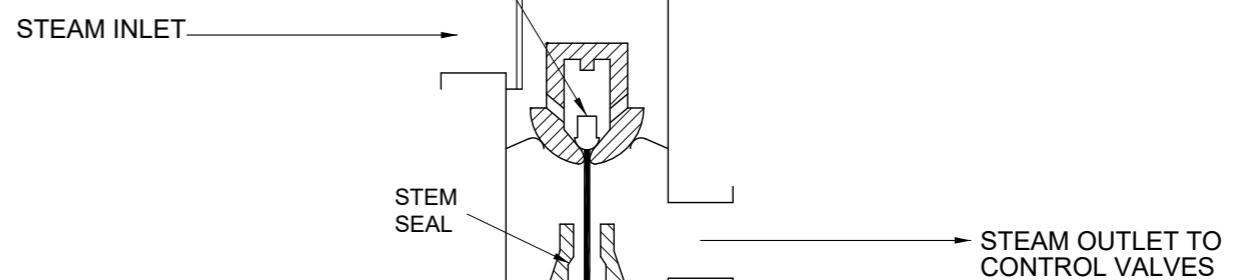
PT-201 ON SV-1 3/4-511-J-PT-0135
V0224 3/4-511-V-0224
V0225 3/4-511-V-0225

STEAM OUTLET TO CONTROL VALVES

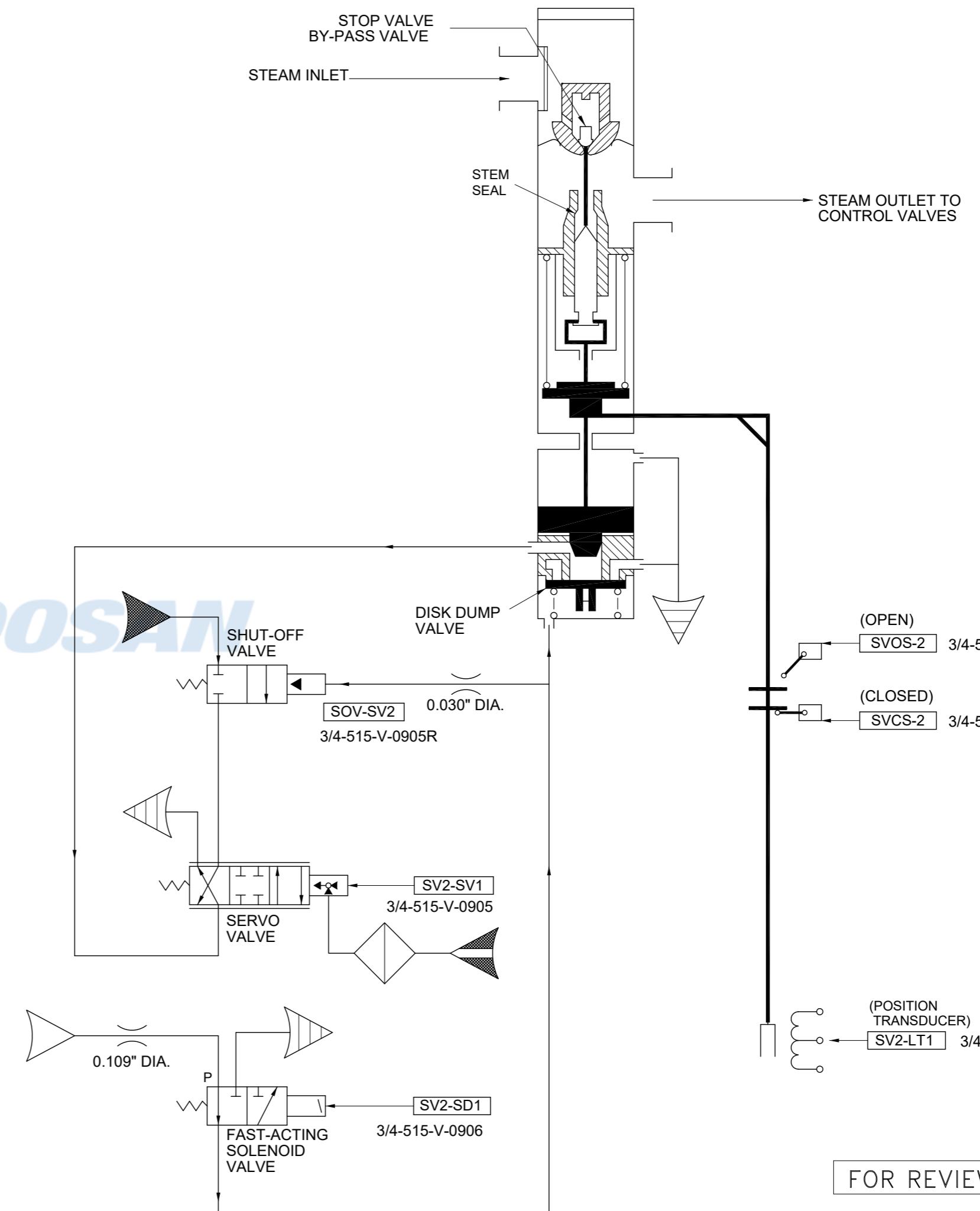
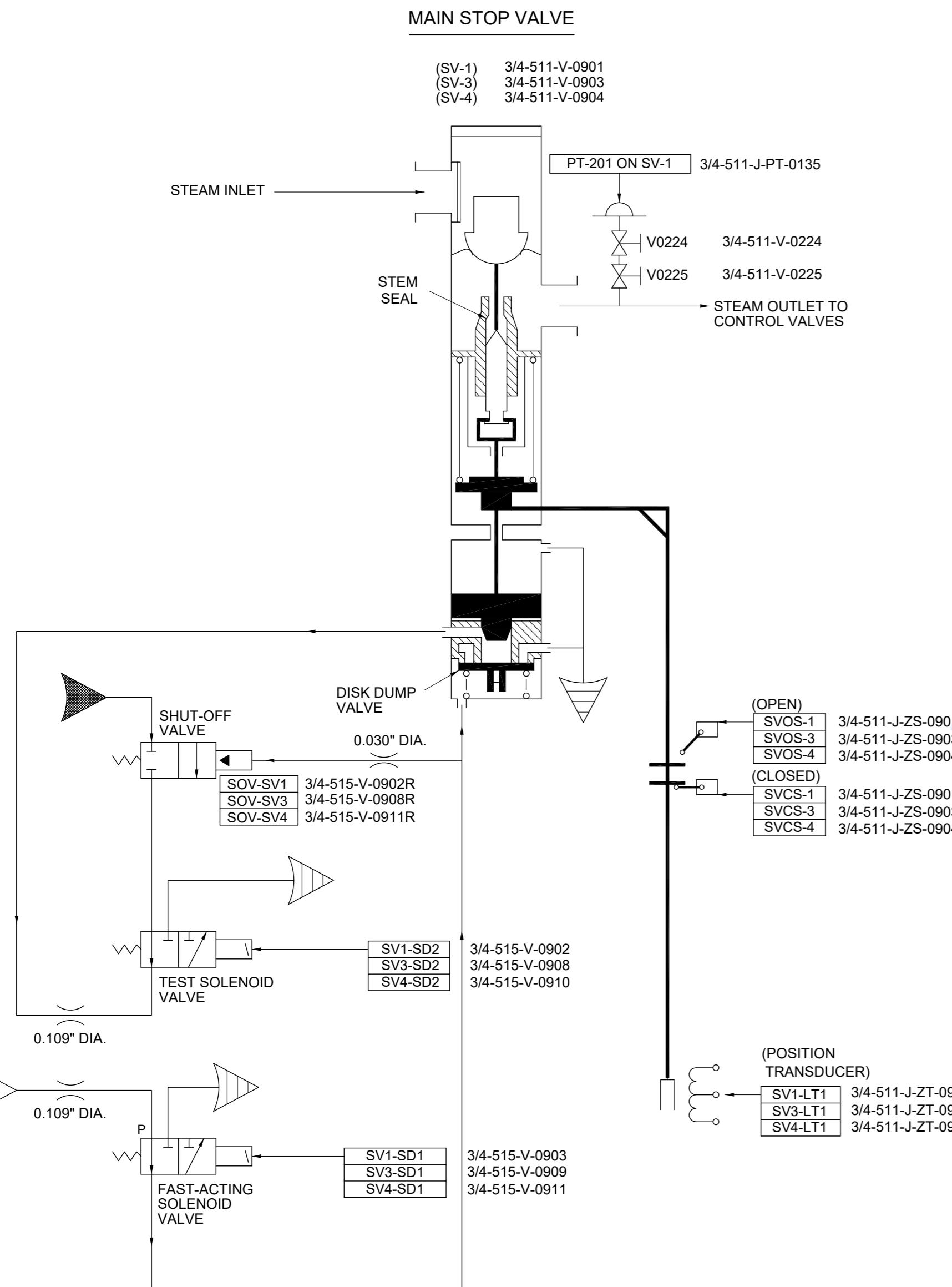
MAIN STOP VALVE

