LINE AND INSTRUMENTS LEGEND

MAIN PROCESS	ELECTRICAL POWER
AUXLIARY	CAPILLARY TUBE
ELECTRICAL SIGNAL	BUS COMMUNICATION
SOFTWARE COMMUNICATION	MECHANICAL CONNECTION
PNEUMATIC	HEAT TRACING
LOCAL INSTRUMENT	INSTRUMENT BEHIND LOCAL PANEL
INSTRUMENT IN CONTROL ROOM	

GRAPHIC SYMBOLS

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
OTHER TURBODEN	LIMIT OF SCOPE OF SUPPPLY	KW OT LOS 1 LOS 2	LOS 1 / LOS 2 LIMIT SCOPE OF SUPPLY
	LEVEL REFERENCE	SLOPE	PIPING SLOPE
	SYSTEM CHANGE		ON A VALVE VALVE LOCKED OPEN OR CLOSED LO: LOCKED OPEN LC: LOCKED CLOSED
	THERMOWELLS		

VALVES

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	BALL VALVE		GLOBE VALVE		3 WAY VALVE
	BUTTERFLY VALVE		NEEDLE VALVE		PRESSURE REDUCING VALVE WITH PRESSURE REDUCING REGULATOR
	CHECK VALVE		AUTOMATIC BREATHER VALVE		ANGLE SAFETY VALVE WITH SPRING CONTROL
	PLUG VALVE				

VALVE POSITION IN OPERATION
OPEN
CLOSE

VALVE FAIL POSITION
FC: FAIL CLOSE
FO: FAIL OPEN

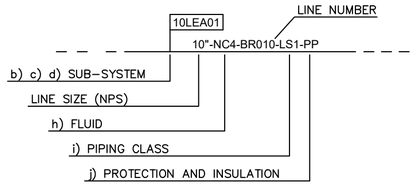
ACTUATORS

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	CYLINDER PNEUMATIC ACTUATOR WITH SOLENOID VALVE	EP	CYLINDER PNEUMATIC ACTUATOR WITH POSITIONER
EP	CYLINDER PNEUMATIC ACTUATOR WITH FAST CLOSURE	EP S	CYLINDER PNEUMATIC ACTUATOR WITH SOLENOID VALVE AND POSITIONER
EP	DIAPHRAM PNEUMATIC ACTUATOR WITH POSITIONER	EP S	DIAPHRAM PNEUMATIC ACTUATOR WITH SOLENOID VALVE AND POSITIONER
EP	DAMPER REGULATING ACTUATOR WITH PNEUMATIC FAIL SAFE	M	MOTORIZED ACTUATOR
	VALVE WITH ELECTRICAL CONTROL	S	SOLENOID ACTUATOR

i) PIPING CLASS

LS1	HIGH PRESSURE WORKING FLUID	LS40	GENERATOR COOLING WATER
LS10	HIGH PRESSURE, LOW T WORKING FLUID	LS5	NON-CONDENSABLE GASES
LS2	LOW PRESSURE WORKING FLUID	LS6	DRAINAGE SYSTEM
LS20	TURBINE OUTLET / COND VAPOUR PHASE	LS9	COMPRESSED AIR AND NITROGEN
LS3	GEOTHERMAL WATER SYSTEM		
LS4	CONDENSER COOLING WATER		

LINE CODE



j) LINE PROTECTION

N	NOTHNIG
G	GUARDS
PHI	PRIMER+HEAT TRACING+THERMAL INSULATION
PNI	PRIMER+NOISE INSULATION
PNT	PRIMER+THERMAL+NOISE INSULATION
PP	PRIMER+PAINTING
PTI	PRIMER+THERMAL INSULATION

EQUIPMENT

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	CENTRIFUGAL PUMP		DIAPHRAGM PUMP		VOLUMETRIC PUMP		GEAR PUMP		COMPRESSOR
	FAN	G	ELECTRICAL GENERATOR		INVERTER	M	A.C MOTOR	D	DIESEL MOTOR
	ELECTRIC HEATER		HEAT EXCHANGER	V	HORIZONTAL VESSEL		SCREW PUMP		
	HEAT EXCHANGER WITH THERMAL INSULATION								

LINES ACCESSORIES AND CONNECTIONS

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	THREADED CAP		Y STRAINER		WELD RING GASKET FLANGE		FLANGED CONNECTION		CARTRIDGE FILTER
	SPRAY NOZZLE		NOZZLE		DRAIN POINT		COVER FLANGE WITH DRAIN		EXPANTION JOINT
	HOSE		WELD CAP		DIAPHRAGM SEAL		EXCESS FLOW VALVE		RUPTURE DISCK

e) EQUIPMENT KEY LEGEND

KEYS
AA - VALVES, DAMPERS, RUPTURE DISK
AC - HEAT EXCHANGERS
AG - GENERATORS UNIT
AN - COMPRESSORS, FAN
AP - PUMPS
AT - FILTERS, DRYERS
BB - BARRELS, TANKS, SEPARATOR
CG - DIRECT MEASUREMENT - POSITION, LENGTH
CJ - DIRECT MEASUREMENT - POWER
CL - DIRECT MEASUREMENT - LEVEL
CP - DIRECT MEASUREMENT - PRESSURE
CS - DIRECT MEASUREMENT - SPEED
CT - DIRECT MEASUREMENT - TEMPERATURE
CY - DIRECT MEASUREMENT - VIBRATION
CF - DIRECT MEASUREMENT - FLOWRATE
CQ - DIRECT MEASUREMENT - COMPOSITION
GM - PLANT DRAINING SYSTEM
GL - LUBRICATION UNIT
KC - AIR CONDENSER TUBE BUNDLE
MR - CONNECTORS, FLEXIBLE HOOSE
MT - TURBINE
FL - CONVERTER - LEVEL

SUFFIX & PREFIX

g) SUFFIX
M - MOTORS
E - EXTERNAL COVER FOR INHALATION SYSTEM
R - RESISTORS
Y - SOLENOID VALVES
YS - SOLENOID FAST CLOSING
b) PREFIX
V1 - ORC PLANT

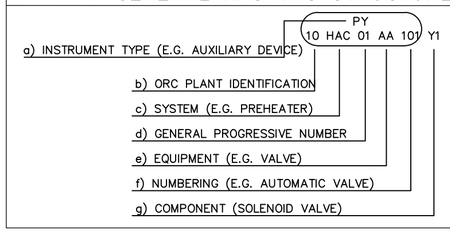
c) SYSTEM LEGEND

HAC	HEAT EXCHANGER (PREHEATERS)
HAD	HEAT EXCHANGER (EVAPORATORS)
LEA	ORC WORKING FLUID IN LIQUID PHASE
LEC	ORC WORKING FLUID IN VAPOUR PHASE
LEV	ORC FEED PUMPS LUBRICATION SYSTEM
LEW	DRAINAGE AND STORAGE SYSTEM
MAA	TURBINE
MAG	CONDENSING SYSTEM
MAM	FLANGE INHALATION SYSTEM
MAJ	NCG REMOVAL SYSTEM
MAK	GEARBOX
MAW	TURBINE MECH. SEAL FAIL SAFE SYSTEM
MAV	TURBINE AND GEARBOX LUBR. SYSTEM
MKA	GENERATOR
MKV	GENERATOR LUBRICATION SYSTEM
PAA	CONDENSER COOLING WATER PRODUCTION
PAB	CONDENSER COOLING WATER DISTRIBUTION
PAC	CONDENSER COOLING WATER RE-INJECTION
PGA	GENERATOR COOLING SYSTEM
PGR	COOLING WATER REFILL SYSTEM
QFA	COMPRESSED AIR SUPPLY
QFB	COMPRESSED AIR DISTRIBUTION SYSTEM
QJA	NITROGEN SUPPLY SYSTEM
QJB	NITROGEN DISTRIBUTION SYSTEM
UMA	ORC ROOM WITH AIR CONDITIONING
UTF	COMPRESSED AIR CONTAINER
WAA	THERMAL WATER PRODUCTION SYSTEM
WAB	THERMAL WATER DISTRIBUTION SYSTEM
WAC	THERMAL WATER RE-INJECTION SYSTEM

h) FLUIDS

1233zd - ORC main process fluid
CW - Cooling water
GW - Geothermal water
CA - Compressed air
NCG - Non condensable gases

