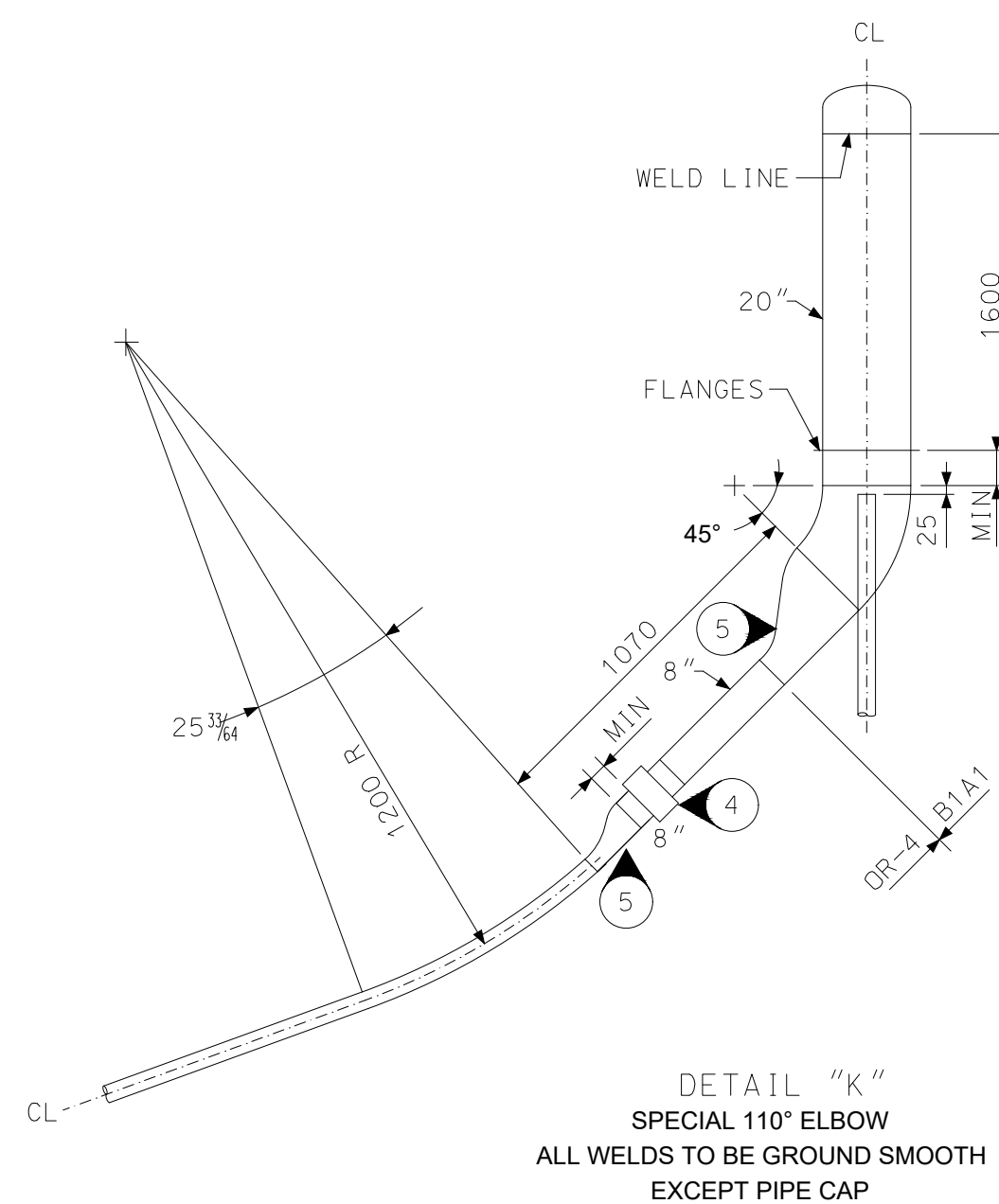
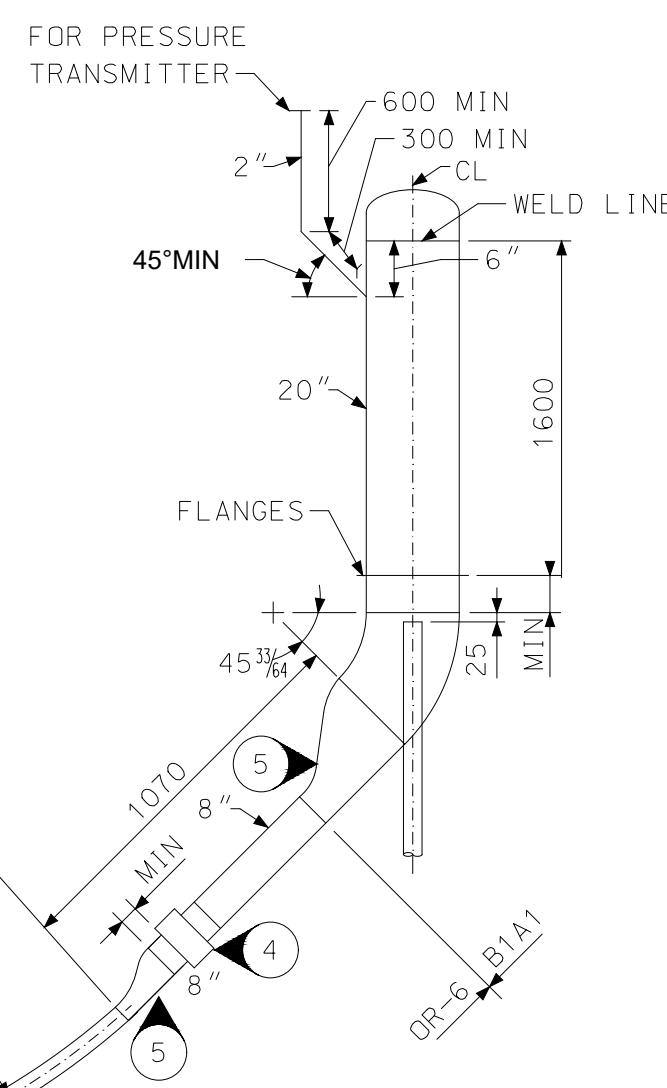
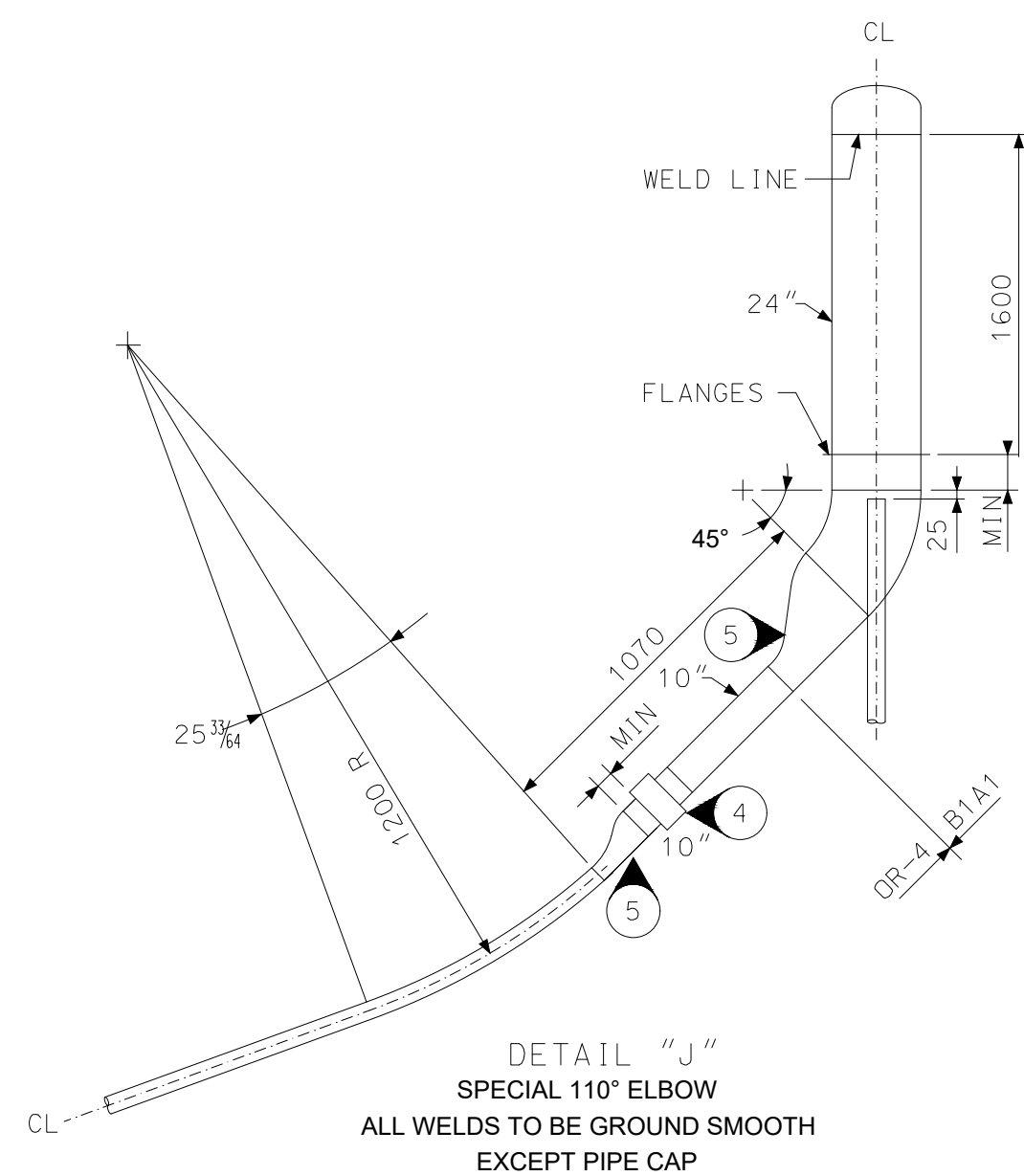
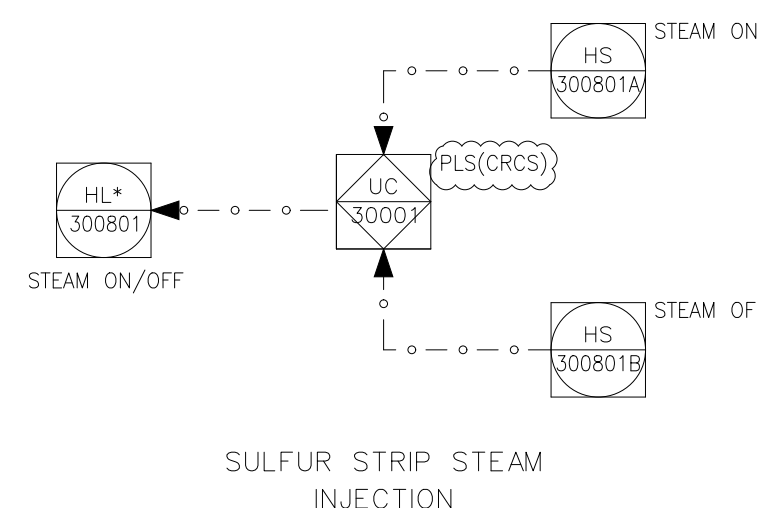
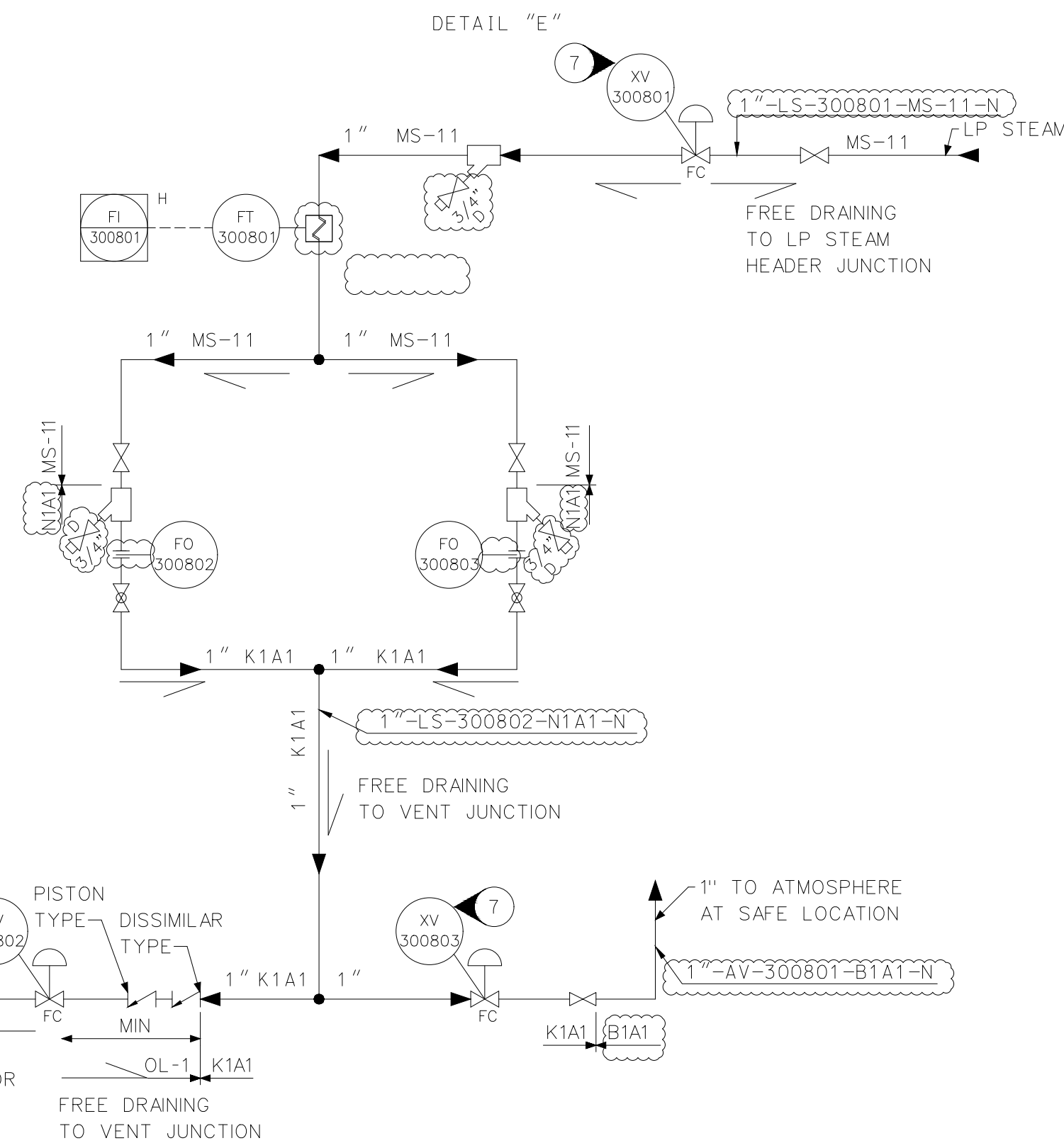