(SV-2) 3/4-511-V-0902

STOP VALVE BY-PASS VALVE



NQ



KOREA HYDRO & NUCLEAR POWER CO., LTD
SHIN-HANUL NUCLEAR POWER PLANT UNITS 3&4

DOOSAN EnerbilityTITLE
DIAGRAM OF HYDRAULIC SYSTEM

DOOSAN DWG NO 9-515-191-L-T-105-002 SHEET

PROJECT DWG NO 9-515-191-L-T-105-002 5 OF 9

REV.

CONT. NO

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A	2024.08.07	FIRST ISSUE	D.H.KIM	D.H.KIM	J.Y.GWAK	E.S.LEE	K.H.KIM	JOB NO.	SAFETY CATEGORY	AREA CODE	SCALE	REV.
REV.	DATE	DESCRIPTION	DRN	DGN	CK	RV	APP	11C64	N		N/S	A

DWG. NO. 9-515-191-L-T-105-002 (4/9)

A

NQ

NO.	DESCRIPTION	MATERIAL	Q'TY	SIZE, DWG. NO.	WT. (kg)		REMARK
					UNIT	TOTAL	

B

C

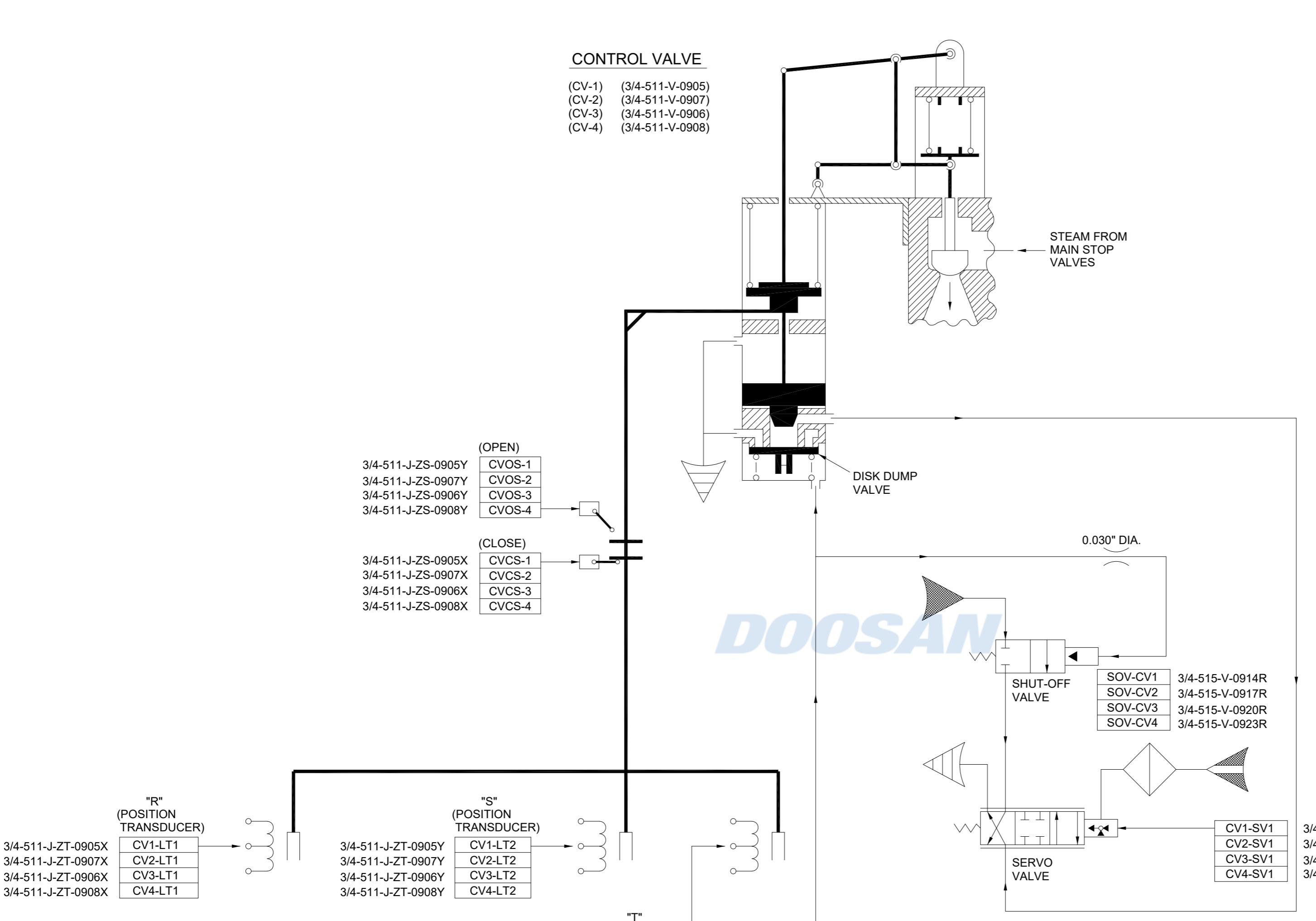
D

E

F

G

H



FOR REVIEW

KOREA HYDRO & NUCLEAR POWER CO., LTD
SHIN-HANUL NUCLEAR POWER PLANT UNITS 3&4**DOOSAN Enerbility**
TITLE
DIAGRAM OF HYDRAULIC SYSTEM

DOOSAN DWG NO. 9-515-191-L-T-105-002 SHEET

PROJECT DWG NO. 9-515-191-L-T-105-002 6 OF 9

REV.