GENERAL KKS TAG STRUCTURE



a) INSTRUMENT & VALVE LEGEND

AT	ANALYSIS TRANSMITTER	PSL	PRESSURE SWITCH LOW
AP	ANALYSIS POINT	PSV	PRESSURE SAFETY VALVE
FCV	FLOW CONTROL VALVE	PT	PRESSURE TRANSMITTER
FSL	LOW FLOW SWITCH	SCV	SPEED CONTROL VALVE
FT	FLOW TRANSMITTER	SE	SPEED ELEMENT
FV	FLOW VALVE	SI	SPEED INDICATOR
HCV	HAND CONTROL VALVE	SSH	SPEED SWITCH HIGH
HV	HAND VALVE	ST	SPEED TRASMITTER
JIT	EL. POWER METER	TCV	TEMPERATURE CONTROL VALVE
LIT	LEVEL INDICATOR & TRANSMITTER	TE	TEMPERATURE ELEMENT
LSH	LEVEL SWITCH HIGH	TSH	TEMPERATURE SWITCH HIGH
LSL	LEVEL SWITCH LOW	TIT	TEMPERATURE INDICATOR & TRANSMITTER
LT	LEVEL TRASMITTER	TT	TEMPERATURE TRANSMITTER
PCV	PRESSURE CONTROL VALVE	VE	VIBRATION ELEMENT
PDSL	DIFFERENTIAL PRESSURE SWITCH LOW	VSH	VIBRATION SWITCH HIGH
PDT	DIFFERENTIAL PRESSURE TRANSMITTER	VT	VIBRATION TRANSMITTER
PI	PRESSURE INDICATOR	xY	AUXILIARY DEVICE
PISH	PRESSURE INDICATOR SWITCH HIGH	ZT	POSITION TRANSMITTER
PIT	PRESSURE INDICATOR TRANSMITTER	GS+	ON-OFF VALVE LIMIT SWITCH OPEN
PSE	PRESSURE SAFETY EQUIPMENT	GS-	ON-OFF VALVE LIMIT SWITCH CLOSE
PSH	PRESSURE SWITCH HIGH	GT	VALVE POSITONER

f) ASSEMBLY NUMBERING

VALVES
001 - 100 : MANUAL VALVES ON MAIN PIPING
101 - 190 : AUTOMATIC VALVES ON MAIN PIPING
191 - 199 : SAFETY VALVES
301 - 399 : VALVES IN MEASURING LINES
401 - 499 : VALVES ON DRAINING AND FLUSH. LINES
501 - 599 : VALVES ON VENT LINES
601 - 699 : MANUAL VALVES FOR SAMPLING LINES
PIPING
001 - 100 : MAIN PIPING
191 - 199 : PIPING BEFORE/AFTER SAFETY VALVES
301 - 399 : MEASURING LINES
401 - 499 : DRAINING AND FLUSHING LINES
501 - 599 : VENT LINES
601 - 699 : SAMPLING AND DOSING LINES
INSTRUMENTS
001 - 099 : ANALOG MEASUREMENT CIRCUITS
100 - 199 : BINARY MEASUREMENT CIRCUITS
401 - 499 : ACCEPTANCE MEASURING POINTS
501 - 599 : LOCAL MEASURING POINTS
801 - 899 : EXPERIMENT MEASURING POINTS
901 - 999 : MEASURED VALUES LOGIC OPERATIONS

NOZZLES ON EQUIPMENT

Tx - NOZZLE ON TUBE SIDE
Sx - NOZZLE ON SHELL SIDE
Kx - THERMOWELLS
MH - MANHOLES
Nx - NOZZLE ON THE ACC BOUNDLE

GENERAL NOTES

NOTES

PROJECT NAME
Geothermal Energy Geretsried

PROJECT ABBREVIATION
201-09-GET

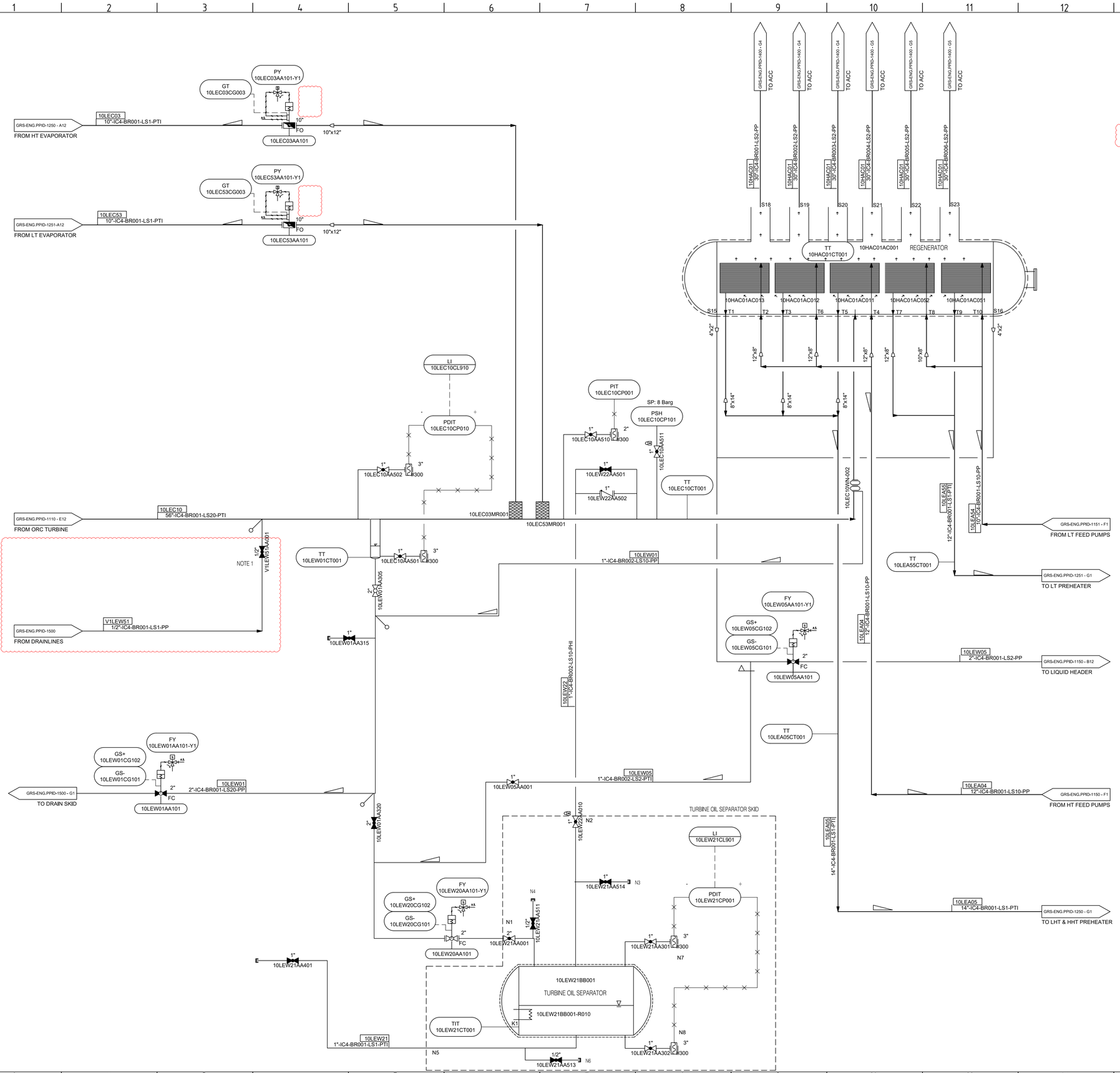
PLAN CREATOR
Turboden S.p.a.
Via Cernaia, 10 - 25124 - Brescia - Italy

REV	DESCRIPTION	AUTHOR	CONTROLLED BY	APPROVED BY	DATE
2	Revised where marked	FF0361	EZ0284	AB0210	22/06/2023
1	General review	FF0361	EZ0284	AB0210	12/04/2023
0	First Issue	FF0361	EZ0284	AB0210	07/03/2023

Doc. code — Code: GRS-ENG.PPID-1000-rev.2

Sheet: 1 / 1
Sheet Format: A1

Subject: P&ID COVER & LEGENDA
Plant: GERETSRIED GEOTHERMAL POWER PLANT
Document: DETAILED P&I



General Notes

1	For symbols & legend, refer to GRS-ENG.PPID-1000
2	For instrumentation & equipment typicals refer to GRS-ENG.PPID-1050

Notes

1	Valve must be easily accessible to field operator

Hold

PROJECT NAME

Geothermal Energy Geretsried

PROJECT ABBREVIATION

201-09-GET

PLAN CREATOR

Turboden S.p.a.

Via Cernaia, 10 - 25124 - Brescia - Italy

REV	DESCRIPTION	AUTHOR	CHECK BY	APP. BY	DATE
4					
3	Revised where marked	FF0361	EZ0284	AB0210	22/06/2023
2	Customer comments integrated, Oil separator skid adjustments	FF0361	EZ0284	AB0210	03/05/2023
1	Revised where marked, TAGs updated	FF0361	EZ0284	AB0210	31/03/2023
0	First Release	FF0361	EZ0284	AB0210	07/03/2023