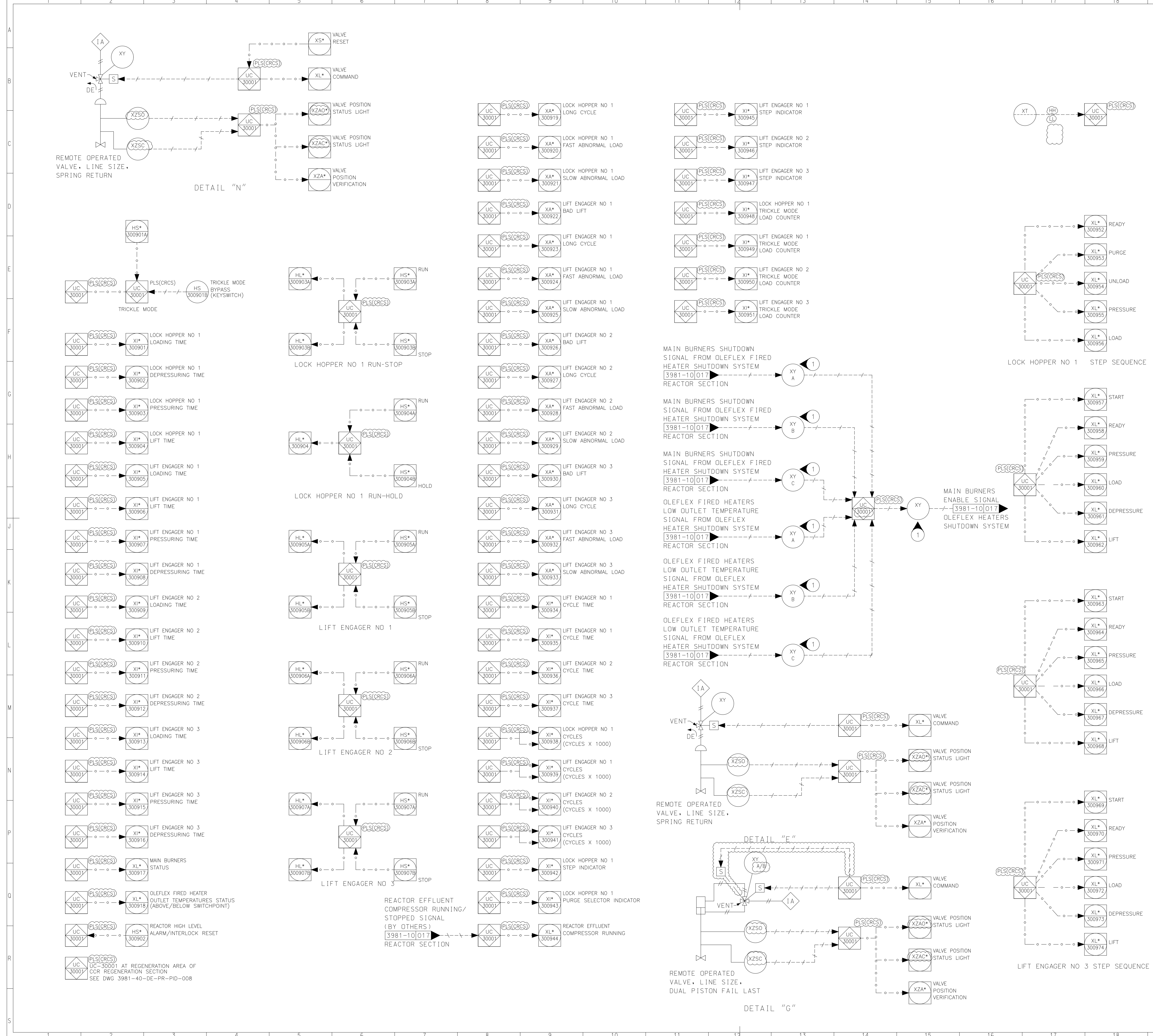
DETAIL "H"  
FILLER FLANGE WITH SCREEN INSERT

10 X 10 MESH (1.60 MM WIRE) DOUBLE CRIMPED  
OR PLAIN WEAVE 316 STAINLESS STEEL  
(MESH DENOTES NUMBER OF SPACES PER LINEAR  
INCH MEASURED FROM CENTERLINE OF WIRE OR  
PROFILE WIRE EQUIVALENT)



19	20	21	22	A3		
REFERENCE			DRAWINGS			
NOTES						
1. FOR SAFETY REASONS NITROGEN TO THIS SECTION MUST COME FROM AN INDEPENDENT SOURCE NOT CONNECTED TO ANY OTHER USERS						
2. FILLER FLANGE MATERIAL AND FILLER FLANGE FACING TO MATCH CONNECTING PIPE CLASS						
3. 10 X 10 MESH (1.60 MM MIN WIRE DIAMETER, 1 MM MAX HOLE DIAMETER) DOUBLE CRIMPED OR PLAIN WEAVE 316 STAINLESS STEEL (MESH DENOTES NUMBER OF SPACES PER LINEAR INCH MEASURED FROM CENTERLINE OF WIRE OR PROFILE WIRE EQUIVALENT)						
4. DUR O LOK COUPLING (SEE STD DWG 8-127)						
5. ECCENTRIC REDUCERS TO MATCH PIPE ID WITH SEAM LOCATED ON TOP						
6. TEE AND SHORT RADIUS ELBOW TO BE ON THE SAME PLANE WITH ORIENTATION AS SHOWN						
7. DETAIL "E". SEE DWG 3981-30-DE-PR-PID-009						
GENERAL NOTES:						
1. FOR GENERAL LEGEND, ABBREVIATIONS, NOMENCLATURE, INSTRUMENTATION, EQUIPMENT SYMBOLOGY AND GENERAL DETAILS SEE DWG'S 3981-00-DE-PR-PID-045 THRU 3981-00-DE-PR-PID-055						
2. EACH INSTRUMENT TAG NUMBER HAS A PLANT IDENTIFICATION NUMBER (PROJECT CODE=81) WHICH WILL NOT BE SHOWN ON THE PID'S.						
3. FUNCTIONAL IDENTIFICATION OF INSTRUMENT SIGNALS SUFFIXED WITH AN ASTERISK (*) ARE INCLUDED IN THE CATALYST REGENERATION CONTROL SYSTEM. THE SUPPLIER OF THE CATALYST REGENERATION CONTROL SYSTEM SHALL PROVIDE DETAILS FOR THESE SIGNALS						
4. USE SPRING SUPPORTS FOR VESSELS WHERE POSSIBLE TO AVOID EXPANSION JOINTS IN CATALYST PIPES						
5. EXCEPT WHERE INDICATED OTHERWISE, CATALYST-BEARING LINES SHALL BE STRAIGHT VERTICAL						
6. HEAT TRACE AND INSULATE WITH ELECTRICAL HEAT TRACING. A REMOVABLE FABRIC COVER IS PREFERRED						
HOLDS						
01	ISSUED FOR APPROVAL	16-Dec-2025	M.KHERADKAR	M.JAMSHIDI	M.H.ESHRAGHI	
00	ISSUED FOR COMMENT	13-Aug-2025	M.KHERADKAR	M.JAMSHIDI	M.H.ESHRAGHI	
REV.	PURPOSE OF ISSUE	ISSUE DATE	PREPARE	CHECKED	APPROVED	
OWNER: 		MC: 	CONTRACTOR/CONSULTANT:  			
PROJECT TITLE:						
PROPANE DEHYDROGENATION (PDH) PROJECT						
DOCUMENT TITLE:						
PIPING AND INSTRUMENT DIAGRAM UNIT SPECIFIC DETAILS AND NOTES FOR REACTOR AREA OF REGENERATION UNIT						
DOC NO.:	PROJ.CODE	Sec.	PHASE	DEP.	DOC. TYPE	SERIAL NO.
	3981	30	DE	PR	PID	008
SCALE:	SIZE: A1	SHEET NO: 1 OF 1		REVISION: 01	CLASS: 1	





REFERENCE

DRAWINGS

NOTES

1. RELAY (PROVIDED BY VENDOR OF CATALYST REGENERATION CONTROL SYSTEM)

2. DELETED.

GENERAL NOTES:

1. FOR GENERAL LEGEND, ABBREVIATIONS, NOMENCLATURE, INSTRUMENTATION, EQUIPMENT SYMBOLOGY AND GENERAL DETAILS, SEE DWG'S 3981-00-DE-PR-PID-045 THRU 3981-00-DE-PR-PID-055

2. EACH INSTRUMENT TAG NUMBER HAS A PLANT IDENTIFICATION NUMBER(PROJECT CODE=81) WHICH WILL NOT BE SHOWN ON THE PID'S.

3. FUNCTIONAL IDENTIFICATION OF INSTRUMENT SIGNALS SUFFIXED WITH AN ASTERISK (\*) ARE INCLUDED IN THE CATALYST REGENERATION CONTROL SYSTEM. THE SUPPLIER OF THE CATALYST REGENERATION CONTROL SYSTEM SHALL PROVIDE DETAILS FOR THESE SIGNALS.

HOLDS

01	ISSUED FOR APPROVAL	16-Dec-2025	M.KHERADKAR	M.JAMSHIDI	M.HESHRAHGH
00	ISSUED FOR COMMENT	13-Aug-2025	M.KHERADKAR	M.JAMSHIDI	M.HESHRAHGH
REV.	PURPOSE OF ISSUE	ISSUE DATE	PREPARE	CHECKED	APPROVED
OWNER:		MC:			

PROJECT TITLE:

PROPANE DEHYDROGENATION (PDH) PROJECT

DOCUMENT TITLE:

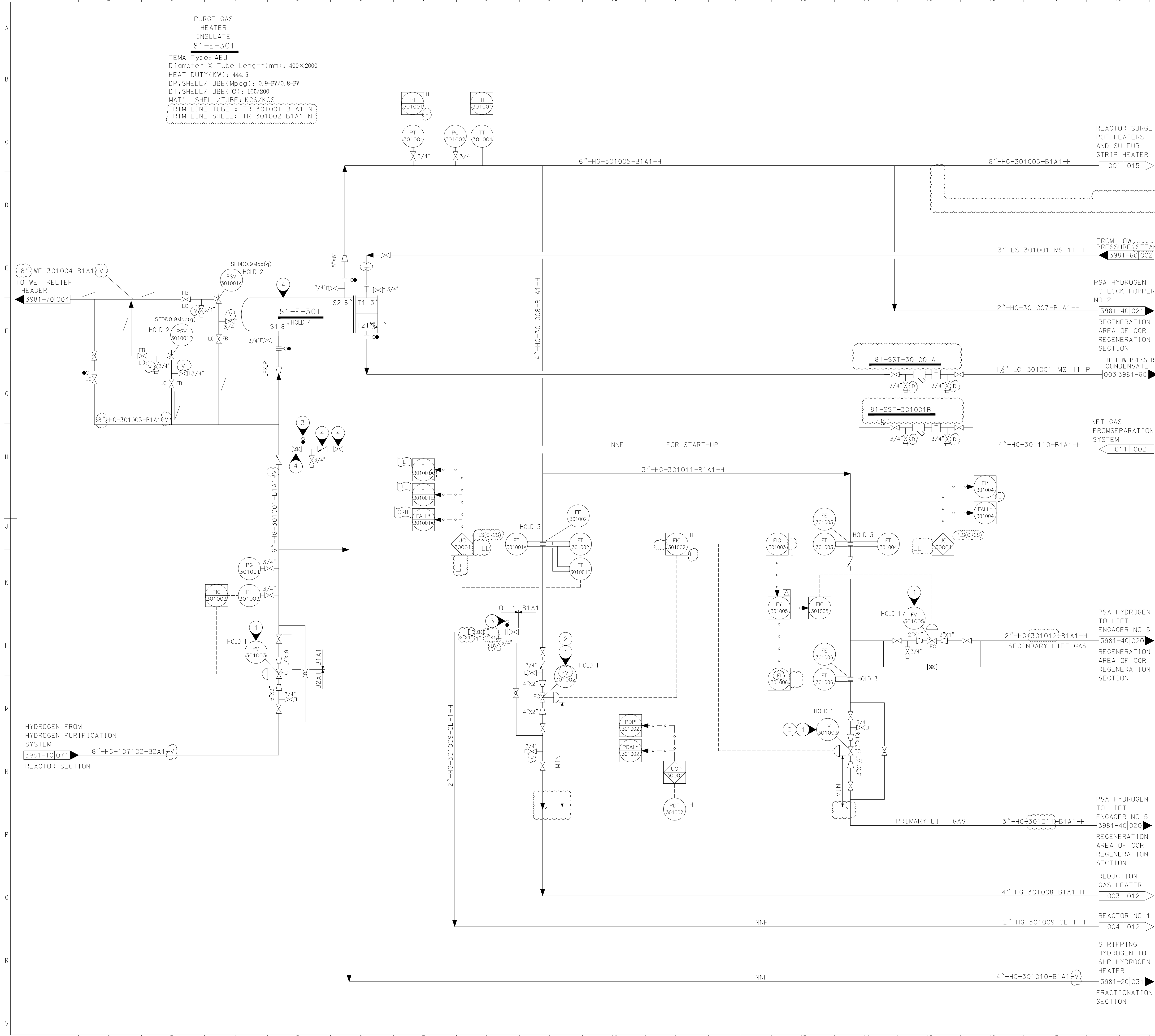
PIPING AND INSTRUMENT DIAGRAM  
UNIT SPECIFIC INSTRUMENTATION




DOC NO.:	PROJ.CODE	Sec.	PHASE	DEP.	DOC. TYPE	SERIAL NO.
	3981	30	DE	PR	PID	009

SCALE:	SIZE: A1	SHEET NO: 1 OF 1	REVISION: 01	CLASS: 1
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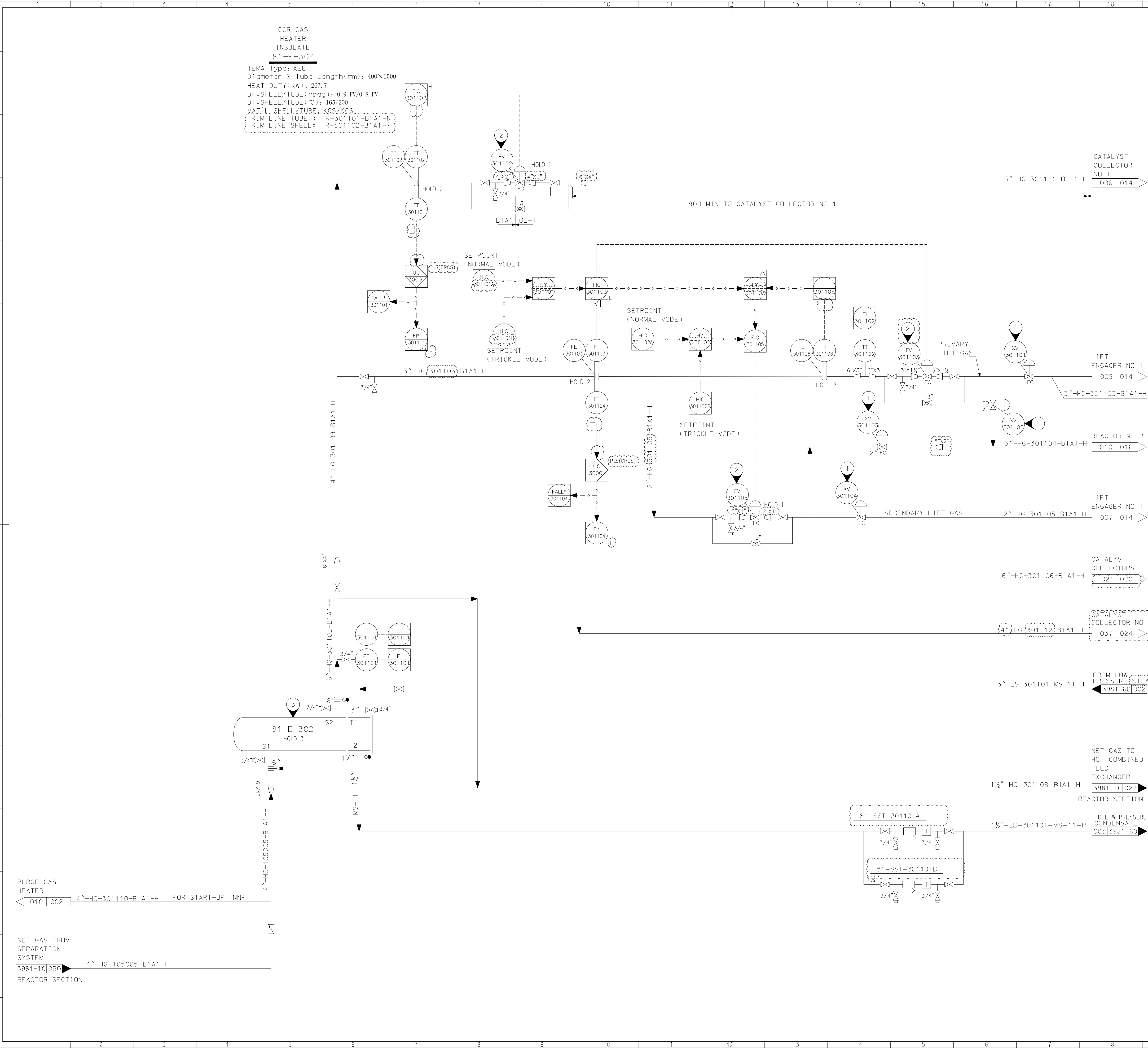





REFERENCE			DRAWINGS		
NOTES					
1. DETAIL "CV". SEE DWG 3981-00-DE-PR-PID-054. 2. LOCATE A MINIMUM DISTANCE APART ON SAME PLATFORM 3. BLANKOFF DURING NORMAL OPERATION 4. LOCATE AT GRADE					
GENERAL NOTES:					
1. FOR GENERAL LEGEND, ABBREVIATIONS, NOMENCLATURE, INSTRUMENTATION, EQUIPMENT SYMBOLOGY AND GENERAL DETAILS SEE DWG'S 3981-00-DE-PR-PID-045 THRU 3981-00-DE-PR-PID-055 2. EACH INSTRUMENT TAG NUMBER HAS A PLANT IDENTIFICATION NUMBER(PROJECT CODE=81) WHICH WILL NOT BE SHOWN ON THE PID'S. 3. FUNCTIONAL IDENTIFICATION OF INSTRUMENT(SIGNALS) SUFFIXED WITH AN ASTERISK (*) ARE INCLUDED IN THE CATALYST REGENERATION CONTROL SYSTEM. THE SUPPLIER OF THE CATALYST REGENERATION CONTROL SYSTEM SHALL PROVIDE DETAILS FOR THESE SIGNALS.					
HOLDS					
1. CONTROL VALVE, ITS ISOLATION, BY PASS VALVE SIZE AND NUMBER OF EXPANDER/REDUCER 2. PSV ORIFICE SIZE, ITS INLET/OUTLET LINE SIZE AND CORRESPONDING VESSEL NOZZLE SIZE. 3. FLOWMETER CONNECTION SIZE 4. TYPE OF HEAT EXCHANGER, ITS NOZZLE DETAIL AND SIZE OF HX INLET/OUTLET NOZZLES					
01	ISSUED FOR APPROVAL	16-Dec-2025	M.KHERADKAR	M.JAMSHIDI	M.H.ESHRAGHI
00	ISSUED FOR COMMENT	13-Aug-2025	M.KHERADKAR	M.JAMSHIDI	M.H.ESHRAGHI
REV.	PURPOSE OF ISSUE	ISSUE DATE	PREPARE	CHECKED	APPROVED
OWNER:		MC:	CONTRACTOR/CONSULTANT:		
					
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PROPANE DEHYDROGENATION (PDH) PROJECT					
DOCUMENT TITLE:					
PIPING AND INSTRUMENT DIAGRAM PURGE GAS HEATER					
DOC NO.:	PROJ.CODE	Sec.	PHASE	DEP.	SERIAL NO.
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SCALE:	SIZE: A1	SHEET NO: 1 OF 1		REVISION: 01	CLASS: 1

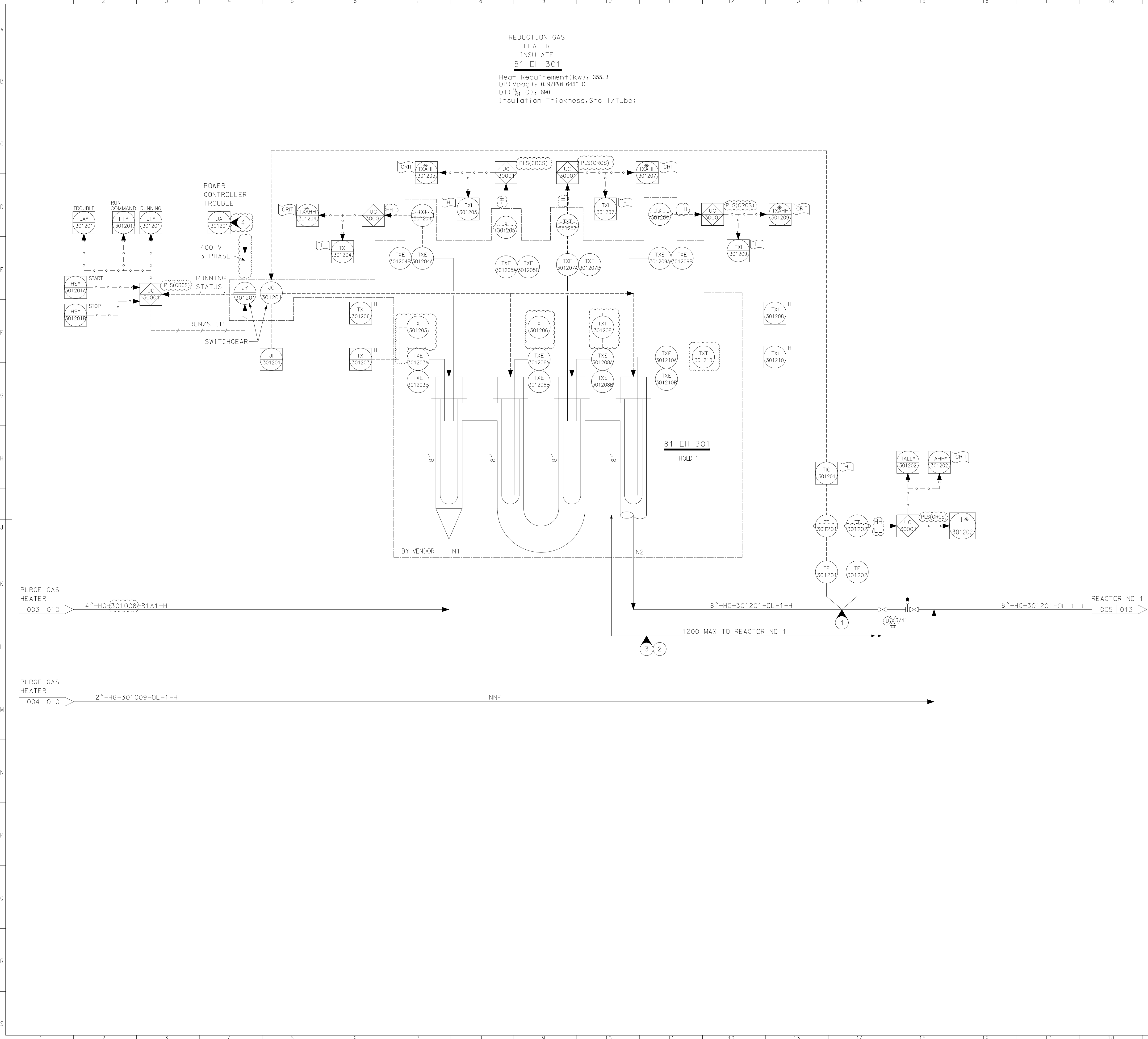
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REFERENCE				DRAWINGS		
NOTES						
1. DETAIL "E", SEE DWG 3981-30-DE-PR-PID-009						
2. DETAIL "CV", SEE DWG 3981-00-DE-PR-PID-054.						
3. LOCATE AT GRADE						
GENERAL NOTES:						
1. FOR GENERAL LEGEND, ABBREVIATIONS, NOMENCLATURE, INSTRUMENTATION, EQUIPMENT SYMBOLOGY AND GENERAL DETAILS SEE DWG'S 3981-00-DE-PR-PID-045 THRU 3981-00-DE-PR-PID-055						
2. EACH INSTRUMENT TAG NUMBER HAS A PLANT IDENTIFICATION NUMBER(PROJECT CODE=81) WHICH WILL NOT BE SHOWN ON THE PID'S.						
3. FUNCTIONAL IDENTIFICATION OF INSTRUMENT(SIGNALS) SUFFIXED WITH AN ASTERISK (*) ARE INCLUDED IN THE CATALYST REGENERATION CONTROL SYSTEM. THE SUPPLIER OF THE CATALYST REGENERATION CONTROL SYSTEM SHALL PROVIDE DETAILS FOR THESE SIGNALS.						
HOLDS						
1. CONTROL VALVE, ITS ISOLATION, BY PASS VALVE SIZE AND NUMBER OF EXPANDER/REDUCER						
2. FLOWMETER CONNECTION SIZE						
3. TYPE OF HEAT EXCHANGER, ITS NOZZLE DETAIL AND SIZE OF HX INLET/OUTLET NOZZLES						
01	ISSUED FOR APPROVAL	16-Dec-2025	M.KHERADKAR	M.JAMSHIDI	M.H.ESHRAGH	
00	ISSUED FOR COMMENT	13-Aug-2025	M.KHERADKAR	M.JAMSHIDI	M.H.ESHRAGH	
REV.	PURPOSE OF ISSUE	ISSUE DATE	PREPARE	CHECKED	APPROVED	
OWNER:		MC:		CONTRACTOR/CONSULTANT:		
						
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PROPANE DEHYDROGENATION (PDH) PROJECT						
DOCUMENT TITLE:						
PIPING AND INSTRUMENT DIAGRAM CCR GAS HEATER						
DOC NO.:		PROJ.CODE	Sec.	PHASE	DEP.	DOC. TYPE
		3981	30	DE	PR	PID
SCALE:		SIZE: A1	SHEET NO: 1 OF 1		REVISION: 01	CLASS: 1



REFERENCE

DRAWINGS

NOTES

GENERAL NOTES:

HOLDS

01	ISSUED FOR APPROVAL	16-Dec-2025	M.KHERADKAR	M.JAMSHIDI	M.HESHRAGHI
00	ISSUED FOR COMMENT	13-Aug-2025	M.KHERADKAR	M.JAMSHIDI	M.HESHRAGHI
REV.	PURPOSE OF ISSUE	ISSUE DATE	PREPARE	CHECKED	APPROVED
OWNER:	MC:		CONTRACTOR/CONSULTANT:		

PROJECT TITLE:

PROpane DEHYDROgenation (PDH) PROJECT

DOCUMENT TITLE:

PIPING AND INSTRUMENT DIAGRAM  
REDUCTION GAS HEATER

DOC NO.:	PROJ.CODE	Sec.	PHASE	DEP.	DOC. TYPE	SERIAL NO.
	3981	30	DE	PR	PID	012

SCALE:

SIZE: A1	SHEET NO: 1 OF 1	REVISION: 01	CLASS: 1
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- SHIELD THERMOCOUPLE ELEMENT AGAINST RADIATION FROM ELECTRIC HEATER ELEMENT OR LOCATE THERMOCOUPLE CONNECTION DOWNSTREAM OF AN ELBOW
- NO ADDITIONAL VALVE OR FLANGES TO BE ADDED EXCEPT IN ADDITION TO WHAT IS SHOWN
- ALL FLANGES AND BLINDS IN THIS LINE ARE TO BE PROVIDED WITH A WEATHER SHIELD IN ACCORDANCE WITH THE DETAIL IN UOP STANDARD SPECIFICATION 9-11-9 PROVIDE NO ADDITIONAL FLANGES EXCEPT AS SHOWN
- UA WILL BE FINALIZED BY VENDOR.

- FOR GENERAL LEGEND, ABBREVIATIONS, NOMENCLATURE, INSTRUMENTATION, EQUIPMENT SYMBOLOGY AND GENERAL DETAILS SEE DWG'S 3981-00-DE-PR-PID-045 THRU 3981-00-DE-PR-PID-055
- EACH INSTRUMENT TAG NUMBER HAS A PLANT IDENTIFICATION NUMBER(PROJECT CODE=81) WHICH WILL NOT BE SHOWN ON THE PID'S.
- FUNCTIONAL IDENTIFICATION OF INSTRUMENT(SIGNALS) SUFFIXED WITH AN ASTERISK (\*) ARE INCLUDED IN THE CATALYST REGENERATION CONTROL SYSTEM. THE SUPPLIER OF THE CATALYST REGENERATION CONTROL SYSTEM SHALL PROVIDE DETAILS FOR THESE SIGNALS.