SAFETY CATEGORY

AREA CODE

SCALE

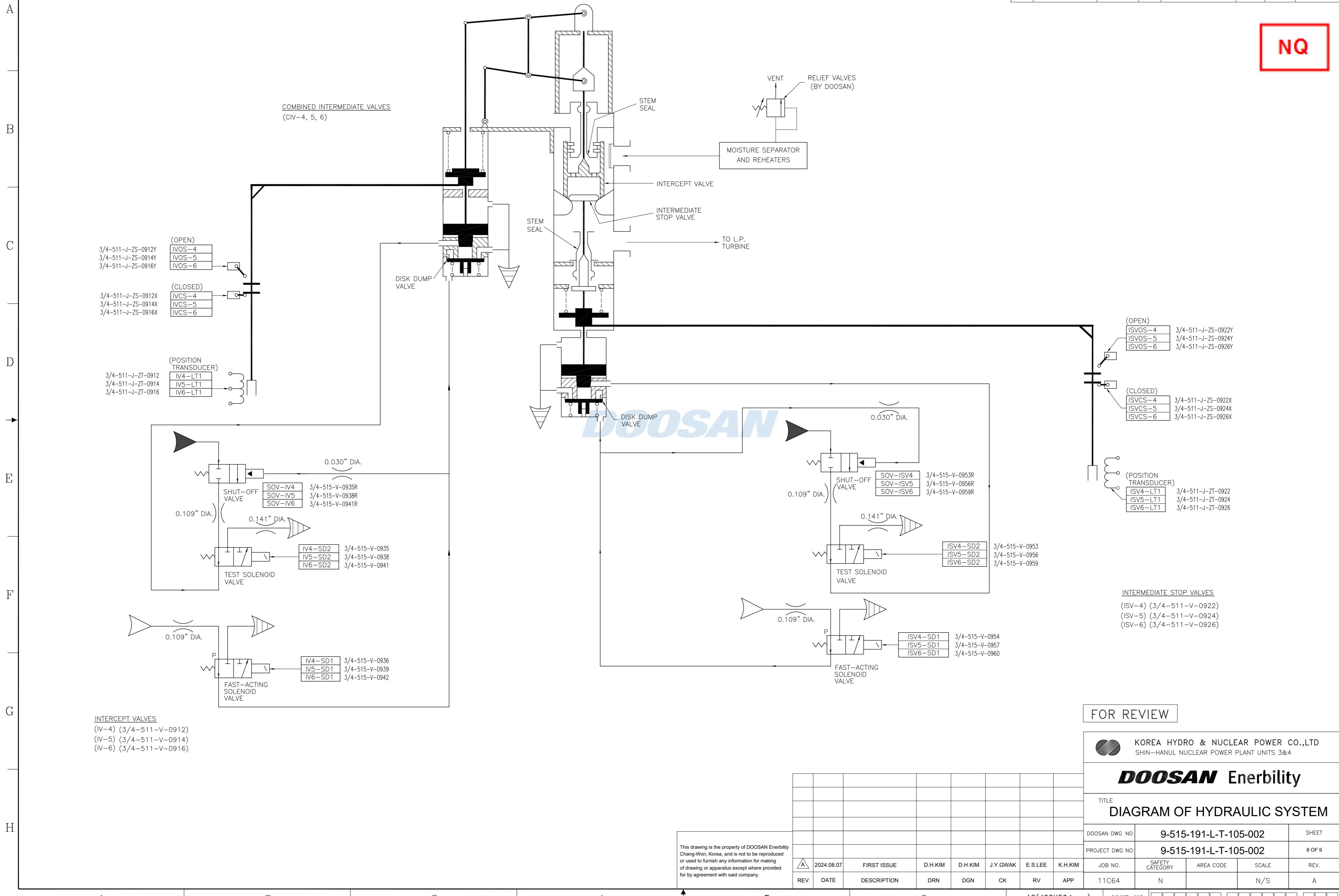
CONT. NO.

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A	2024.08.07	FIRST ISSUE	D.H.KIM	D.H.KIM	J.Y.GWAK	E.S.LEE	K.H.KIM	JOB NO.	Safety Category	Area Code	Scale	Rev.
REV.	DATE	DESCRIPTION	DRN	DGN	CK	RV	APP	11C64	N		N/S	A

DWG. NO. 9-515-191-L-T-105-002 (8/9)
E&I No.

NO.	DESCRIPTION	MATERIAL	Q'TY	SIZE, DWG. NO.	WT. (kg)		REMARK
					UNIT	TOTAL	



9-515-191-L-T-105-002 (9/9)	DWG. NO.
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NO.	DESCRIPTION	MATERIAL	Q'TY	SIZE, DWG. NO.	WT. (kg)		REMARK
					UNIT	TOTAL	