Nav. code

Code GRS-ENG.PPID-1100 -rev.3

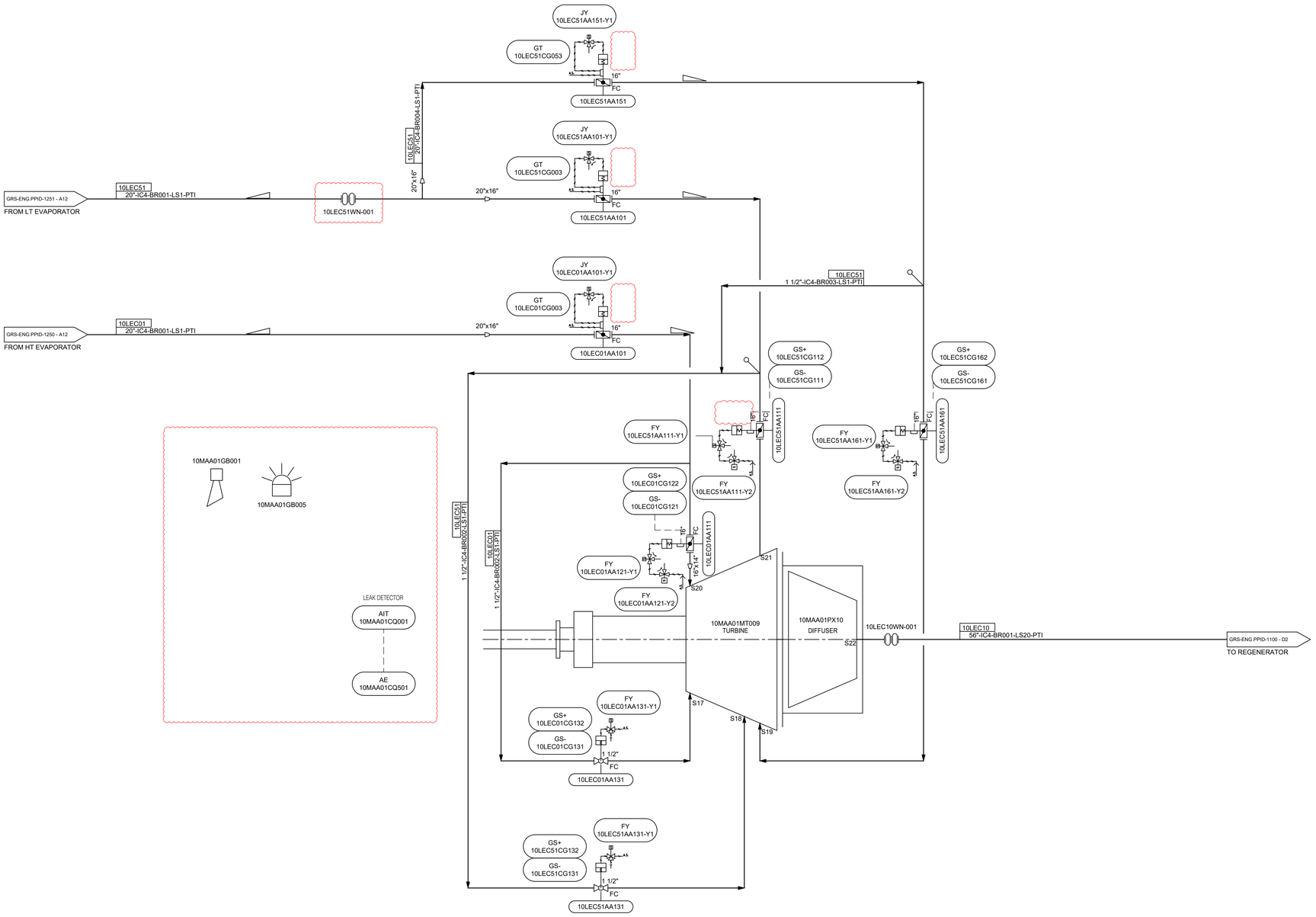
Sheet 1 / 1

Sheet Format A1

Subject ORC TURBINE BYPASS VALVES AND REGENERATOR

Plant GERETSRIED GEOTHERMAL POWER PLANT

Document DETAILED P&ID



General Notes

1	For symbols & legend, refer to GRS-ENG.PPID-1000
2	For instrumentation & equipment typicals refer to GRS-ENG.PPID-1050

Notes

Hold

PROJECT NAME

Geothermal Energy Geretsried

PROJECT ABBREVIATION

201-09-GET

PLAN CREATOR

Turboden S.p.a.

Via Cernaia, 10 - 25124 - Brescia - Italy

REV	DESCRIPTION	AUTHOR	CHECK BY	APP. BY	DATE
4					
3					
2	Revised where marked	FF0361	EZ0284	AB0210	22/06/2023
1	Revised where marked, TAGs updated	FF0361	EZ0284	AB0210	31/03/2023
0	First Release	FF0361	EZ0284	AB0210	07/03/2023

Nav. code

Code GRS-ENG.PPID-1110 -rev.2

Sheet 1 / 1

Sheet Format A1

Subject ORC TURBINE VALVES AND TURBINE DISCHARGE

Plant GERETSRIED GEOTHERMAL POWER PLANT

Document DETAILED P&ID

General Notes

1	For symbols & legend, refer to GRS-ENG.PPID-1000
2	For instrumentation & equipment typicals refer to GRS-ENG.PPID-1050
3	Feed pumps in 3 x 50% configuration (1 redundant pump)

Notes

1	Instrument used for plant performance evaluation

Hold

PROJECT NAME

Geothermal Energy Geretsried

PROJECT ABBREVIATION

201-09-GET

PLAN CREATOR

Turboden S.p.a.
Via Cernaia, 10 - 25124 - Brescia - Italy

REV	DESCRIPTION	AUTHOR	CHECK BY	APP. BY	DATE
4					
3					
2	Revised where marked	FF0361	EZ0284	AB0210	22/06/2023
1	Revised where marked	FF0361	EZ0284	AB0210	31/03/2023
0	First Release	FF0361	EZ0284	AB0210	07/03/2023

Nav. code

Code GRS-ENG.PPID-1150 -rev.2

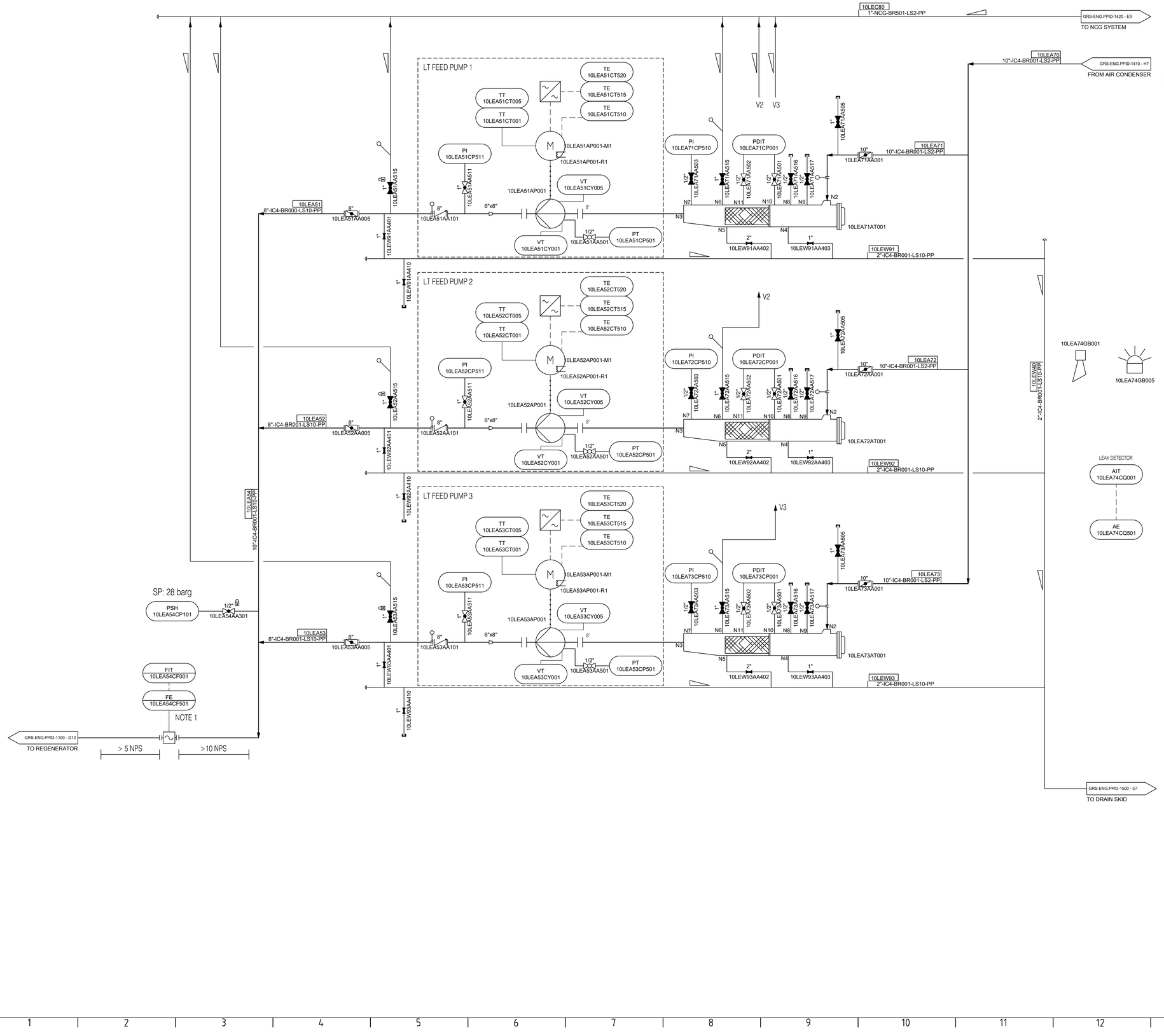
Sheet 1 / 1

Sheet Format A1

Subject ORC HT CYCLE FEED PUMPS

Plant GERETSRIED GEOTHERMAL POWER PLANT

Document DETAILED P&ID



General Notes

1	For symbols & legend, refer to GRS-ENG.PPID-1000
2	For instrumentation & equipment typicals refer to GRS-ENG.PPID-1050
3	Feed pumps in 3 x 50% configuration (1 redundant pump)

Notes

1	Instrument used in plant performance evaluation

Hold

PROJECT NAME

Geothermal Energy Geretsried

PROJECT ABBREVIATION

201-09-GET

PLAN CREATOR

Turboden S.p.a.