1. SIZE OF HEATER INLET/OUTLET NOZZLES

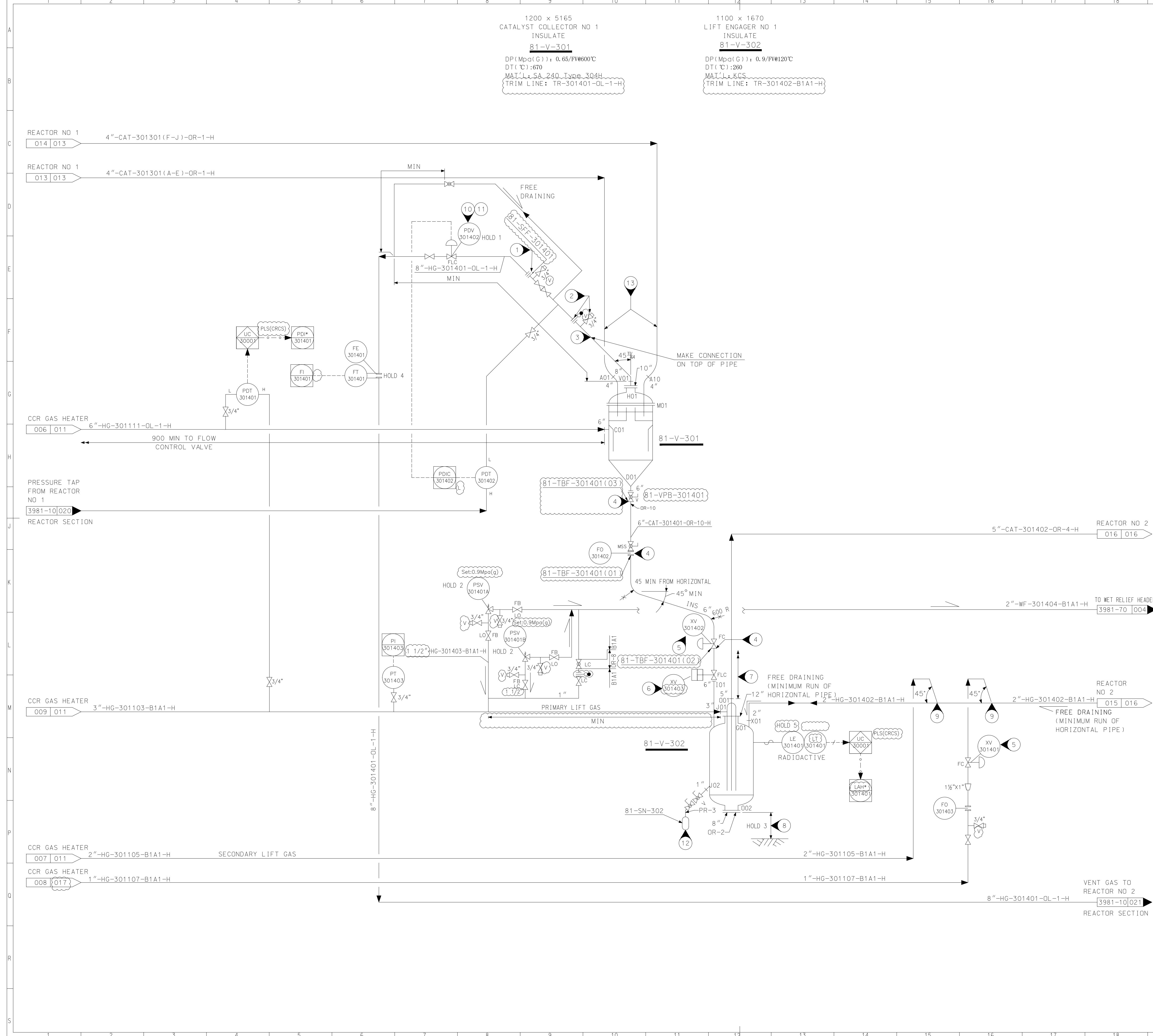
01	ISSUED FOR APPROVAL	16-Dec-2025	M.KHERADKAR	M.JAMSHIDI	M.HESHRAGHI
00	ISSUED FOR COMMENT	13-Aug-2025	M.KHERADKAR	M.JAMSHIDI	M.HESHRAGHI
REV.	PURPOSE OF ISSUE	ISSUE DATE	PREPARE	CHECKED	APPROVED
OWNER:	MC:		CONTRACTOR/CONSULTANT:		

PROJECT TITLE:					
PROpane DEHYDROgenation (PDH) PROJECT					
DOCUMENT TITLE:					
PIPING AND INSTRUMENT DIAGRAM REDUCTION GAS HEATER					
DOC NO.:	PROJ.CODE	Sec.	PHASE	DEP.	DOC. TYPE
	3981	30	DE	PR	PID
SCALE:	SIZE: A1		SHEET NO: 1 OF 1		REVISION: 01
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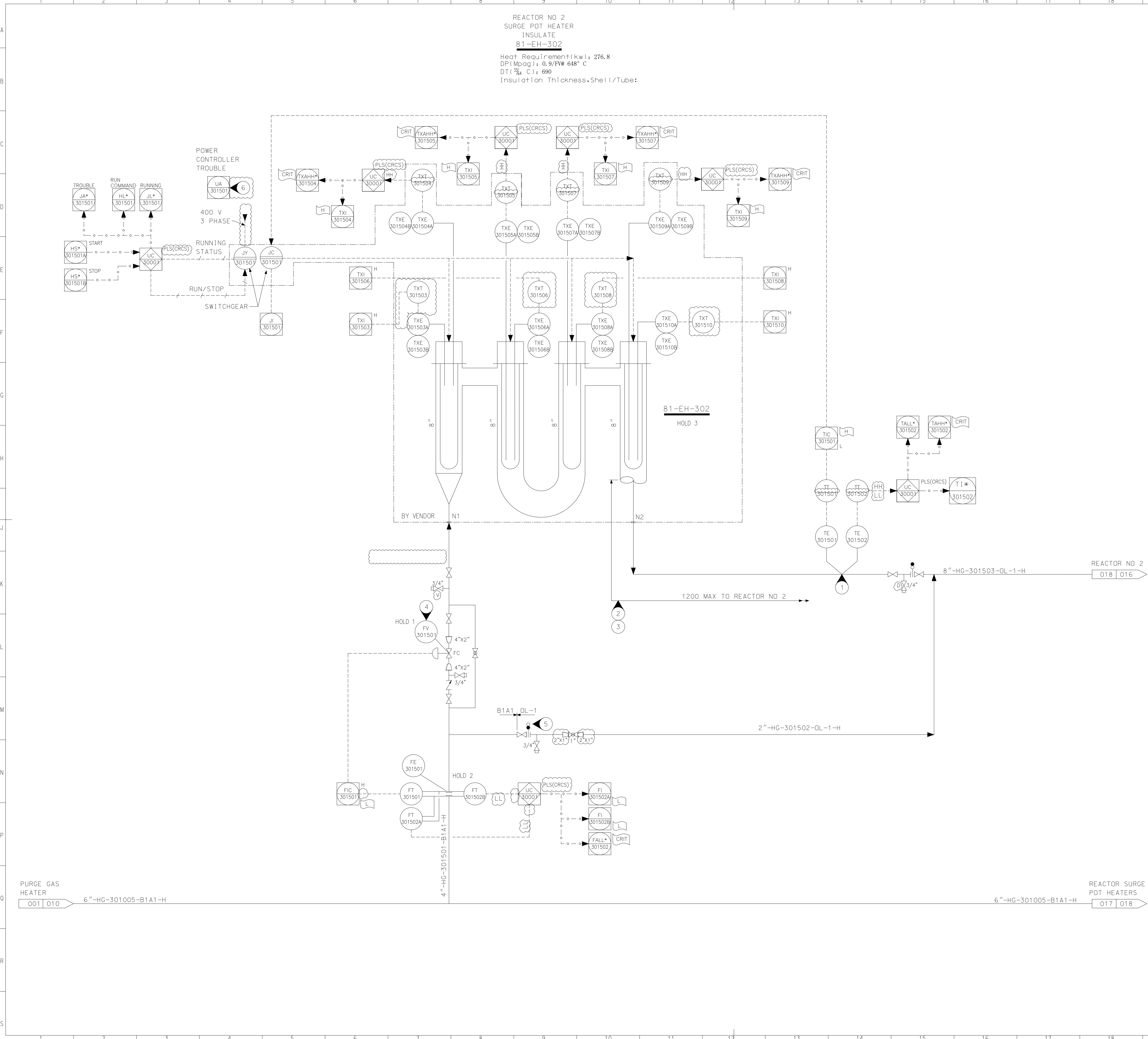




REFERENCE		DRAWINGS	
NOTES			
1. FILLER FLANGE WITH SCREEN INSERT (DETAIL "H", SEE DWG 3981-30-DE-PR-PID-008) ASSEMBLY AND BYPASS MUST BE ACCESSIBLE FROM PLATFORM			
2. FOR NEUTRALIZATION			
3. REMOVABLE ELBOW			
4. SEE STD DWG 8-130			
5. DETAIL "E", SEE DWG 3981-30-DE-PR-PID-009			
6. DETAIL "G", SEE DWG 3981-30-DE-PR-PID-009			
7. PROVIDE CLEARANCE FOR LIFT PIPE REMOVAL			
8. PROVIDE CLEARANCE AND ACCESS FOR 55 GALLON DRUM (1200 MIN)			
9. MAKE CONNECTION ON TOP OF PIPE			
10. DETAIL "CV", SEE DWG 3981-00-DE-PR-PID-054			
11. PROVIDE LIMIT STOP			
12. CATALYST SAMPLER SYSTEM (SEE STD DWG 8-145)			
13. 10 CATALYST PIPES SEE DWG 3981300-840-01			

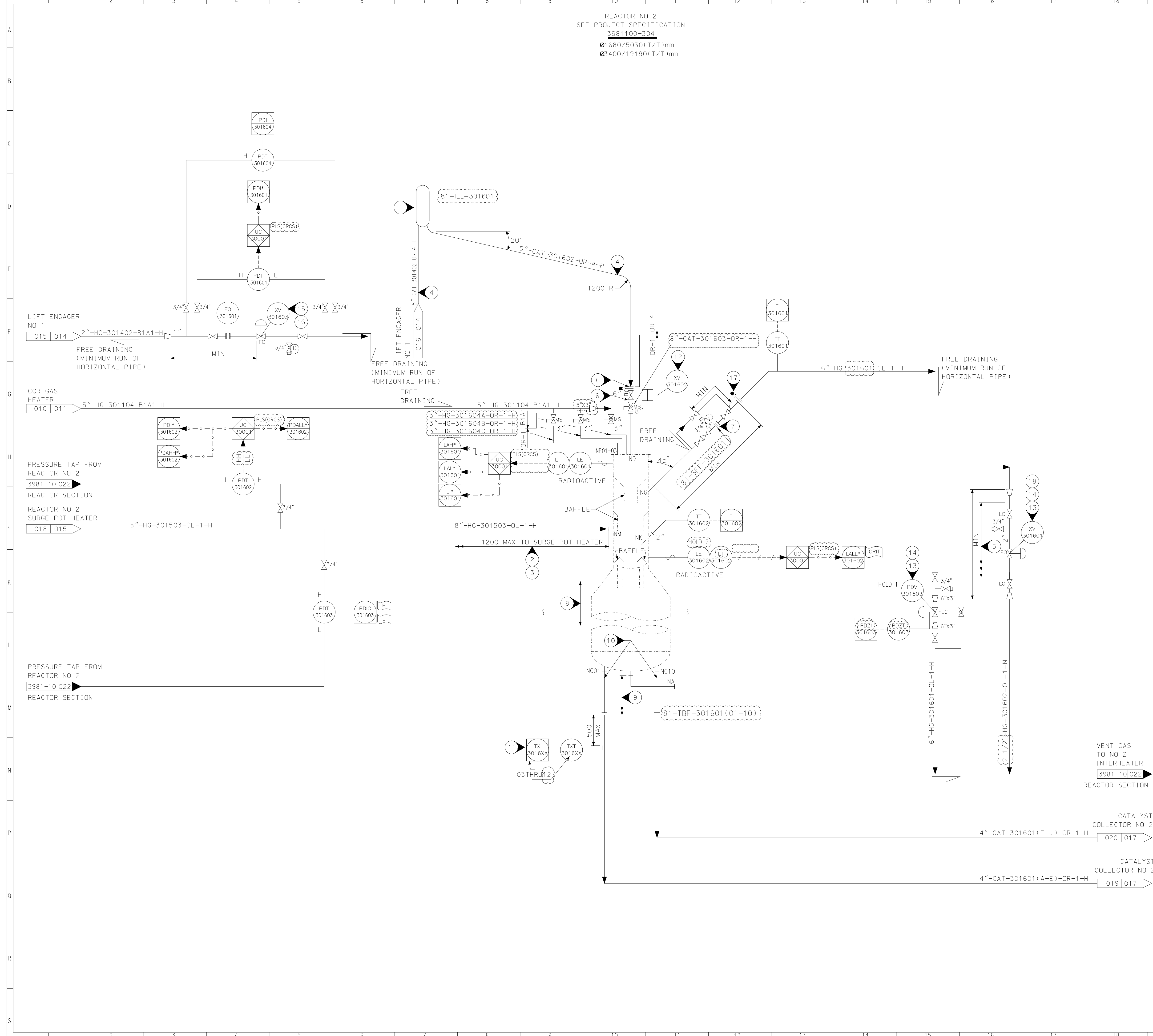
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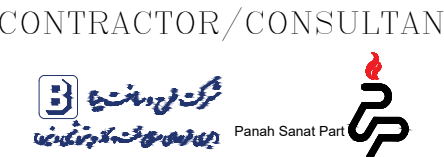