NQ

INTERFACE POINT NAME	SHEET NO. DWG ZONE	FLUID TYPE	NORMAL PRESSURE PSIG (KG/CM2)	NORMAL TEMPERATURE °F (°C)	NORMAL FLOW GPM (LPM)	MAXIMUM PRESSURE PSIG (KG/CM2)	MAXIMUM TEMPERATURE °F (°C)	MAXIMUM FLOW GPM (LPM)	CONNECTION DESCRIPTION
HF001	SHT. 2 G-3	HYDRAULIC	0 (0)	115 (46.1)	5 (18.9)	200 (14.1)	150 (65.5)	588.5 (2227.7)	FLUID DRAIN
HF002	SHT. 2 G-3	HYDRAULIC	0 (0)	115 (46.1)	2.2 (8.3)	200 (14.1)	150 (65.5)	220 (832.8)	FLUID DRAIN
HF003	SHT. 2 G-3	HYDRAULIC	0 (0)	115 (46.1)	5 (18.9)	200 (14.1)	150 (65.5)	588.5 (2227.7)	FLUID DRAIN
HF004	SHT. 2 G-2	HYDRAULIC	1600 (112.5)	115 (46.1)	3.6 (13.6)	3000 (210.9)	150 (65.5)	380 (1438.5)	FLUID SUPPLY
HF005	SHT. 2 G-2	HYDRAULIC	1600 (112.5)	115 (46.1)	0.55 (2.1)	3000 (210.9)	150 (65.5)	19 (71.9)	FLUID SUPPLY
HF006	SHT. 2 G-2	HYDRAULIC	1600 (112.5)	115 (46.1)	3.6 (13.6)	3000 (210.9)	150 (65.5)	380 (1438.5)	FLUID SUPPLY
HF007	SHT. 2 G-2	HYDRAULIC	1600 (112.5)	115 (46.1)	3.6 (13.6)	3000 (210.9)	150 (65.5)	380 (1438.5)	FLUID SUPPLY
HF010	SHT. 2 G-2	HYDRAULIC	1600 (112.5)	115 (46.1)	0.5 (1.9)	3000 (210.9)	150 (65.5)	1 (3.8)	FLUID TRIP SUPPLY
HF011	SHT. 2 G-1	HYDRAULIC	0 (0)	115 (46.1)	0.5 (1.9)	200 (14.1)	150 (65.5)	1 (3.8)	TRIP SYSTEM DRAIN
HF012	SHT. 2 G-1	HYDRAULIC	0 (0)	115 (46.1)	0 (0)	200 (14.1)	150 (65.5)	0.1 (0.4)	TRIP SYSTEM VENT
HF013	SHT. 3 G-4	HYDRAULIC	0 (0)	115 (46.1)	0 (0)	3000 (210.9)	150 (65.5)	1 (3.8)	FLUID RESERVOIR FILL
HF014	SHT. 3 G-2	HYDRAULIC	0 (0)	115 (46.1)	0 (0)	3000 (210.9)	150 (65.5)	1 (3.8)	FLUID RESERVOIR DRAIN
HF040	SHT. 2 F-2	HYDRAULIC	1600 (112.5)	115 (46.1)	0.5 (1.9)	3000 (210.9)	150 (65.5)	1 (3.8)	FLUID TRIP SUPPLY
HF041	SHT. 2 F-2	HYDRAULIC	0 (0)	115 (46.1)	0.5 (1.9)	200 (14.1)	150 (65.5)	1 (3.8)	TRIP SYSTEM DRAIN
HF042	SHT. 2 B-1	HYDRAULIC	0 (0)	115 (46.1)	0 (0)	200 (14.1)	150 (65.5)	0.1 (0.4)	TRIP SYSTEM VENT
HF043	SHT. 2 E-2	HYDRAULIC	1600 (112.5)	115 (46.1)	0.62 (2.3)	3000 (210.9)	150 (65.5)	9.12 (34.5)	EMERGENCY TRIP SUPPLY