Via Cernaia, 10 - 25124 - Brescia - Italy

REV	DESCRIPTION	AUTHOR	CHECK BY	APP. BY	DATE
4					
3					
2	Revised where marked	FF0361	EZ0284	AB0210	22/06/2023
1	Revised where marked	FF0361	EZ0284	AB0210	31/03/2023
0	First Release	FF0361	EZ0284	AB0210	07/03/2023

Nav. code

Code GRS-ENG.PPID-1151 -rev.2

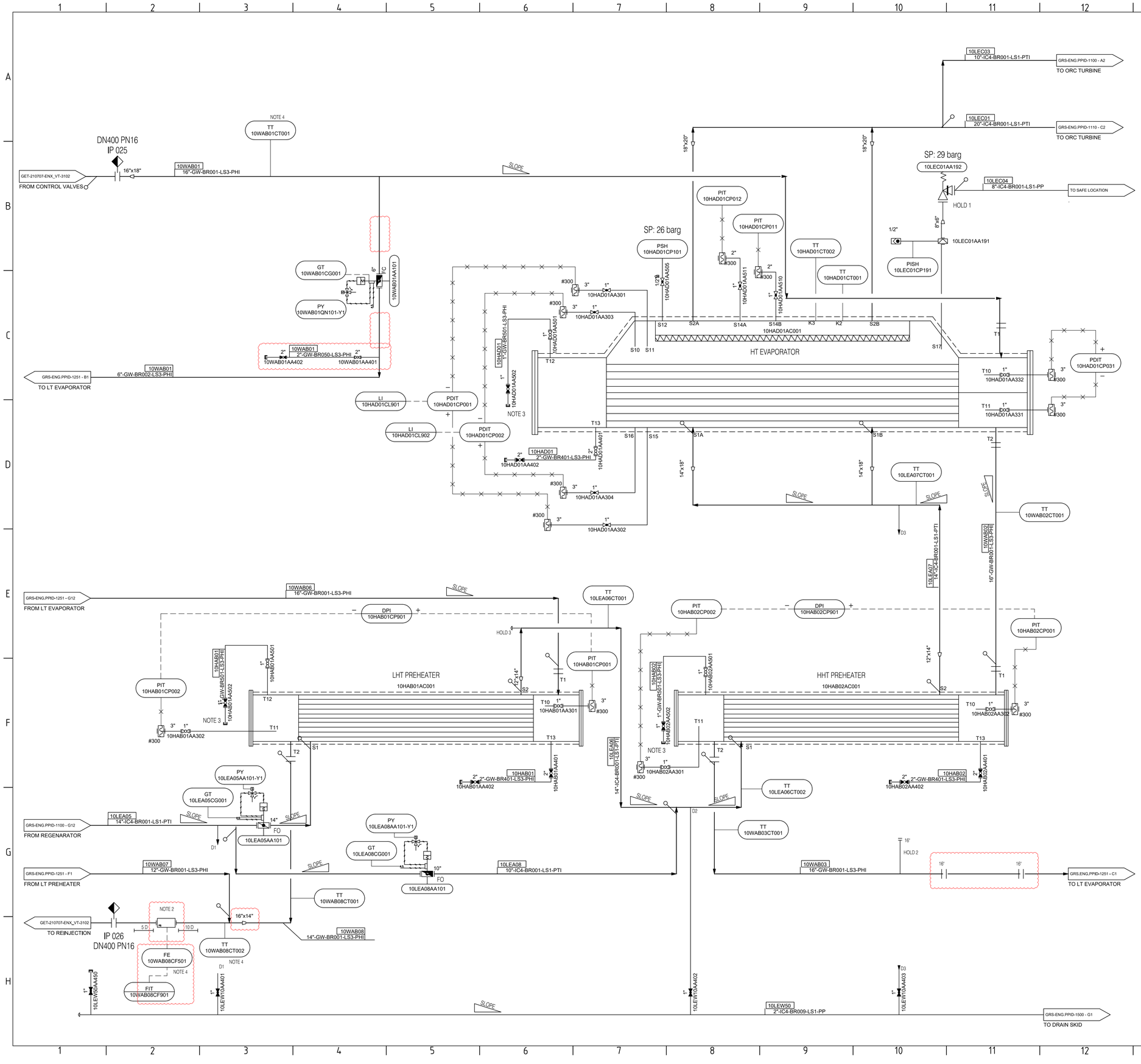
Sheet 1 / 1

Sheet Format A1

Subject ORC LT CYCLE FEED PUMPS

Plant GERETSRIED GEOTHERMAL POWER PLANT

Document DETAILED P&ID



General Notes	
1	For symbols & legend, refer to GRS-ENG.PPID-1000
2	For instrumentation & equipment typicals refer to GRS-ENG.PPID-1050

Notes	
2	Electromagnetic type flowmeter
3	Vent valve AA502 shall be placed near ground level for easy venting activities
4	Instrument used for plant performance evaluation

Hold	
1	PSV SIZE HOLD
2	Provision for DH connection
3	Provision for KWK connection

PROJECT NAME

Geothermal Energy Geretsried

PROJECT ABBREVIATION

201-09-GET

PLAN CREATOR

Turboden S.p.a.
Via Cernaia, 10 - 25124 - Brescia - Italy

REV	DESCRIPTION	AUTHOR	CHECK BY	APP. BY	DATE
4	Revised where marked	FF0361	EZ0284	AB0210	17/07/2023
3	Revised where marked	FF0361	EZ0284	AB0210	22/06/2023
2	Revised where marked	FF0361	EZ0284	AB0210	03/05/2023
1	Revised where marked, TAGs updated	FF0361	EZ0284	AB0210	03/04/2023
0	First Release	FF0361	EZ0284	AB0210	07/03/2023