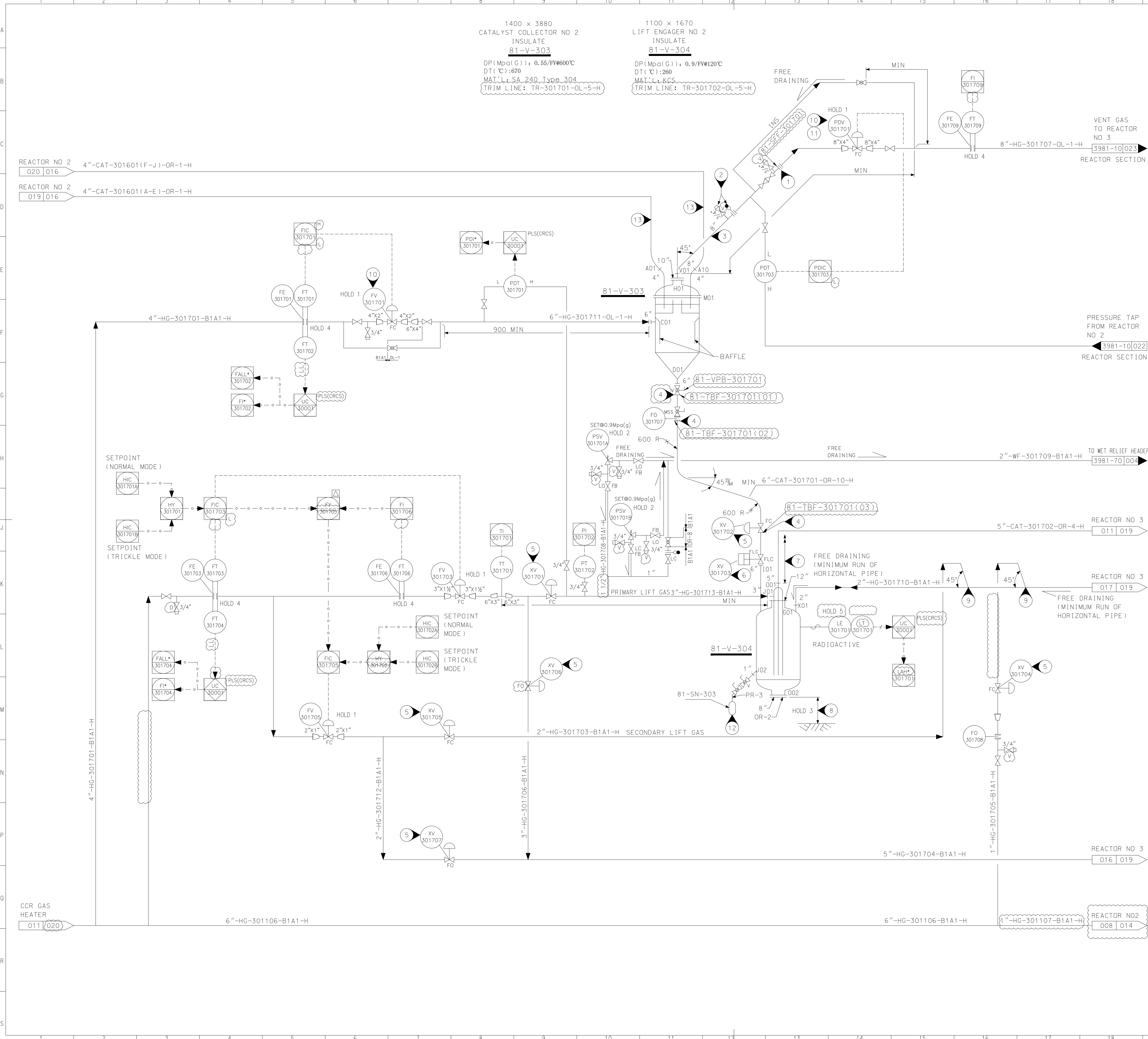
REFERENCE				DRAWINGS	
NOTES					
1. SHIELD THERMOCOUPLE ELEMENT AGAINST RADIATION FROM ELECTRIC HEATER ELEMENT OR LOCATE THERMOCOUPLE CONNECTION DOWNSTREAM OF AN ELBOW					
2. NO ADDITIONAL VALVE OR FLANGES TO BE ADDED EXCEPT IN ADDITION TO WHAT IS SHOWN					
3. ALL FLANGES AND BLINDS IN THIS LINE ARE TO BE PROVIDED WITH A WEATHER SHIELD IN ACCORDANCE WITH THE DETAIL IN UOP STANDARD SPECIFICATION 9-11 PROVIDE NO ADDITIONAL FLANGES EXCEPT AS SHOWN					
4. DETAIL "CV", SEE DWG 3981-00-DE-PR-PID-054					
5. BLANKOFF DURING NORMAL OPERATION					
6. UA WILL BE FINALIZED BY VENDOR.					

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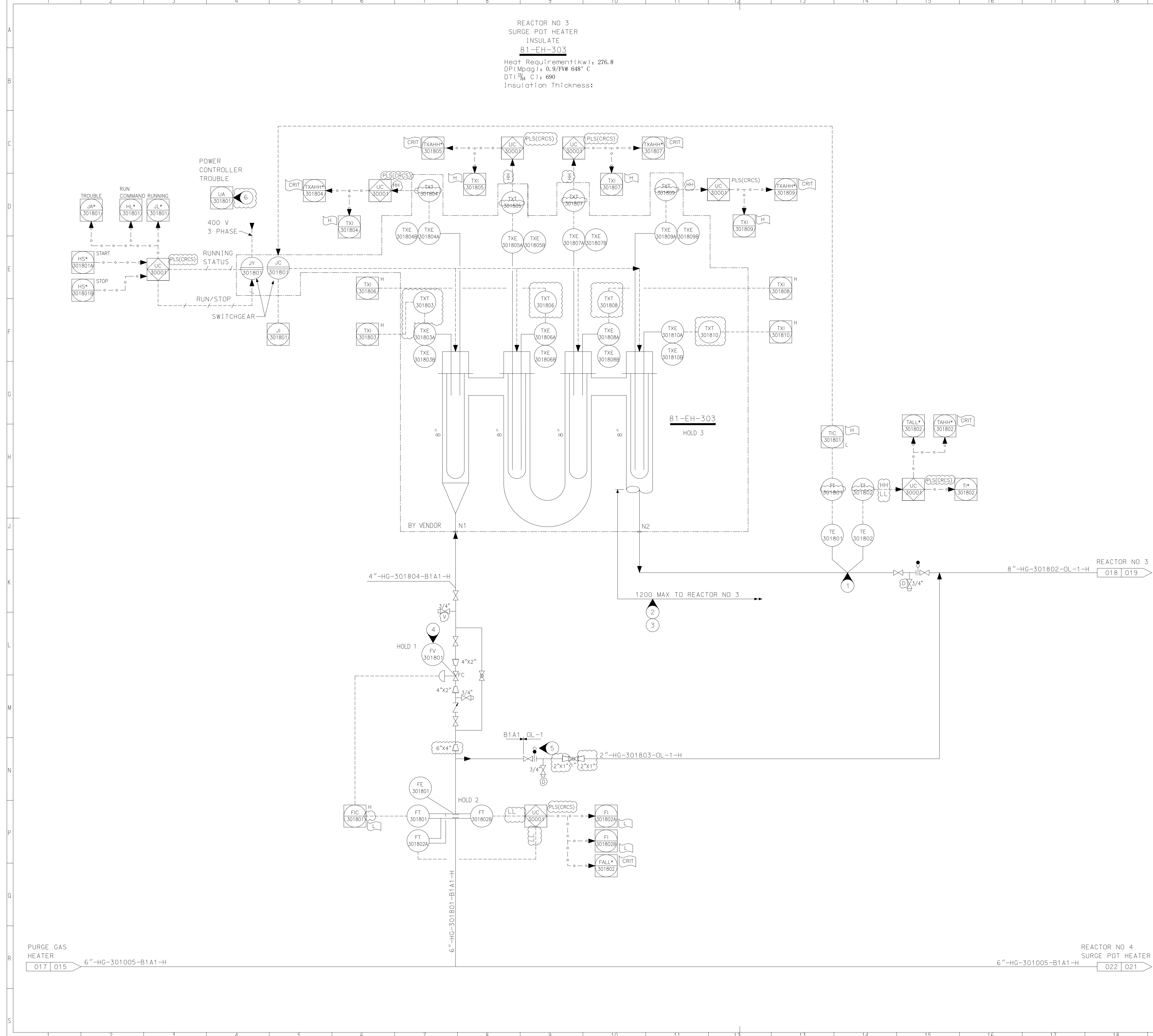
REFERENCE			DRAWINGS		
NOTES					
1. DETAIL "J", SEE DWG 3981-30-DE-PR-PID-008					
2. NO ADDITIONAL VALVES OR FLANGES TO BE ADDED EXCEPT IN ADDITION TO WHAT IS SHOWN					
3. ALL FLANGES AND BLINDS IN THIS LINE ARE TO BE PROVIDED WITH A WEATHER SHIELD IN ACCORDANCE WITH THE DETAIL IN UOP STANDARD SPECIFICATION 9-11 PROVIDE NO ADDITIONAL FLANGES EXCEPT AS SHOWN					
4. THIS PNEUMATIC CATALYST TRANSFER LINE SHALL CONSIST OF ONE VERTICAL AND ONE DOWNWARD SLOPING SECTION (SLOPING IN DIRECTION OF CATALYST FLOW) WITH NO PIPE BENDS EXCEPT WHERE SHOWN AT TOP OF REACTOR STACK. THE LENGTH OF THE DOWNWARD SLOPING SECTION SHALL BE HELD TO A MINIMUM (15000 MAXIMUM PER CATALYST TRANSPORT LINE). THIS MINIMUM MAY BE GOVERNED BY PIPING FLEXIBILITY REQUIRED TO ACCOMMODATE STRUCTURAL MOVEMENT AND/OR THERMAL EXPANSION. VERTICAL SECTION MUST BE WITHIN 0.5% OF VERTICAL AND DOWNWARD SLOPING SECTION MUST BE 20% 0.5% FROM HORIZONTAL WHEN ALL EQUIPMENT IS AT NORMAL OPERATING TEMPERATURE					
5. MINIMUM TO REACTOR OUTLET					
6. REDUCING FLANGE					
7. FILLER FLANGE WITH SCREEN INSERT (DETAIL "H", SEE DWG 3981-30-DE-PR-PID-008 ) ASSEMBLY AND BYPASS MUST BE ACCESSIBLE FROM PLATFORM					
8. PROVIDE CLEARANCES FOR REMOVAL OF UPPER REACTOR, CONE AND REACTOR INTERNALS					
9. PROVIDE CLEARANCE FOR REMOVAL OF STRAIGHTENING VANE AND REACTOR INLET ELBOW					
10.10 CATALYST PIPES SEE DWG 3981300-840-01					
11.PROVIDE ONE FOR EACH CATALYST TRANSFER PIPE					
12.DETAIL "G", SEE DWG 3981-30-DE-PR-PID-009					
13.DETAIL "CV", SEE DWG 3981-00-DE-PR-PID-054					
14.LOCATE IN VERTICAL RUN					
15.LOCATE VALVE IN HORIZONTAL LINE WITH STEM UPWARD ABOVE REACTOR NO 2					
16.DETAIL "E", SEE DWG 3981-30-DE-PR-PID-009					
17.FOR NEUTRALIZATION					
18.DETAIL "N", SEE DWG 3981-30-DE-PR-PID-009					
GENERAL NOTES:					
1. FOR GENERAL LEGEND, ABBREVIATIONS, NOMENCLATURE, INSTRUMENTATION, EQUIPMENT SYMBOLOGY AND GENERAL DETAILS SEE DWG'S 3981-00-DE-PR-PID-045 THRU 3981-00-DE-PR-PID-055					
2. EACH INSTRUMENT TAG NUMBER HAS A PLANT IDENTIFICATION NUMBER(PROJECT CODE=81) WHICH WILL NOT BE SHOWN ON THE PID'S.					
3. FUNCTIONAL IDENTIFICATION OF INSTRUMENT SIGNALS SUFFIXED WITH AN ASTERISK (*) ARE INCLUDED IN THE CATALYST REGENERATION CONTROL SYSTEM. THE SUPPLIER OF THE CATALYST REGENERATION CONTROL SYSTEM SHALL PROVIDE DETAILS FOR THESE SIGNALS.					
HOLDS					
1. CONTROL VALVE, ITS ISOLATION, BY PASS VALVE SIZE AND NUMBER OF EXPANDER/REDUCER					
2. COOLING WATER REQUIREMENT					
01	ISSUED FOR APPROVAL	16-Dec-2025	M.KHERADKAR	M.JAMSHIDI	M.H.ESHRAGHI
00	ISSUED FOR COMMENT	13-Aug-2025	M.KHERADKAR	M.JAMSHIDI	M.H.ESHRAGHI
REV.	PURPOSE OF ISSUE	ISSUE DATE	PREPARE	CHECKED	APPROVED
OWNER:	MC:		CONTRACTOR/CONSULTANT:		
					
PROJECT TITLE:					
PROPANE DEHYDROGENATION (PDH) PROJECT					
DOCUMENT TITLE:					
PIPING AND INSTRUMENT DIAGRAM CCR REGENERATION SECTION- REACTOR NO 2					
DOC NO.:	PROJ.CODE	Sec.	PHASE	DEP.	SERIAL NO.
	3981	30	DE	PR	PID
SCALE:	SIZE: A1	SHEET NO: 1 OF 1		REVISION: 01	CLASS: 1