HF044	SHT. 2 B-1	AIR	60 (4.2)	70.2 (21.1)	0.01 (0)	125 (8.8)	150 (65.5)	1 SCFM	AIR RELAY DUMP SUPPLY
HF045	SHT. 2 B-1	AIR	60 (4.2)	70.2 (21.1)	0.01 (0)	125 (8.8)	150 (65.5)	1 SCFM	AIR RELAY DUMP SUPPLY
HF046	SHT. 2 B-1	AIR	60 (4.2)	70.2 (21.1)	0.01 (0)	125 (8.8)	150 (65.5)	1 SCFM	EMERGENCY TRIP AIR SUPPLY
HF047	SHT. 2 B-1	AIR	60 (4.2)	70.2 (21.1)	0.01 (0)	125 (8.8)	150 (65.5)	1 SCFM	EMERGENCY TRIP AIR SUPPLY
HF050	SHT. 2 C-3	HYDRAULIC	1600 (112.5)	115 (46.1)	0.2 (0.8)	3000 (210.9)	150 (65.5)	3 (11.4)	EMERGENCY TRIP SUPPLY
HF051	SHT. 2 C-3	HYDRAULIC	0 (0)	115 (46.1)	0.4 (1.5)	200 (14.1)	150 (65.5)	55 (208.2)	FLUID DRAIN
HF052	SHT. 2 C-3	HYDRAULIC	1600 (112.5)	115 (46.1)	0.2 (0.8)	3000 (210.9)	150 (65.5)	9.5 (36)	FLUID SUPPLY
HF053	SHT. 2 D-3	HYDRAULIC	1600 (112.5)	115 (46.1)	0.2 (0.8)	3000 (210.9)	150 (65.5)	3 (11.4)	EMERGENCY TRIP SUPPLY
HF054	SHT. 2 D-3	HYDRAULIC	0 (0)	115 (46.1)	0.4 (1.5)	200 (14.1)	150 (65.5)	55 (208.2)	FLUID DRAIN
HF055	SHT. 2 D-3	HYDRAULIC	1600 (112.5)	115 (46.1)	0.2 (0.8)	3000 (210.9)	150 (65.5)	9.5 (36)	FLUID SUPPLY
HF056	SHT. 2 E-3	HYDRAULIC	1600 (112.5)	115 (46.1)	0.2 (0.8)	3000 (210.9)	150 (65.5)	3 (11.4)	EMERGENCY TRIP SUPPLY
HF057	SHT. 2 E-3	HYDRAULIC	0 (0)	115 (46.1)	0.4 (1.5)	200 (14.1)	150 (65.5)	55 (208.2)	FLUID DRAIN
HF058	SHT. 2 E-3	HYDRAULIC	1600 (112.5)	115 (46.1)	0.2 (0.8)	3000 (210.9)	150 (65.5)	9.5 (36)	FLUID SUPPLY
HF059	SHT. 2 F-3	HYDRAULIC	1600 (112.5)	115 (46.1)	0.2 (0.8)	3000 (210.9)	150 (65.5)	3 (11.4)	EMERGENCY TRIP SUPPLY
HF060	SHT. 2 F-3	HYDRAULIC	0 (0)	115 (46.1)	0.4 (1.5)	200 (14.1)	150 (65.5)	55 (208.2)	FLUID DRAIN
HF061	SHT. 2 F-3	HYDRAULIC	1600 (112.5)	115 (46.1)	0.2 (0.8)	3000 (210.9)	150 (65.5)	9.5 (36)	FLUID SUPPLY
HF080	SHT. 2 B-4	HYDRAULIC	1600 (112.5)	115 (46.1)	0.01 (0)	3000 (210.9)	150 (65.5)	0.02 (0.1)	EMERGENCY TRIP SUPPLY
HF081	SHT. 2 B-4	HYDRAULIC	0 (0)	115 (46.1)	0.7 (2.6)	200 (14.1)	150 (65.5)	95.5 (361.5)	FLUID DRAIN
HF082	SHT. 2 B-4	HYDRAULIC	1600 (112.5)	115 (46.1)	0.9 (3.4)	3000 (210.9)	150 (65.5)	95 (359.6)	FLUID SUPPLY