Nav. code

Code GRS-ENG.PPID-1250 -rev.4

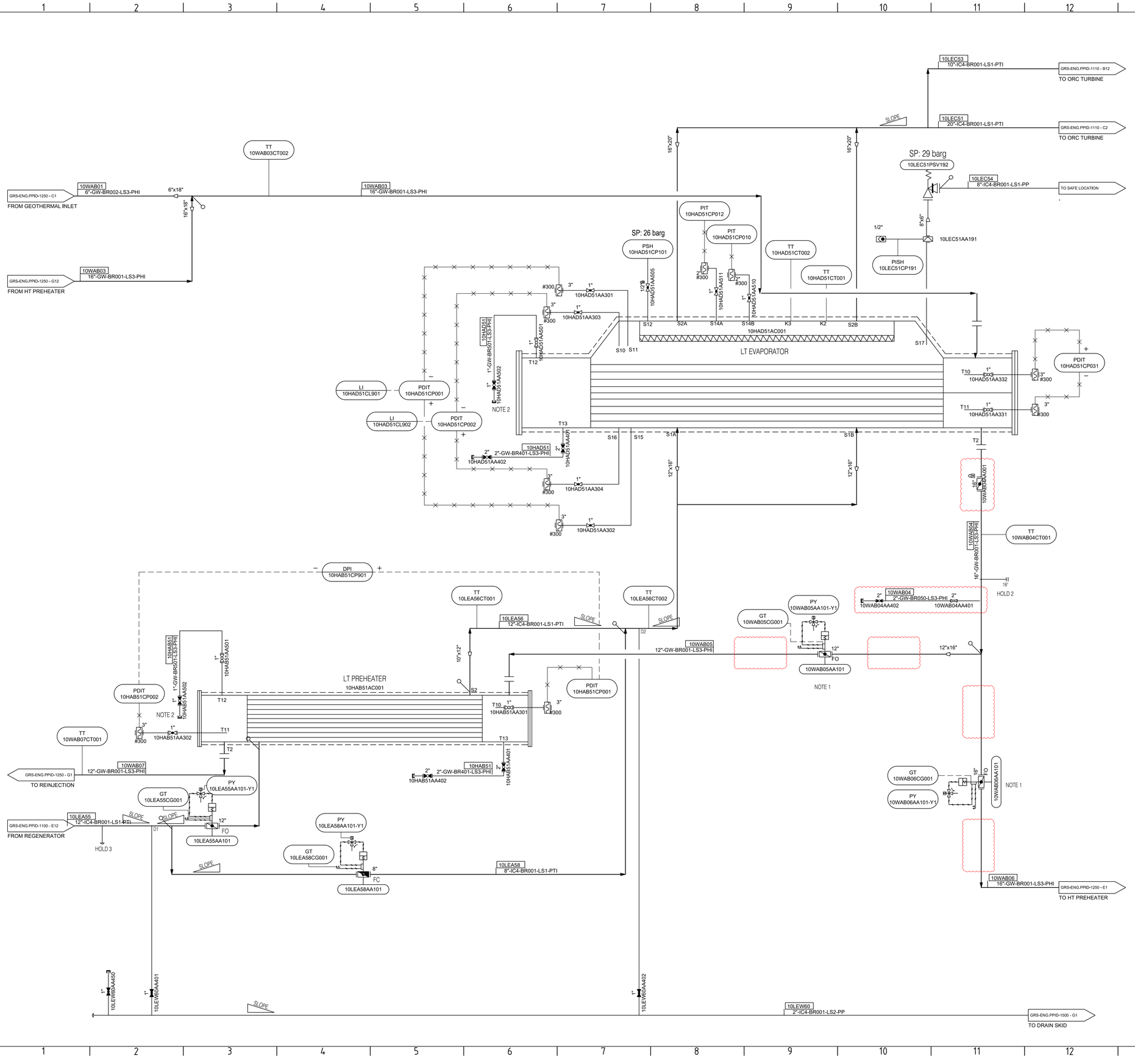
Sheet 1 / 1

Sheet Format A1

Subject ORC HT CYCLE HEAT SOURCE AND EXCHANGERS

Plant GERETSRIED GEOTHERMAL POWER PLANT

Document DETAILED P&ID



General Notes

1	For symbols & legend, refer to GRS-ENG.PPID-1000
2	For instrumentation & equipment typicals refer to GRS-ENG.PPID-1050

Notes

1	Valves minimum opening 20 % by mechanical & software interlock
2	Vent valve AA502 shall be placed near ground level for easy venting activities

Hold

1	PSV SIZE HOLD
2	Provision for DH connection
3	Provision for KWK connection

PROJECT NAME

Geothermal Energy Geretsried

PROJECT ABBREVIATION

201-09-GET

PLAN CREATOR

Turboden S.p.a.
Via Cernaia, 10 - 25124 - Brescia - Italy

REV	DESCRIPTION	AUTHOR	CHECK BY	APP. BY	DATE
4	Revised where marked	FF0361	EZ0284	AB0210	18/07/2023
3	Revised where marked	FF0361	EZ0284	AB0210	22/06/2023
2	Revised where marked	FF0361	EZ0284	AB0210	03/05/2023
1	Revised where marked, TAGs updated	FF0361	EZ0284	AB0210	03/04/2023
0	First Release	FF0361	EZ0284	AB0210	07/03/2023

Nav. code

Code GRS-ENG.PPID-1251 -rev.4

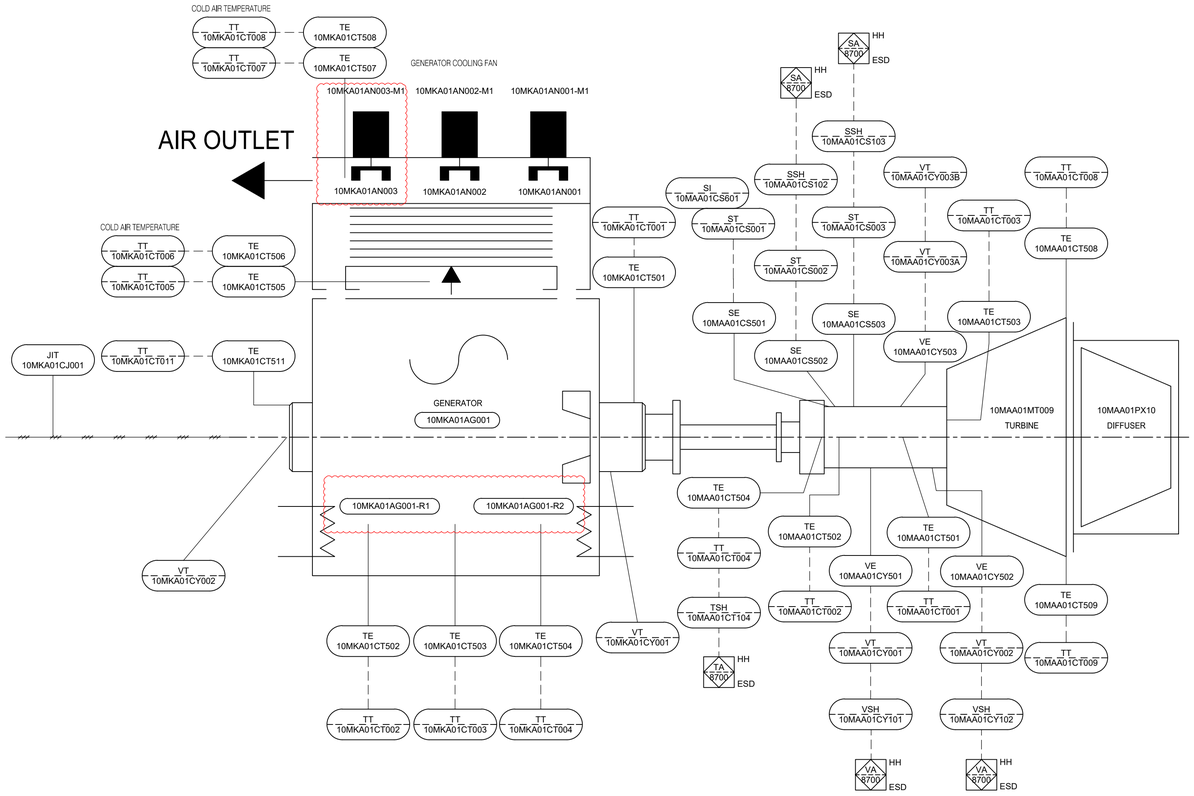
Sheet 1 / 1

Sheet Format A1

Subject ORC LT CYCLE HEAT SOURCE AND EXCHANGERS

Plant GERETSRIED GEOTHERMAL POWER PLANT

Document DETAILED P&ID



General Notes

1	For symbols & legend, refer to GRS-ENG.PPID-1000
2	For instrumentation & equipment typicals refer to GRS-ENG.PPID-1050

Note

1	Turbine spindle diameter 200 mm

Hold

PROJECT NAME

Geothermal Energy Geretsried

PROJECT ABBREVIATION

201-09-GET

PLAN CREATOR

Turboden S.p.a.

Via Cernaia, 10 - 25124 - Brescia - Italy

REV	DESCRIPTION	AUTHOR	CHECK BY	APP. BY	DATE
4					
3					
2	Revised where marked	FF0361	EZ0284	AB0210	26/06/2023
1	TAGs Updated	FF0361	EZ0284	AB0210	03/04/2023
0	First Release	FF0361	EZ0284	AB0210	07/03/2023

Consortium:

Nav. code

Code GRS-ENG.PPID-1300 -rev.2

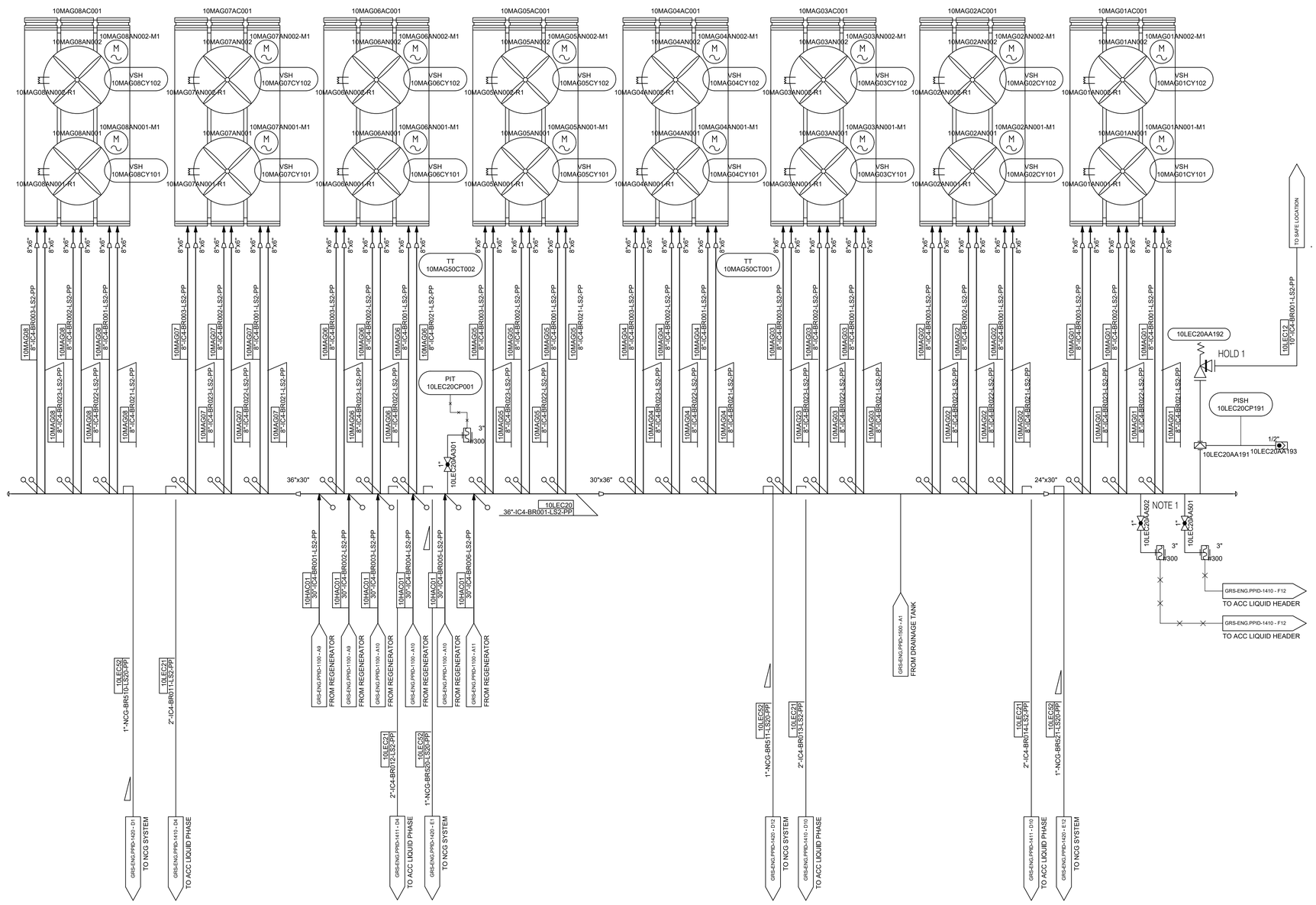
Sheet 1 / 1

Sheet Format A1

Subject P&ID TURBINE AND GENERATOR

Plant GERETSRIED GEOTHERMAL POWER PLANT

Document DETAILED P&ID



General Notes

1	For symbols & legend, refer to GRS-ENG.PPID-1000
2	For instrumentation & equipment typicals refer to GRS-ENG.PPID-1050

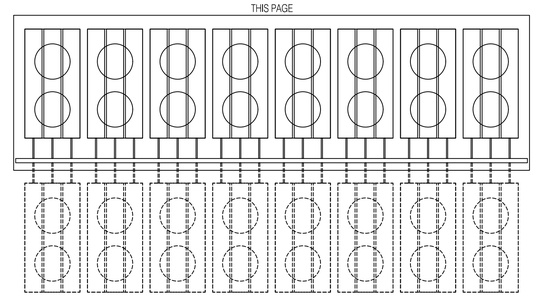
Notes

1	Nozzle position on top of the pipeline

Hold

1	PSV size dimensions HOLD

ACC configuration scheme



PROJECT NAME

Geothermal Energy Geretsried

PROJECT ABBREVIATION

201-09-GET

PLAN CREATOR

Turboden S.p.a.

Via Cernaia, 10 - 25124 - Brescia - Italy

REV	DESCRIPTION	AUTHOR	CHECK BY	APP. BY	DATE
4					
3					
2	Small adjustment	FF0361	EZ0284	AB0210	22/06/2023
1	Revised where marked, TAGs updated	FF0361	EZ0284	AB0210	03/04/2023
0	First Release	FF0361	EZ0284	AB0210	07/03/2023

Nav. code

Code GRS-ENG.PPID-1400 -rev.2

Sheet 1 / 1

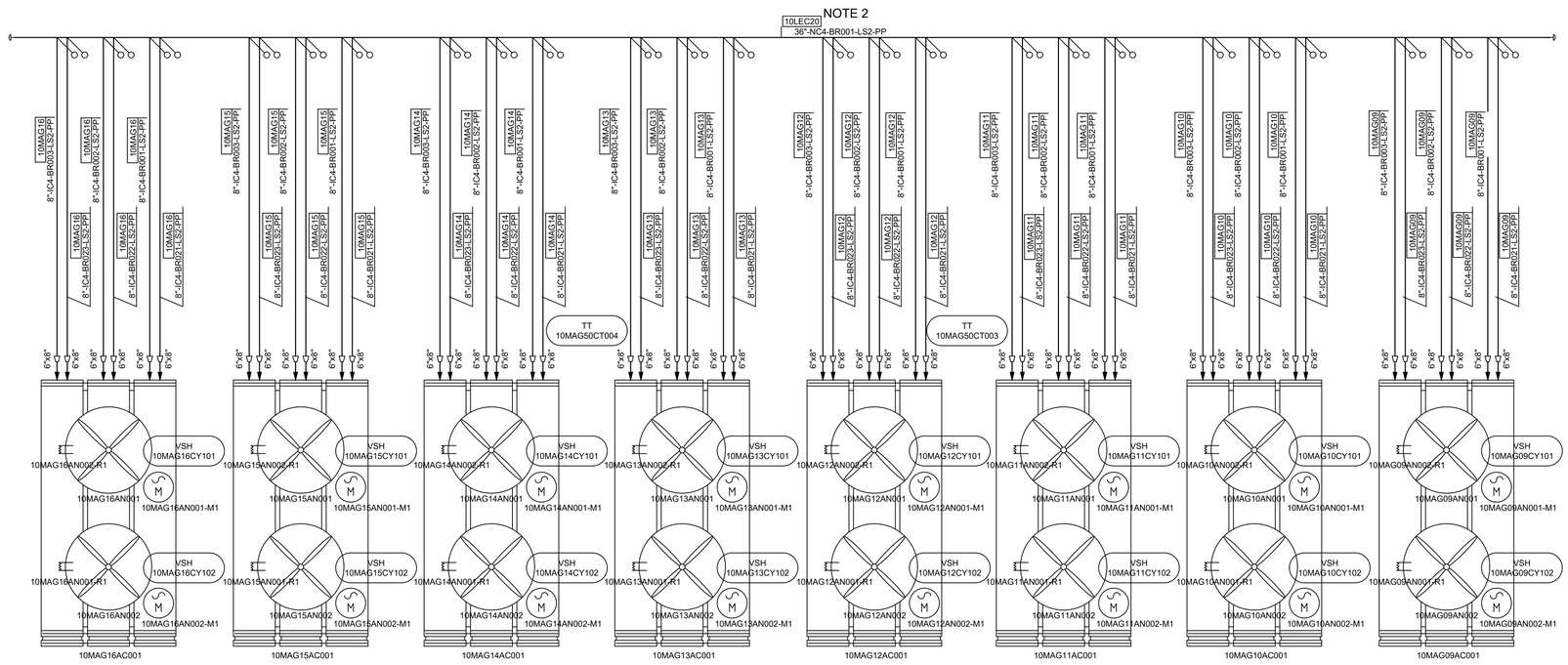
Sheet Format A1

Subject P&ID ACC VAPOUR PHASE

Plant GERETSRIED GEOTHERMAL POWER PLANT

Document DETAILED P&ID

clean energy ahead TURBODEN



General Notes

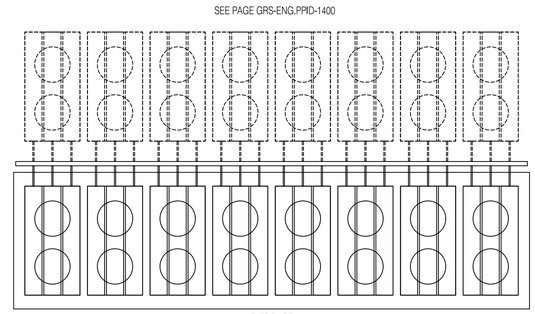
1	For symbols & legend, refer to GRS-ENG.PPID-1000
2	For instrumentation & equipment typicals refer to GRS-ENG.PPID-1050

Notes

1	Instrument used in plant performance evaluation
2	Pipe represented in the P&ID page GRS-ENG.PPID-1400

Hold

ACC configuration scheme



PROJECT NAME

Geothermal Energy Geretsried

PROJECT ABBREVIATION

201-09-GET

PLAN CREATOR

Turboden S.p.a.

Via Cernaia, 10 - 25124 - Brescia - Italy

REV	DESCRIPTION	AUTHOR	CHECK BY	APP. BY	DATE
4					
3					
2	Small adjustment	FF0361	EZ0284	AB0210	22/06/2023
1	Revised where marked, TAGs updated	FF0361	EZ0284	AB0210	03/04/2023
0	First Release	FF0361	EZ0284	AB0210	07/03/2023