REFERENCE				DRAWINGS																			
NOTES																							
<p>1. FILLER FLANGE WITH SCREEN INSERT (DETAIL "H". SEE DWG 3981-30-DE-PR-PID-008) ASSEMBLY AND BYPASS MUST BE ACCESSIBLE FROM PLATFORM</p> <p>2. FOR NEUTRALIZATION</p> <p>3. REMOVABLE ELBOW</p> <p>4. SEE STD DWG 8-130</p> <p>5. DETAIL "E", SEE DWG 3981-30-DE-PR-PID-009</p> <p>6. DETAIL "G", SEE DWG 3981-30-DE-PR-PID-009</p> <p>7. PROVIDE CLEARANCE FOR LIFT PIPE REMOVAL</p> <p>8. PROVIDE CLEARANCE AND ACCESS FOR 55 GALLON DRUM (1200 MIN)</p> <p>9. MAKE CONNECTION ON TOP OF PIPE</p> <p>10. DETAIL "CV", SEE DWG 3981-00-DE-PR-PID-054</p> <p>11. PROVIDE LIMIT STOP</p> <p>12. CATALYST SAMPLER SYSTEM (SEE STD DWG 8-145)</p> <p>13. 10 CATALYST PIPES, SEE STD DWG 398100-840-01</p>																							
GENERAL NOTES:																							
<p>1. FOR GENERAL LEGEND, ABBREVIATIONS, NOMENCLATURE, INSTRUMENTATION, EQUIPMENT SYMBOLOGY AND GENERAL DETAILS SEE DWG'S 3981-00-DE-PR-PID-045 THRU 3981-00-DE-PR-PID-055</p> <p>2. EACH INSTRUMENT TAG NUMBER HAS A PLANT IDENTIFICATION NUMBER (PROJECT CODE=81) WHICH WILL NOT BE SHOWN ON THE PID'S.</p> <p>3. FUNCTIONAL IDENTIFICATION OF INSTRUMENT SIGNALS SUFFIXED WITH AN ASTERISK (*) ARE INCLUDED IN THE CATALYST REGENERATION CONTROL SYSTEM. THE SUPPLIER OF THE CATALYST REGENERATION CONTROL SYSTEM SHALL PROVIDE DETAILS FOR THESE SIGNALS.</p>																							
HOLDS																							
<p>1. CONTROL VALVE, ITS ISOLATION, BY PASS VALVE SIZE AND NUMBER OF EXPANDER/REDUCER</p> <p>2. PSV DRIFTE SIZE, ITS INLET/OUTLET LINE SIZE AND CORRESPONDING VESSEL NOZZLE SIZE.</p> <p>3. ELEVATION.</p> <p>4. FLOWMETER CONNECTION SIZE</p> <p>5. COOLING WATER REQUIREMENT.</p>																							
<table border="1"><thead><tr><th>REV.</th><th>PURPOSE OF ISSUE</th><th>ISSUE DATE</th><th>PREPARE</th><th>CHECKED</th><th>APPROVED</th></tr></thead><tbody><tr><td>01</td><td>ISSUED FOR APPROVAL</td><td>16-Dec-2025</td><td>M.KHERADKAR</td><td>M.JAMSHIDI</td><td>M.HESHRAHGH</td></tr><tr><td>00</td><td>ISSUED FOR COMMENT</td><td>13-Aug-2025</td><td>M.KHERADKAR</td><td>M.JAMSHIDI</td><td>M.HESHRAHGH</td></tr></tbody></table>						REV.	PURPOSE OF ISSUE	ISSUE DATE	PREPARE	CHECKED	APPROVED	01	ISSUED FOR APPROVAL	16-Dec-2025	M.KHERADKAR	M.JAMSHIDI	M.HESHRAHGH	00	ISSUED FOR COMMENT	13-Aug-2025	M.KHERADKAR	M.JAMSHIDI	M.HESHRAHGH
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PROPANE DEHYDROGENATION (PDH) PROJECT																							
DOCUMENT TITLE:																							
PIPING AND INSTRUMENT DIAGRAM CATALYST COLLECTOR AND LIFT ENGAGER NO 2																							
DOC NO.:	PROJ.CODE	Sec.	PHASE	DEP.	SERIAL NO.																		
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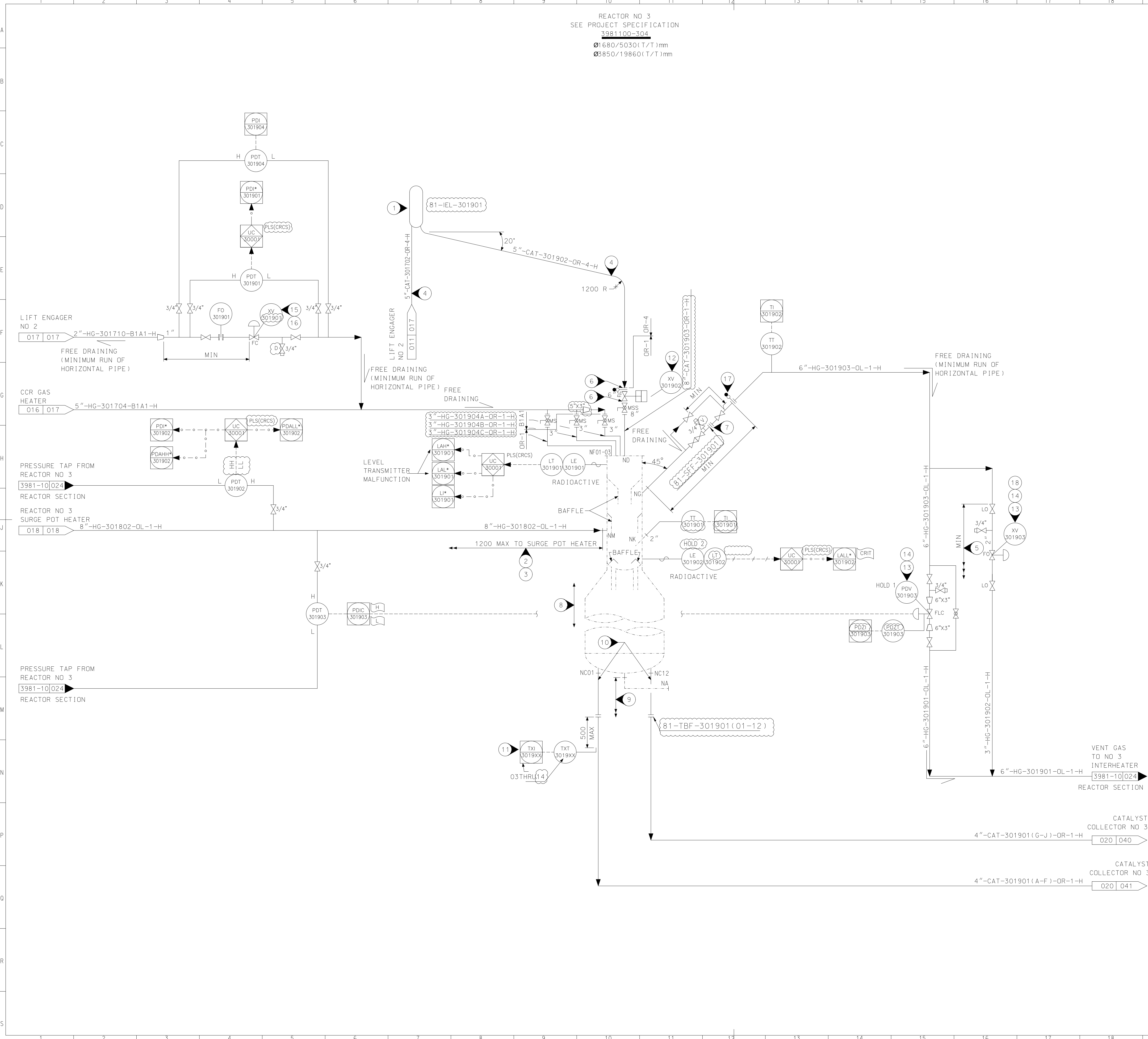
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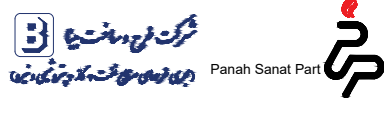


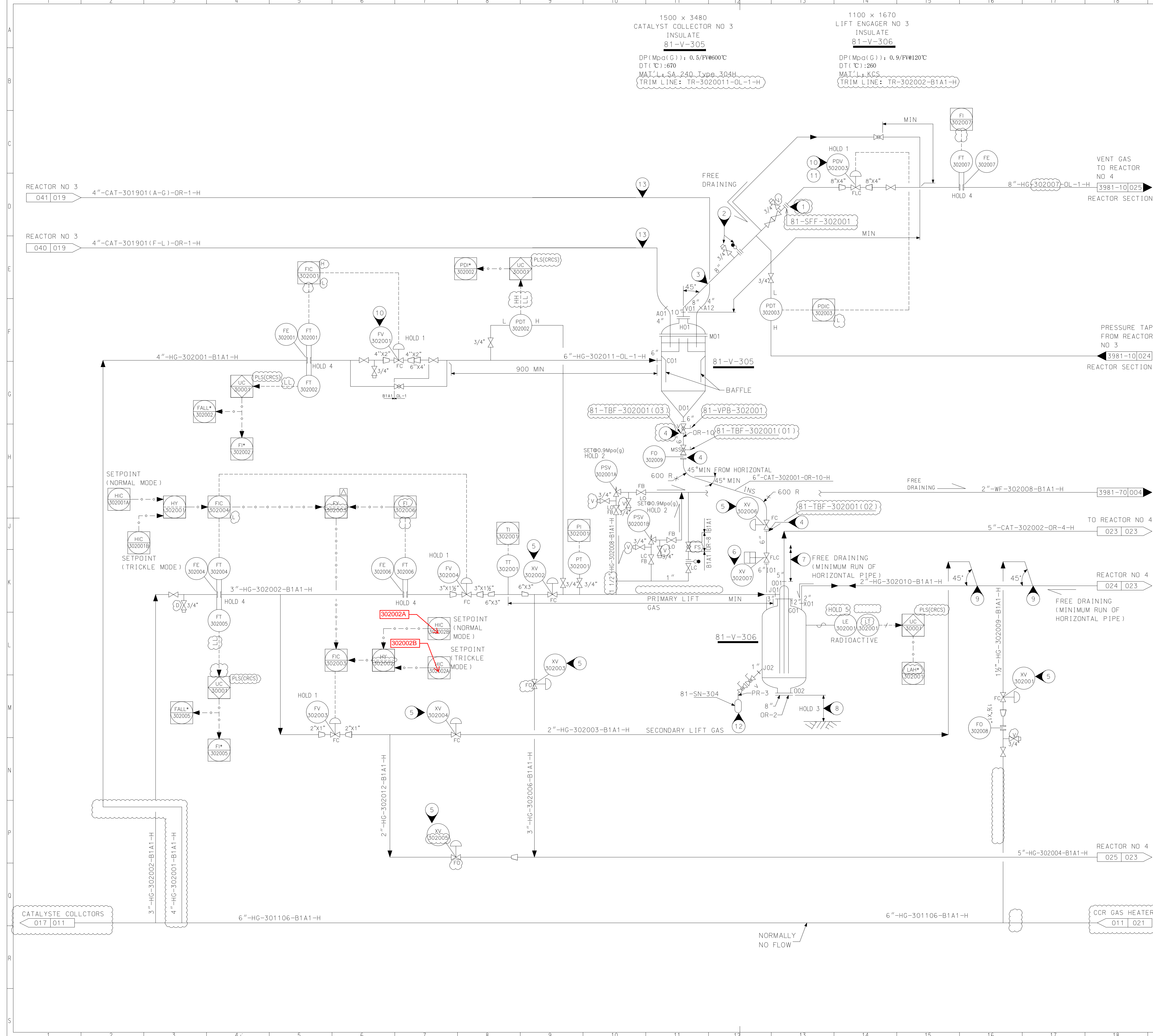
REFERENCE		DRAWINGS																					
<h3>NOTES</h3> <ol style="list-style-type: none"><li>SHIELD THERMOCOUPLE ELEMENT AGAINST RADIATION FROM ELECTRIC HEATER ELEMENT OR LOCATE THERMOCOUPLE CONNECTION DOWNSTREAM OF AN ELBOW</li><li>NO ADDITIONAL VALVE OR FLANGES TO BE ADDED EXCEPT IN ADDITION TO WHAT IS SHOWN</li><li>ALL FLANGES AND BLINDS IN THIS LINE ARE TO BE PROVIDED WITH A WEATHER SHIELD IN ACCORDANCE WITH THE DETAIL IN UOP STANDARD SPECIFICATION 9-11-9 PROVIDE NO ADDITIONAL FLANGES EXCEPT AS SHOWN</li><li>DETAIL "CV", SEE DWG 3981-00-DE-PR-PID-054</li><li>BLANKOFF DURING NORMAL OPERATION</li><li>UA WILL BE FINALIZED BY VENDOR.</li></ol>																							
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OWNER: 		MC: 		CONTRACTOR/CONSULTANT: 																			
PROJECT TITLE: PROPANE DEHYDROGENATION (PDH) PROJECT																							
DOCUMENT TITLE: PIPING AND INSTRUMENT DIAGRAM REACTOR NO 3 SURGE POT HEATER																							
DOC NO.: 3981		Sec. 30	PHASE DE	DOC. TYPE PR	SERIAL NO. PID																		
SCALE:		SIZE: A1	SHEET NO: 1 OF 1	REVISION: 01	CLASS: 1																		

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REFERENCE			DRAWINGS		
NOTES					
1. DETAIL "J", SEE DWG 3981-30-DE-PR-PID-008					
2. NO ADDITIONAL VALVES OR FLANGES TO BE ADDED EXCEPT IN ADDITION TO WHAT IS SHOWN					
3. ALL FLANGES AND BLINDS IN THIS LINE ARE TO BE PROVIDED WITH A WEATHER SHIELD IN ACCORDANCE WITH THE DETAIL IN UOP STANDARD SPECIFICATION 9-11 PROVIDE NO ADDITIONAL FLANGES EXCEPT AS SHOWN					
4. THIS PNEUMATIC CATALYST TRANSFER LINE SHALL CONSIST OF ONE VERTICAL AND ONE DOWNWARD SLOPING SECTION (SLOPING IN DIRECTION OF CATALYST FLOW) WITH NO PIPE BENDS EXCEPT WHERE SHOWN AT TOP OF REACTOR STACK. THE LENGTH OF THE DOWNWARD SLOPING SECTION SHALL BE HELD TO A MINIMUM (15000 MAXIMUM PER CATALYST TRANSPORT LINE). THIS MINIMUM MAY BE GOVERNED BY PIPING FLEXIBILITY REQUIRED TO ACCOMMODATE STRUCTURAL MOVEMENT AND/OR THERMAL EXPANSION. VERTICAL SECTION MUST BE WITHIN 0.5% OF VERTICAL AND DOWNWARD SLOPING SECTION MUST BE 20% FROM HORIZONTAL WHEN ALL EQUIPMENT IS AT NORMAL OPERATING TEMPERATURE					
5. MINIMUM TO REACTOR OUTLET					
6. REDUCING FLANGE					
7. FILLER FLANGE WITH SCREEN INSERT (DETAIL "H", SEE DWG 3981-30-DE-PR-PID-008 ) ASSEMBLY AND BYPASS MUST BE ACCESSIBLE FROM PLATFORM					
8. PROVIDE CLEARANCES FOR REMOVAL OF UPPER REACTOR, CONE AND REACTOR INTERNALS					
9. PROVIDE CLEARANCE FOR REMOVAL OF STRAIGHTENING VANE AND REACTOR INLET ELBOW					
10.12 CATALYST PIPES SEE DWG 3981300-840-01					
11.PROVIDE ONE FOR EACH CATALYST TRANSFER PIPE					
12.DETAIL "G", SEE DWG 3981-30-DE-PR-PID-009					
13.DETAIL "CV", SEE DWG 3981-00-DE-PR-PID-054					
14.LOCATE IN VERTICAL RUN					
15.LOCATE VALVE IN HORIZONTAL LINE WITH STEM UPWARD ABOVE REACTOR NO 3					
16.DETAIL "E", SEE DWG 3981-30-DE-PR-PID-009					
17.FOR NEUTRALIZATION					
18.DETAIL "N", SEE DWG 3981-30-DE-PR-PID-009					
GENERAL NOTES:					
1. FOR GENERAL LEGEND, ABBREVIATIONS, NOMENCLATURE, INSTRUMENTATION, EQUIPMENT SYMBOLOGY AND GENERAL DETAILS SEE DWG'S 3981-00-DE-PR-PID-045 THRU 3981-00-DE-PR-PID-055					
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01	ISSUED FOR APPROVAL	16-Dec-2025	M.KHERADKAR	M.JAMSHIDI	M.H.ESHRAHGH
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PIPING AND INSTRUMENT DIAGRAM CCR REGENERATION SECTION- REACTOR NO 3					
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GENERAL NOTES:

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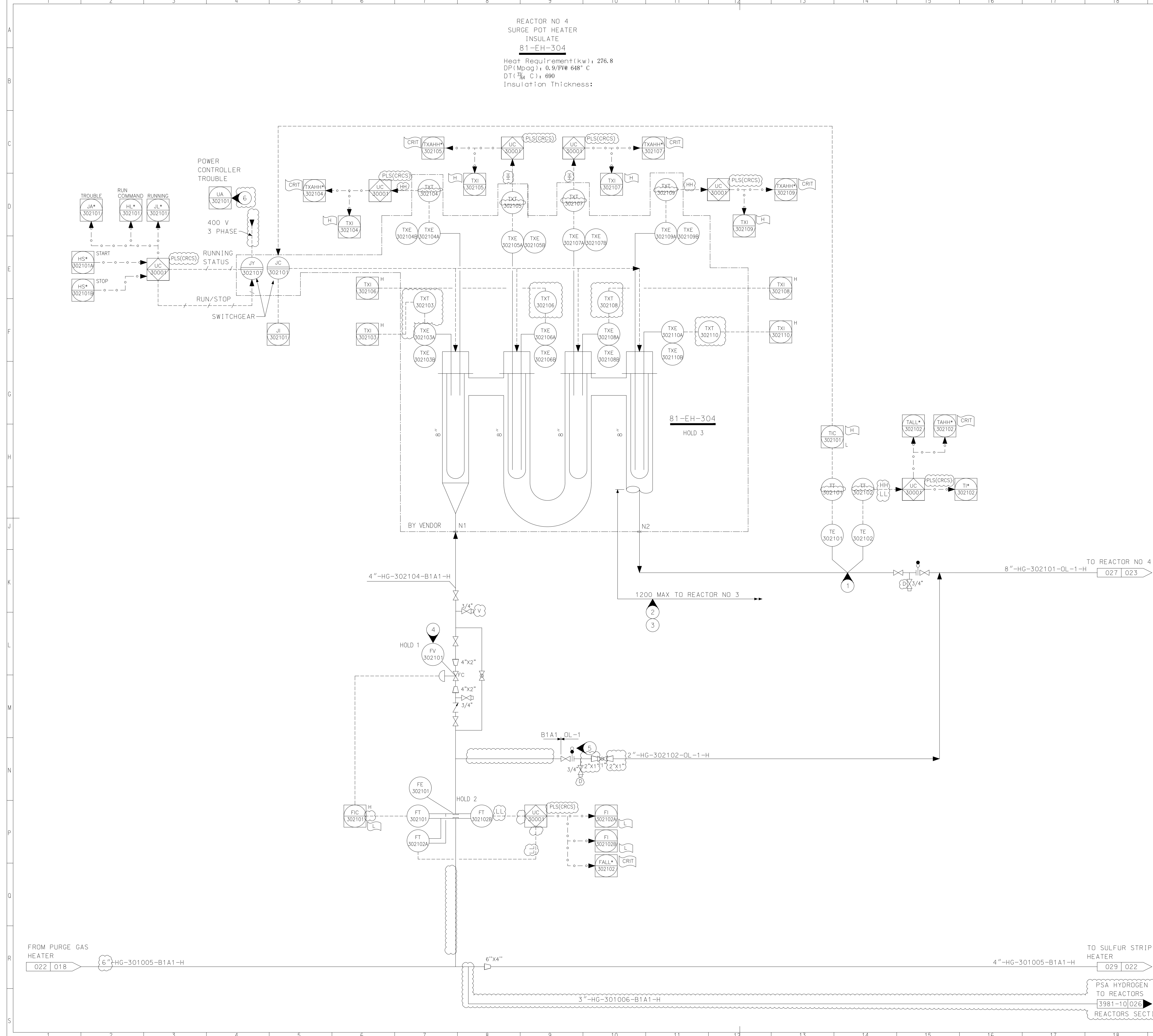
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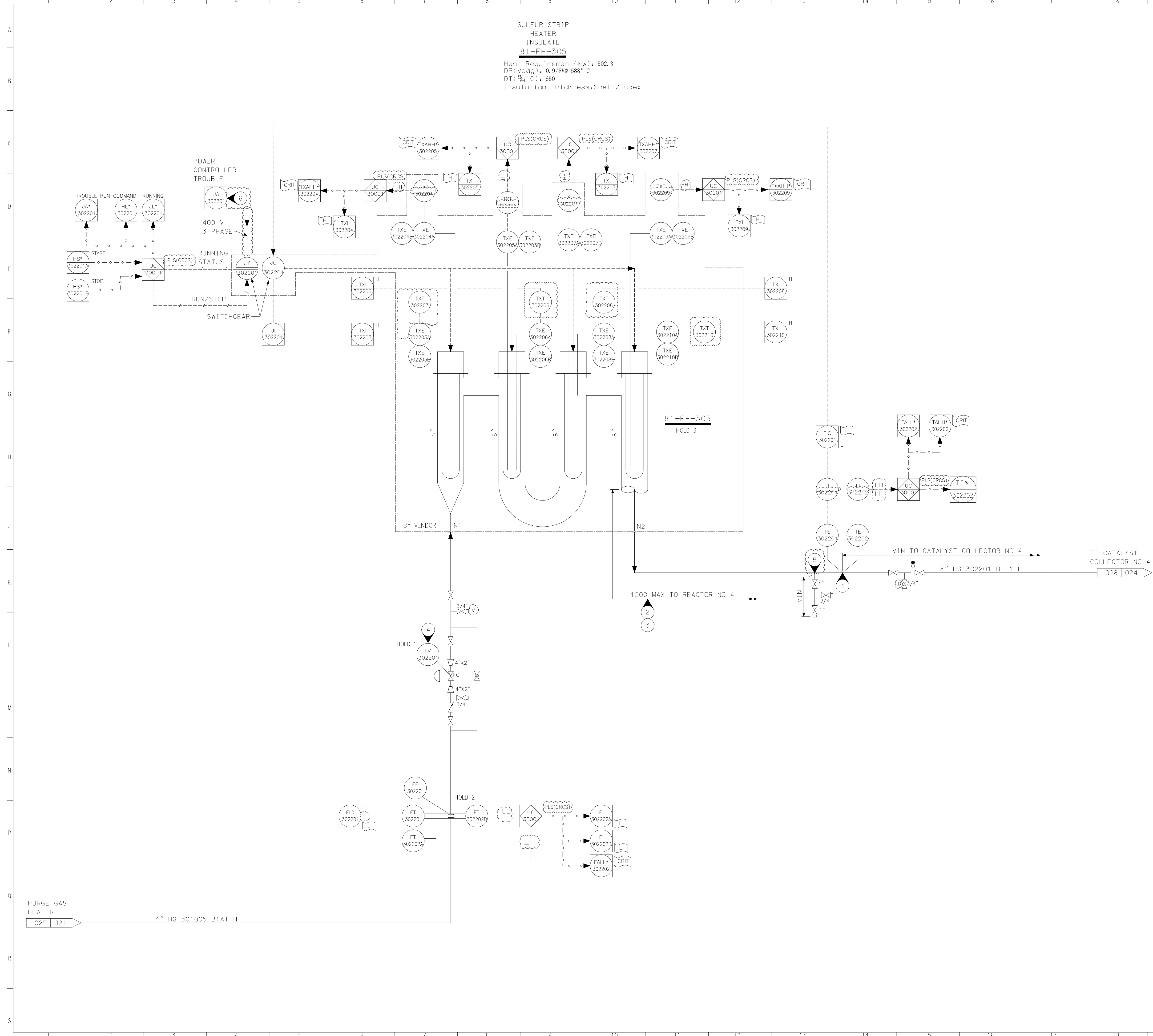
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DOCUMENT TITLE: PIPING AND INSTRUMENT DIAGRAM REACTOR NO 4 SURGE POT HEATER																					
DOC NO.: 3981-10-026		PROJ.CODE 3981	Sec. PHASE 30 DE	DEP. PR	DOC. TYPE PID																
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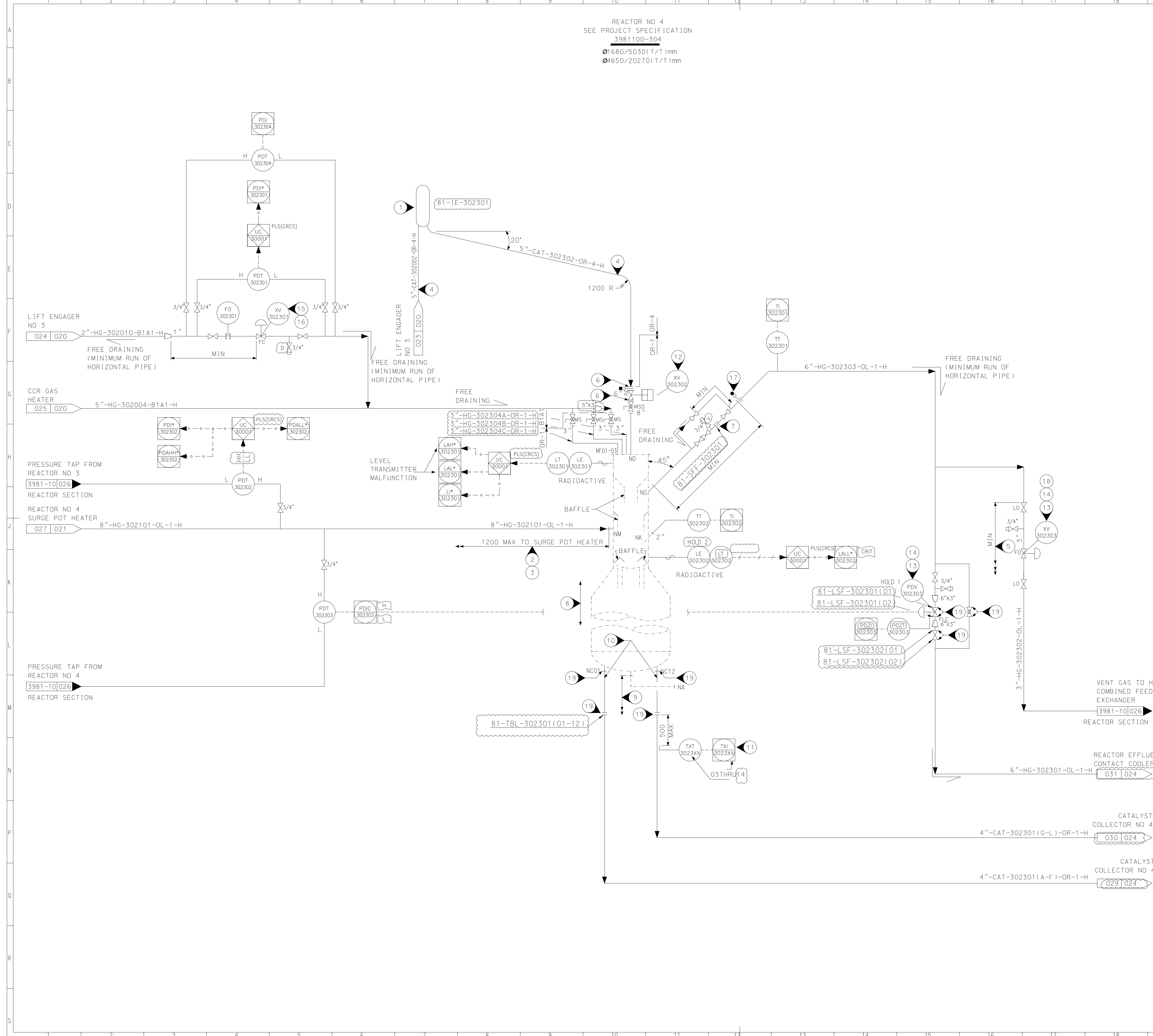
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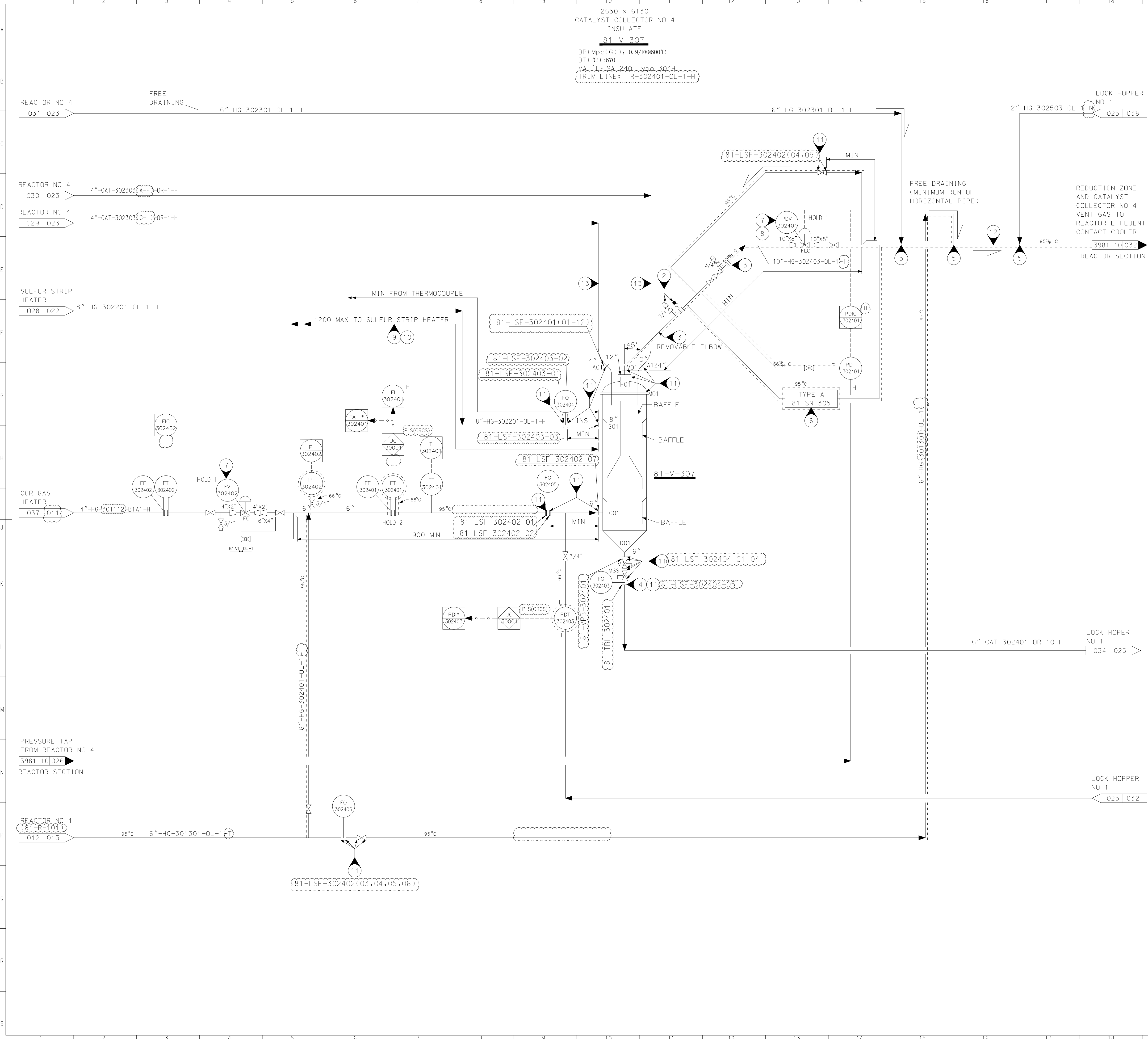
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REFERENCE			DRAWINGS		
NOTES					
1. DETAIL "J", SEE DWG 3981-30-DE-PR-PID-008					
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5. MINIMUM TO REACTOR OUTLET					
6. REDUCING FLANGE					
7. FILLER FLANGE WITH SCREEN INSERT (DETAIL "H", SEE DWG 3981-30-DE-PR-PID-008 ) ASSEMBLY AND BYPASS MUST BE ACCESSIBLE FROM PLATFORM					
8. PROVIDE CLEARANCES FOR REMOVAL OF UPPER REACTOR, CONE AND REACTOR INTERNALS					
9. PROVIDE CLEARANCE FOR REMOVAL OF STRAIGHTENING VANE AND REACTOR INLET ELBOW					
10.12 CATALYST PIPES SEE DWG 3981300-840-01					
11.PROVIDE ONE FOR EACH CATALYST TRANSFER PIPE					
12.DETAIL "G", SEE DWG 3981-30-DE-PR-PID-009					
13.DETAIL "CV", SEE DWG 3981-00-DE-PR-PID-054					
14.LOCATE IN VERTICAL RUN					
15.LOCATE VALVE IN HORIZONTAL LINE WITH STEM UPWARD ABOVE REACTOR NO 3					
16.DETAIL "E", SEE DWG 3981-30-DE-PR-PID-009					
17.FOR NEUTRALIZATION					
18.DETAIL "N", SEE DWG 3981-30-DE-PR-PID-009					
19.FOR LIP SEAL WELDED REQUIREMENTS SEE PROJECT SPECIFICATION 3981300-801					
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1. FOR GENERAL LEGEND, ABBREVIATIONS, NOMENCLATURE, INSTRUMENTATION, EQUIPMENT SYMBOLOGY AND GENERAL DETAILS SEE DWG'S 3981-00-DE-PR-PID-045 THRU 3981-00-DE-PR-PID-055					
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DOCUMENT TITLE:					
PIPING AND INSTRUMENT DIAGRAM CCR REGENERATION SECTION- REACTOR NO 4					
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PROPANE DEHYDROGENATION (PDH) PROJECT