HF090	SHT. 2 C-4	HYDRAULIC	1600 (112.5)	115 (46.1)	0.01 (0)	3000 (210.9)	150 (65.5)	0.02 (0.1)	EMERGENCY TRIP SUPPLY
HF091	SHT. 2 C-4	HYDRAULIC	0 (0)	115 (46.1)	0.7 (2.6)	200 (14.1)	150 (65.5)	95.5 (361.5)	FLUID DRAIN
HF092	SHT. 2 C-4	HYDRAULIC	1600 (112.5)	115 (46.1)	0.9 (3.4)	3000 (210.9)	150 (65.5)	95 (359.6)	FLUID SUPPLY
HF100	SHT. 2 D-4	HYDRAULIC	1600 (112.5)	115 (46.1)	0.01 (0)	3000 (210.9)	150 (65.5)	0.02 (0.1)	EMERGENCY TRIP SUPPLY
HF101	SHT. 2 D-4	HYDRAULIC	0 (0)	115 (46.1)	0.7 (2.6)	200 (14.1)	150 (65.5)	95.5 (361.5)	FLUID DRAIN
HF102	SHT. 2 D-4	HYDRAULIC	1600 (112.5)	115 (46.1)	0.9 (3.4)	3000 (210.9)	150 (65.5)	95 (359.6)	FLUID SUPPLY
HF110	SHT. 2 E-4	HYDRAULIC	1600 (112.5)	115 (46.1)	0.01 (0)	3000 (210.9)	150 (65.5)	0.02 (0.1)	EMERGENCY TRIP SUPPLY
HF111	SHT. 2 E-4	HYDRAULIC	0 (0)	115 (46.1)	0.7 (2.6)	200 (14.1)	150 (65.5)	95.5 (361.5)	FLUID DRAIN
HF112	SHT. 2 E-4	HYDRAULIC	1600 (112.5)	115 (46.1)	0.9 (3.4)	3000 (210.9)	150 (65.5)	95 (359.6)	FLUID SUPPLY
HF130	SHT. 2 B-7	HYDRAULIC	1600 (112.5)	115 (46.1)	0.01 (0)	3000 (210.9)	150 (65.5)	3 (11.4)	EMERGENCY TRIP SUPPLY
HF131	SHT. 2 B-7	HYDRAULIC	0 (0)	115 (46.1)	0.4 (1.5)	200 (14.1)	150 (65.5)	55 (208.2)	FLUID DRAIN
HF132	SHT. 2 B-7	HYDRAULIC	1600 (112.5)	115 (46.1)	0.39 (1.5)	3000 (210.9)	150 (65.5)	9.5 (36)	FLUID SUPPLY
HF140	SHT. 2 B-6	HYDRAULIC	1600 (112.5)	115 (46.1)	0.01 (0)	3000 (210.9)	150 (65.5)	3 (11.4)	EMERGENCY TRIP SUPPLY
HF141	SHT. 2 B-6	HYDRAULIC	0 (0)	115 (46.1)	0.4 (1.5)	200 (14.1)	150 (65.5)	55 (208.2)	FLUID DRAIN
HF142	SHT. 2 B-6	HYDRAULIC	1600 (112.5)	115 (46.1)	0.39 (1.5)	3000 (210.9)	150 (65.5)	9.5 (36)	FLUID SUPPLY
HF150	SHT. 2 B-5	HYDRAULIC	1600 (112.5)	115 (46.1)	0.01 (0)	3000 (210.9)	150 (65.5)	3 (11.4)	EMERGENCY TRIP SUPPLY
HF151	SHT. 2 B-5	HYDRAULIC	0 (0)	115 (46.1)	0.4 (1.5)	200 (14.1)	150 (65.5)	55 (208.2)	FLUID DRAIN
HF152	SHT. 2 B-5	HYDRAULIC	1600 (112.5)	115 (46.1)	0.39 (1.5)	3000 (210.9)	150 (65.5)	9.5 (36)	FLUID SUPPLY
HF160	S								