Nav. code

Code GRS-ENG.PPID-1401 -rev.2

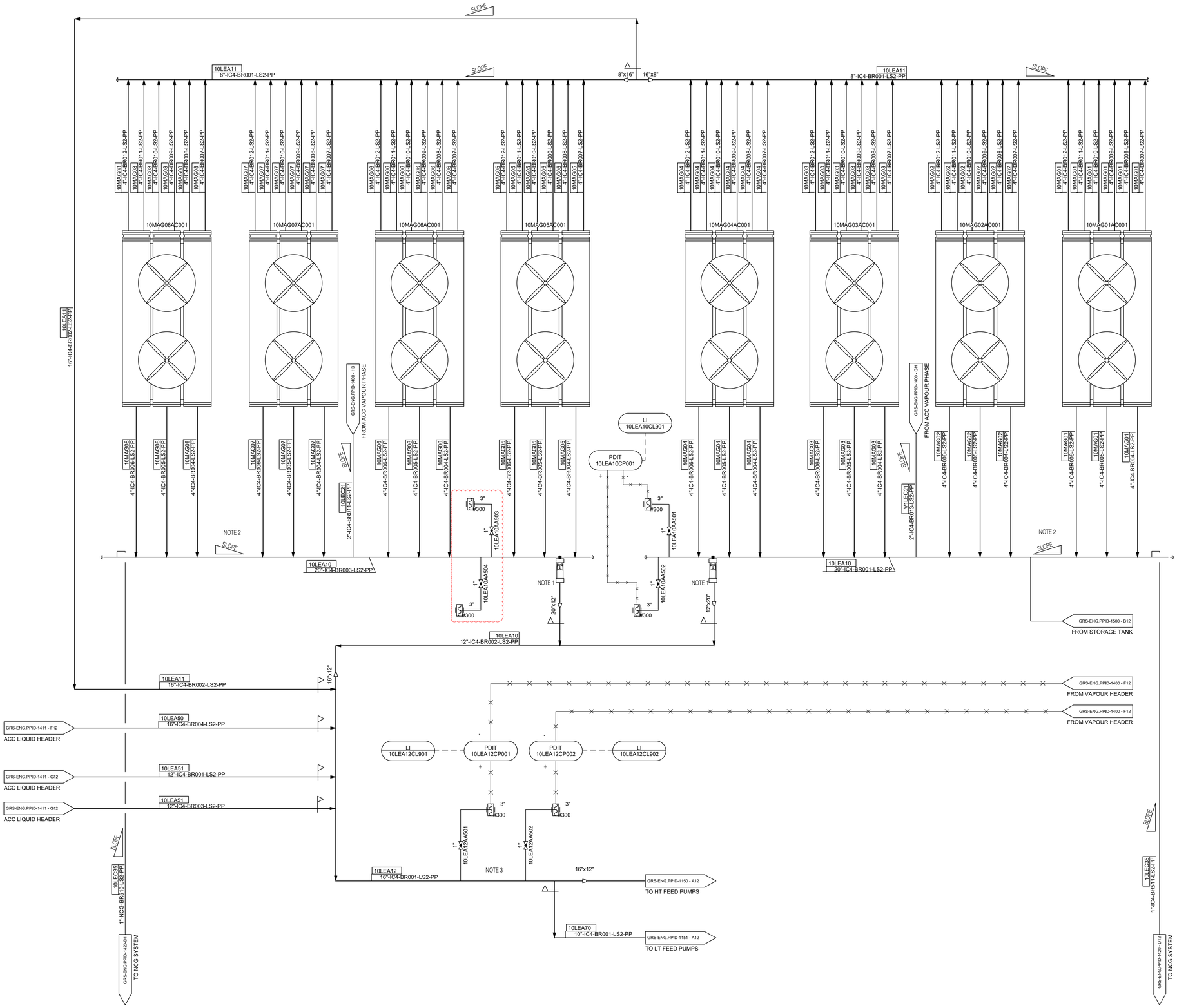
Sheet 1 / 1

Sheet Format A1

Subject P&ID ACC VAPOUR PHASE

Plant GERETSRIED GEOTHERMAL POWER PLANT

Document DETAILED P&ID



General Notes

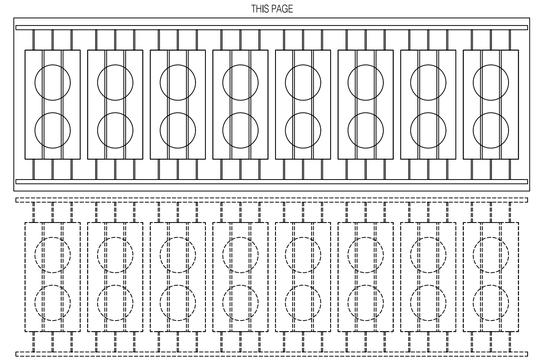
1	For symbols & legend, refer to GRS-ENG.PPID-1000
2	For instrumentation & equipment typicals refer to GRS-ENG.PPID-1050

Notes

1	Vortex breaker inserted inside the T-connector
2	Slope shall be exactly 0,5%
3	Nozzle installed on horizontal position on pipeline

Hold

ACC configuration scheme



PROJECT NAME

Geothermal Energy Geretsried

PROJECT ABBREVIATION

201-09-GET

PLAN CREATOR

Turboden S.p.a.
Via Cernaia, 10 - 25124 - Brescia - Italy

REV	DESCRIPTION	AUTHOR	CHECK BY	APP. BY	DATE
4					
3	Small adjustment	FF0361	EZ0284	AB0210	22/06/2023
2	Revised where marked	FF0361	EZ0284	AB0210	03/05/2023
1	TAGs updated	FF0361	EZ0284	AB0210	02/04/2023
0	First Release	FF0361	EZ0284	AB0210	07/03/2023

Nav. code

Code GRS-ENG.PPID-1410 -rev.3

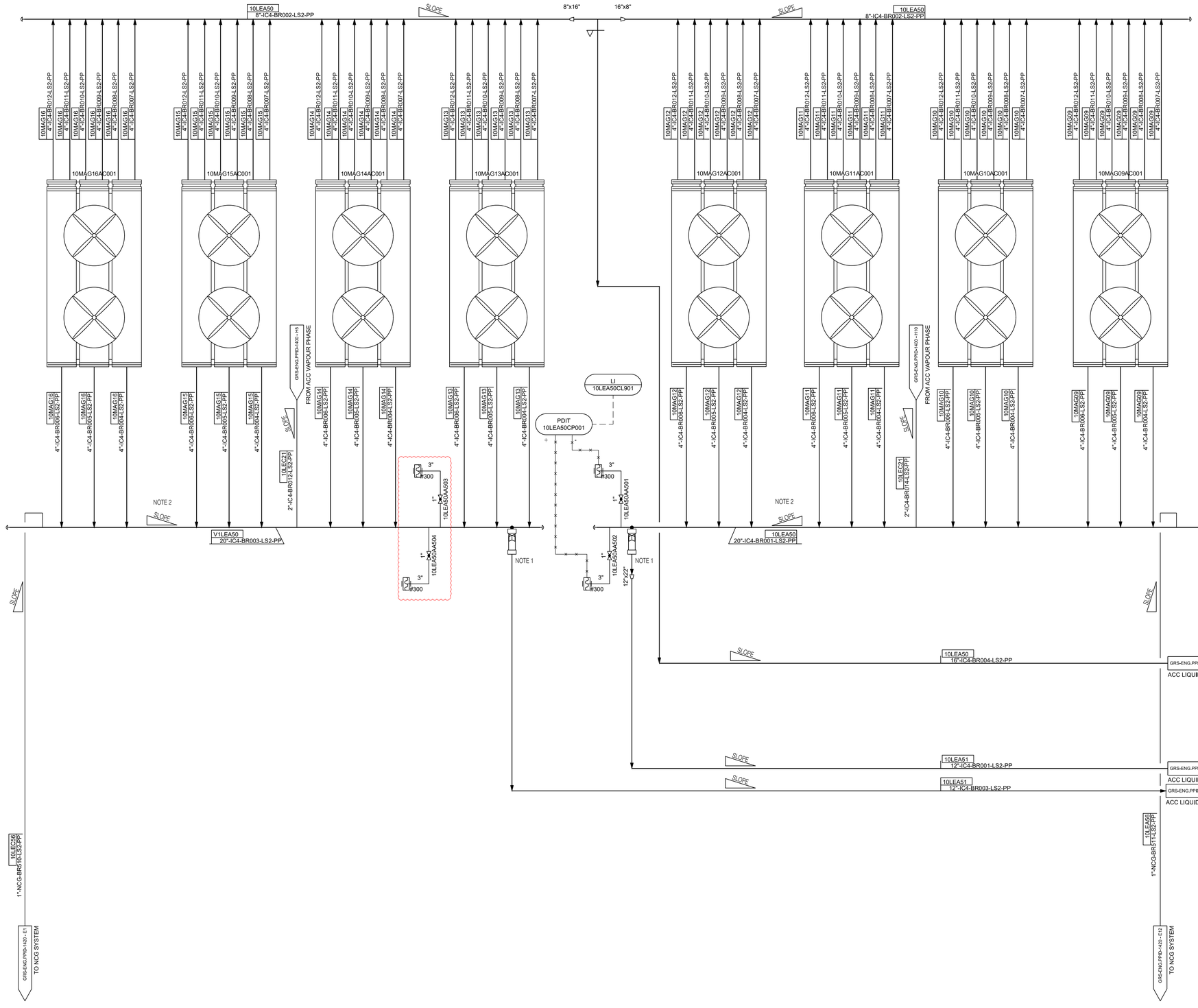
Sheet 1 / 1

Sheet Format A1

Subject P&ID ACC LIQUID PHASE

Plant GERETSRIED GEOTHERMAL POWER PLANT

Document DETAILED P&ID



General Notes

1	For symbols & legend, refer to GRS-ENG.PPID-1000
2	For instrumentation & equipment typicals refer to GRS-ENG.PPID-1050

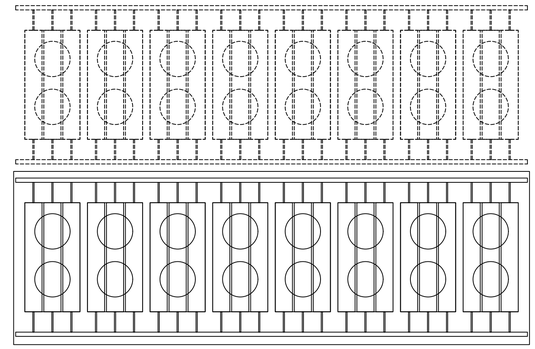
Notes

1	Vortex breaker inserted inside the T-connector
2	Slope shall be exactly 0,5%

Hold

ACC configuration scheme

SEE PAGE GRS-ENG.PPID-1410



THIS PAGE

PROJECT NAME

Geothermal Energy Geretsried

PROJECT ABBREVIATION

201-09-GET

PLAN CREATOR

Turboden S.p.a.
Via Cernaia, 10 - 25124 - Brescia - Italy

REV	DESCRIPTION	AUTHOR	CHECK BY	APP. BY	DATE
4					
3	Small adjustment	FF0361	EZ0284	AB0210	22/06/2023
2	Revised where marked	FF0361	EZ0284	AB0210	03/05/2023
1	Revised where marked, TAGs updated	FF0361	EZ0284	AB0210	03/04/2023
0	First Release	FF0361	EZ0284	AB0210	07/03/2023

Nav. code

Code GRS-ENG.PPID-1411 -rev.3

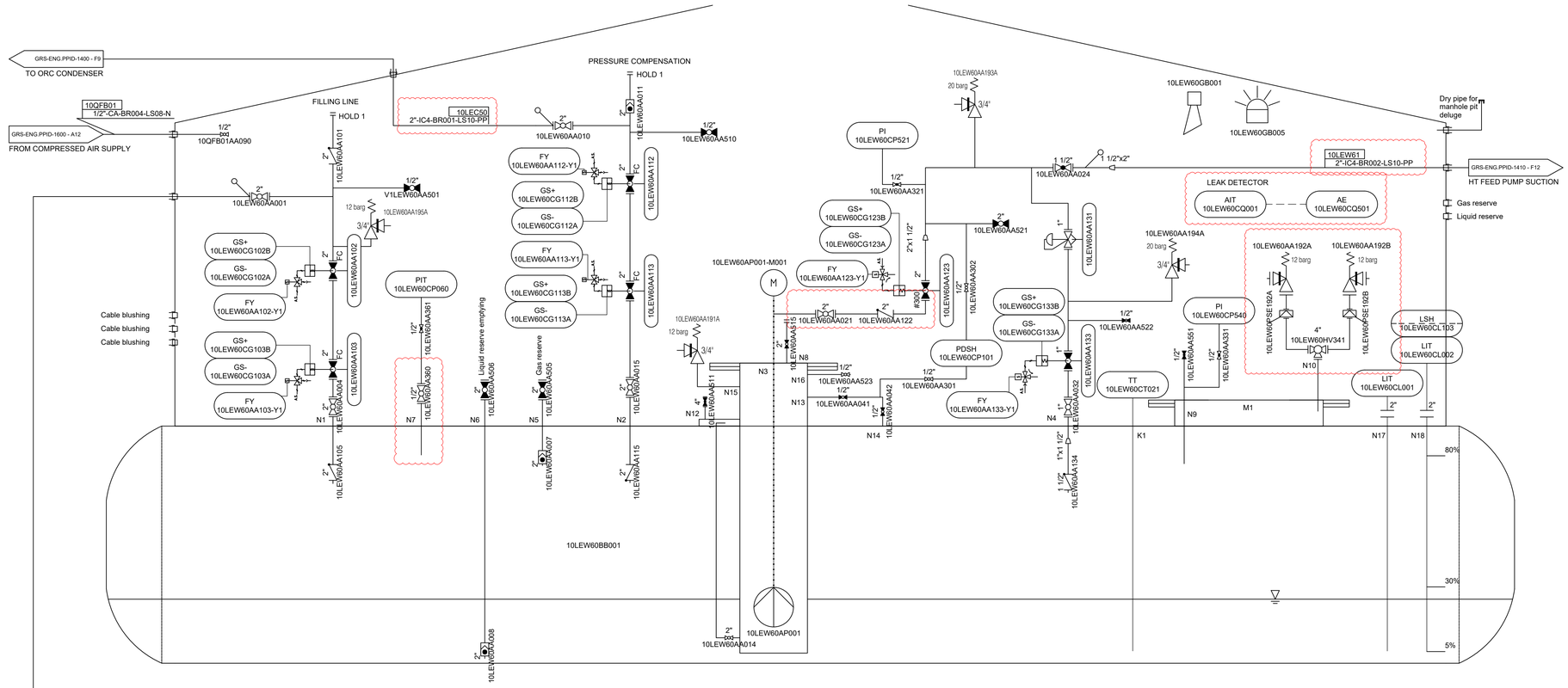
Sheet 1 / 1

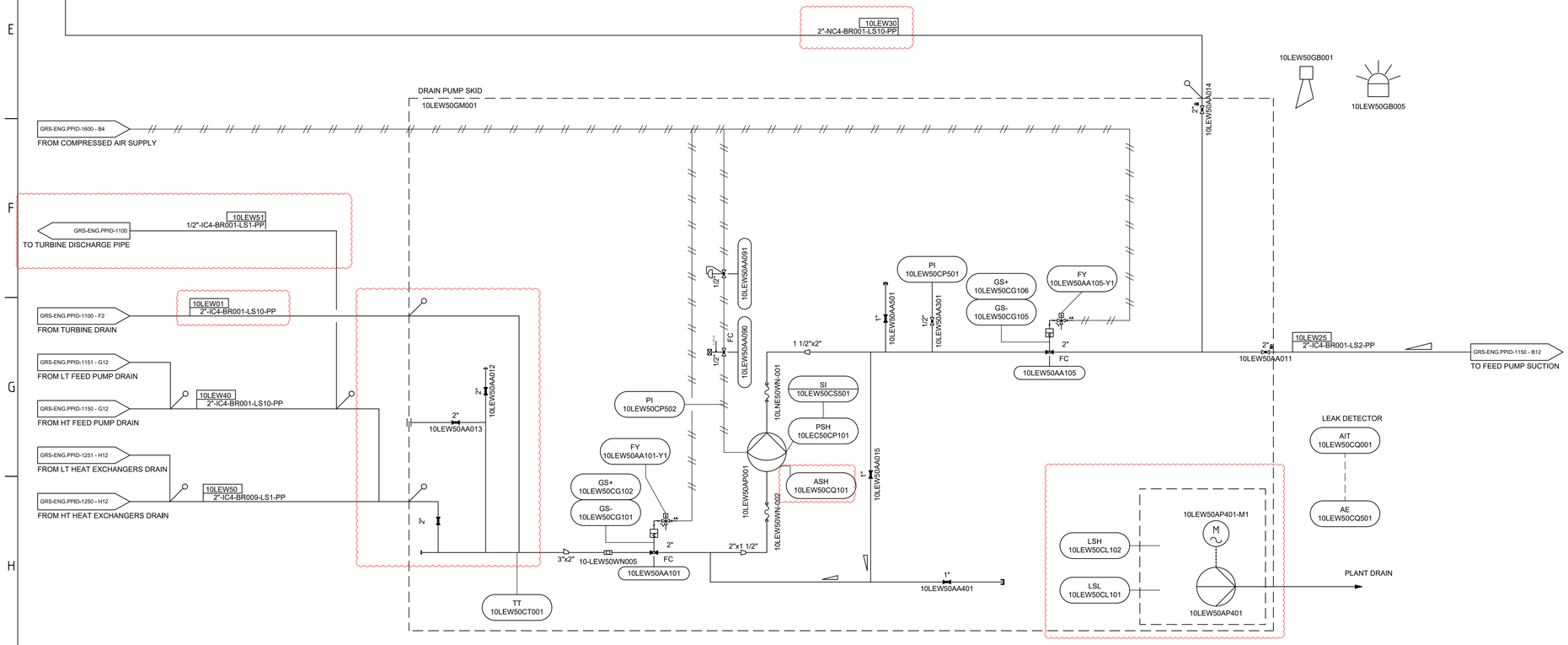
Sheet Format A1

Subject P&ID ACC LIQUID PHASE

Plant GERETSRIED GEOTHERMAL POWER PLANT

Document DETAILED P&ID





General Notes

1	For symbols & legend, refer to GRS-ENG.PPID-1000
2	For instrumentation & equipment typicals refer to GRS-ENG.PPID-1050
3	All flanges and all flanged valves in this Page is rating #300

Notes

Hold

1	Type & dimensions of filling and vent connection HOLD

REV	DESCRIPTION	AUTHOR	CHECK BY	APP. BY	DATE
4	Revised where marked	FF0361	EZ0284	AB0210	22/06/2023
3	Revised where marked	FF03611	EZ0284	AB0210	16/05/2023
2	Revised where marked	FF0361	EZ0284	AB0210	03/05/2023
1	Revised where marked, TAGs revised	FF0361	EZ0284	AB0210	03/04/2023
0	First Release	FF0361	EZ0284	AB0210	07/03/2023

Nav. code

Code GRS-ENG.PPID-1500 -rev.4

Sheet 1 / 1

Sheet Format A1

Subject DRAIN & STORAGE SYSTEM

Plant GERETSREID GEOTHERMAL POWER PLANT

Document DETAILED P&ID

TURBODEN