DOCUMENT TITLE:

PIPING AND INSTRUMENT DIAGRAM  
CATALYST COLLECTOR NO 4

DOC NO.:	PROJ.CODE	Sec.	PHASE	DEP.	DOC. TYPE	SERIAL NO.
	3981	30	DE	PR	PID	024

SCALE:

SIZE: A1	SHEET NO: 1 OF 1	REVISION: 01	CLASS: 1
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1. FILLER FLANGE WITH SCREEN INSERT (DETAIL "H". SEE DWG 3981-30-DE-PR-PID-008) ASSEMBLY AND BYPASS MUST BE ACCESSIBLE FROM PLATFORM
2. FOR NEUTRALIZATION
3. REMOVABLE ELBOW
4. SEE STD DWG 8-130
5. MAKE CONNECTION ON TOP OF PIPE
6. PROVIDE WITH DETECTOR TUBE SAMPLE DETAIL "DT". SEE DWG 3981-10-DE-PR-PID-022
7. DETAIL "CV", SEE DWG 3981-00-DE-PR-PID-054
8. PROVIDE LIMIT STOP
9. NO ADDITIONAL VALVES OR FLANGES TO BE ADDED EXCEPT IN ADDITION TO WHAT IS SHOWN
10. ALL FLANGES AND BLINDS IN THIS LINE ARE TO BE PROVIDED WITH A WEATHER SHIELD IN ACCORDANCE WITH THE DETAIL IN UOP STANDARD SPECIFICATION
- 9-11 PROVIDE NO ADDITIONAL FLANGES EXCEPT AS SHOWN
11. FOR LIP SEAL WELDED REQUIREMENTS SEE PROJECT SPECIFICATION 3981300-801
12. FOR FLANGE CONNECTIONS FROM THE CATALYST COLLECTOR VENT OUTLET TO THE PIPING CONNECTION AT DETAIL "D" ON THE REACTOR SECTION. THE FLANGE CONNECTIONS SHALL BE SEAL WELEDED USING LIP SEAL GASKET. SEE PROJECT SPECIFICATION 3981300-801
13. 12 CATALYST PIPES, SEE DWG 3981300-840-01

1. FOR GENERAL LEGEND, ABBREVIATIONS, NOMENCLATURE, INSTRUMENTATION, EQUIPMENT SYMBOLOGY AND GENERAL DETAILS SEE DWG'S 3981-00-DE-PR-PID-045 THRU 3981-00-DE-PR-PID-055
2. EACH INSTRUMENT TAG NUMBER HAS A PLANT IDENTIFICATION NUMBER (PROJECT CODE=81) WHICH WILL NOT BE SHOWN ON THE PID'S.
3. FUNCTIONAL IDENTIFICATION OF INSTRUMENT SIGNALS SUFFIXED WITH AN ASTERISK (\*) ARE INCLUDED IN THE CATALYST REGENERATION CONTROL SYSTEM. THE SUPPLIER OF THE CATALYST REGENERATION CONTROL SYSTEM SHALL PROVIDE DETAILS FOR THESE SIGNALS.

- HOLDS
1. CONTROL VALVE, ITS ISOLATION, BY PASS VALVE SIZE AND NUMBER OF EXPANDER/REDUCER
2. FLOWMETER CONNECTION SIZE

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CATALYST COLLECTOR NO 4

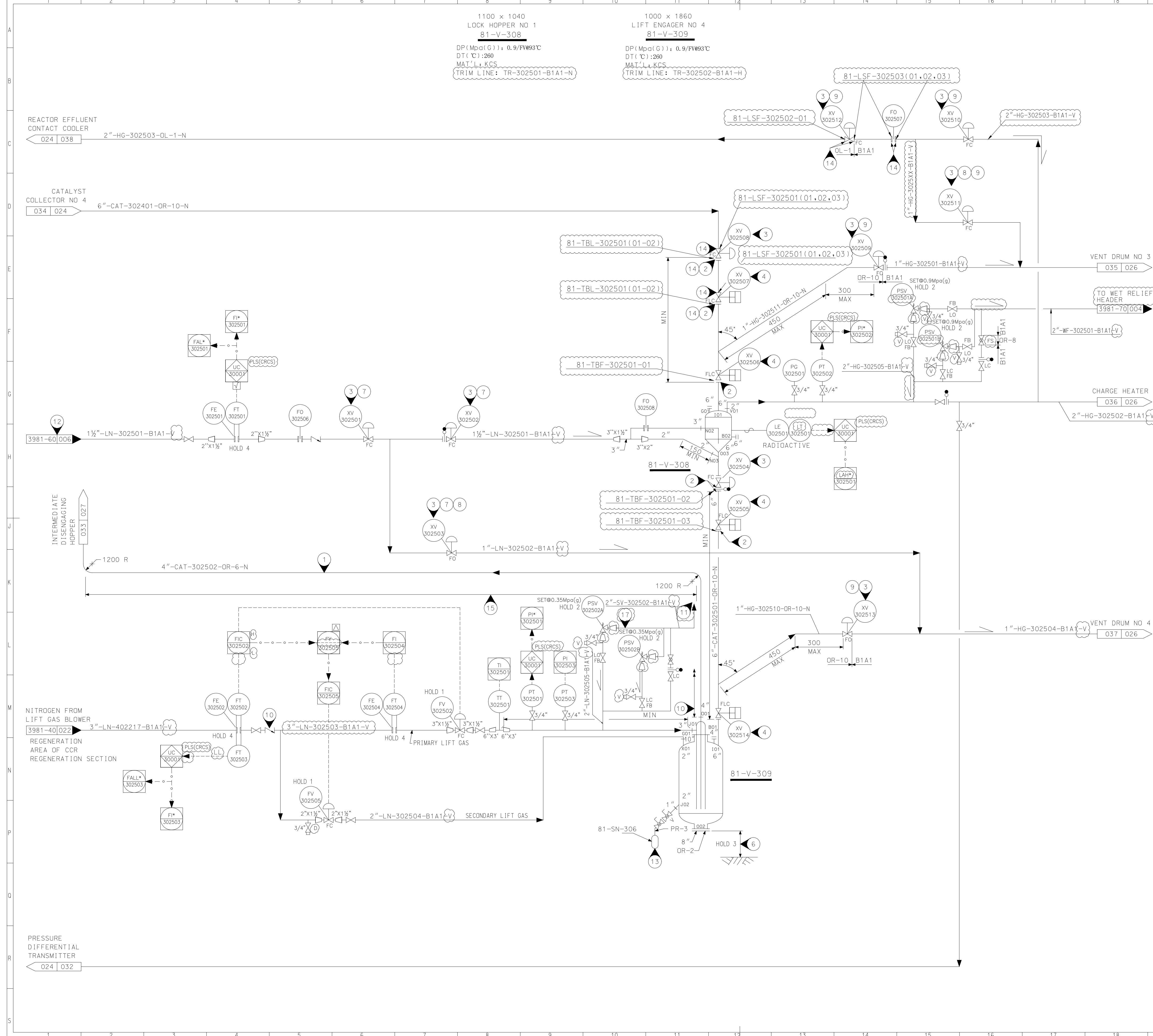
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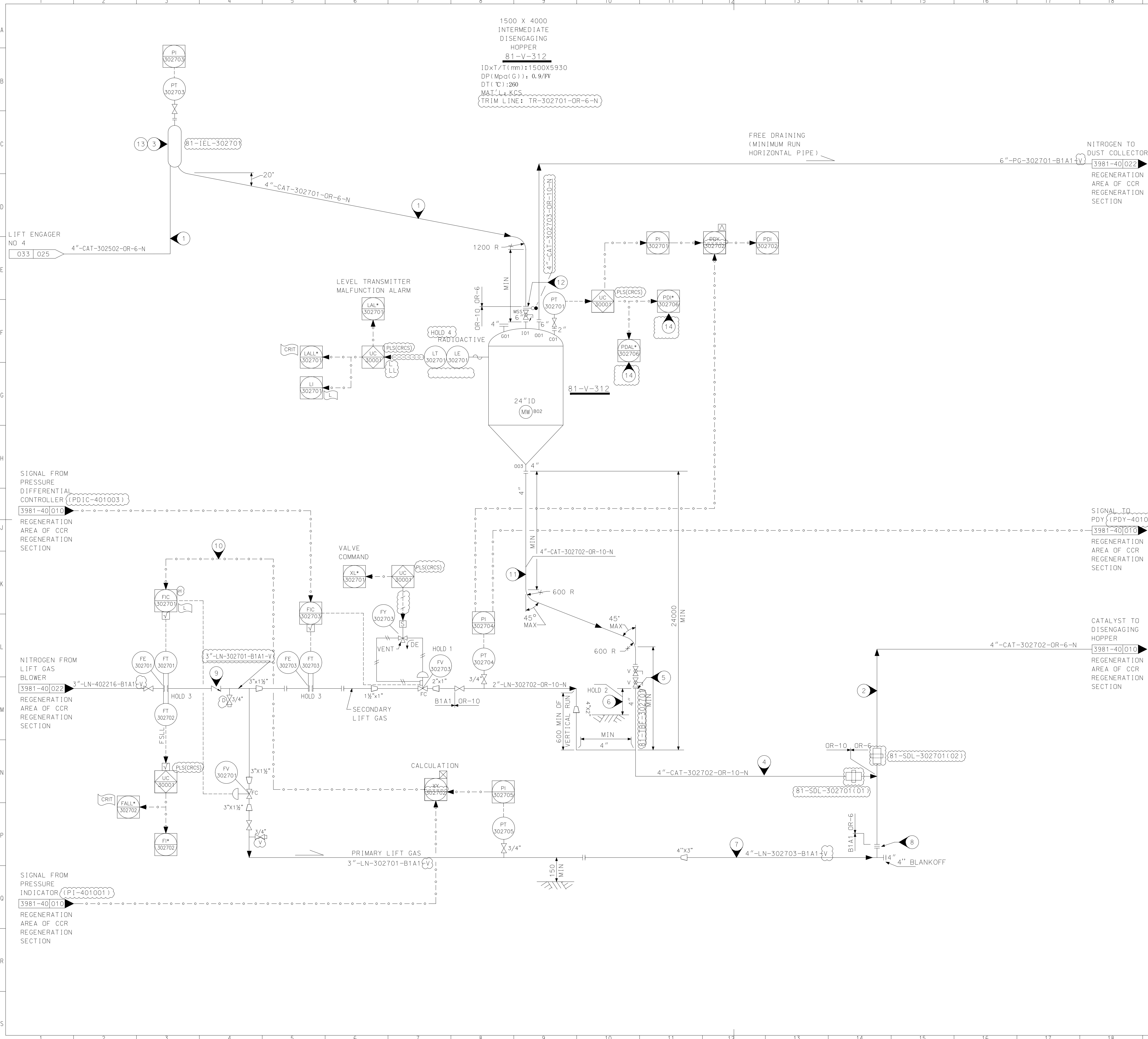





REFERENCE			DRAWINGS						
NOTES									
<div>1. THIS PNEUMATIC CATALYST TRANSFER LINE SHALL CONSIST OF ONE HORIZONTAL, ONE VERTICAL AND ONE DOWNWARD SLOPING SECTION (SLOPING IN DIRECTION OF CATALYST FLOW) WITH TWO PIPE BENDS IN THE REACTOR AREA THE TOTAL LENGTH OF THE HORIZONTAL AND DOWNWARD SLOPING SECTION SHALL BE HELD TO A MINIMUM (15000 MAXIMUM PER CATALYST TRANSFER LINE). THIS MINIMUM MAY BE GOVERNED BY PIPING FLEXIBILITY REQUIRED TO ACCOMMODATE STRUCTURAL MOVEMENT AND/OR THERMAL EXPANSION. VERTICAL SECTION MUST BE WITHIN 0.5% OF VERTICAL AND DOWNWARD SLOPING SECTION MUST BE 20% ¼ 0.5% FROM HORIZONTAL WHEN ALL EQUIPMENT IS AT NORMAL OPERATING TEMPERATURE</div> <div>2. SEE STD DWG 8-130-7</div> <div>3. DETAIL "E", SEE DWG 3981-30-DE-PR-PID-009</div> <div>4. DETAIL "G", SEE DWG 3981-30-DE-PR-PID-009</div> <div>5. PROVIDE CLEARANCE FOR LIFT PIPE REMOVAL</div> <div>6. PROVIDE CLEARANCE AND ACCESS FOR 55 GALLON DRUM (1200 MIN) MUST BE LOCATED AT SAME ELEVATION ABOVE DOWNSTREAM LINE OR EQUIPMENT AND IN HORIZONTAL LINE WITH STEM UPWARD</div> <div>8. LOCATE BLEED VALVE AT SAME ELEVATION AS DOUBLE BLOCK VALVES</div> <div>9. LOCATE IN HORIZONTAL LINE WITH STEM UPWARD</div> <div>10. DUAL PLATE CHECK VALVE</div> <div>11. TO ATMOSPHERE AT SAFE LOCATION</div> <div>12. FROM CCR NITROGEN HEADER</div> <div>13. CATALYST SAMPLER SYSTEM (SEE STD DWG 8-145)</div> <div>14. FOR LIP SEAL WELDED REQUIREMENTS SEE PROJECT SPECIFICATION 3981300-801</div> <div>15. HORIZONTAL RUN SHALL BE MINIMIZED SUCH THAT ONLY THE LENGTH REQUIRED TO CLEAR THE REACTOR VESSEL IS SPECIFIED</div> <div>16. THE VENT SHALL EXTEND AT LEAST 5 METER ABOVE THE HIGHEST PLATFORM OR OTHE OCCUPIED AREA AREA WITHIN A MINIMUM OF 30 METERS RADIUS OF THE DISCHARGE.</div> <div>17. LOCATE WEEPHOLE AT LOW POINT.</div>									
GENERAL NOTES:									
<div>1. FOR GENERAL LEGEND, ABBREVIATIONS, NOMENCLATURE, INSTRUMENTATION, EQUIPMENT SYMBOLOGY AND GENERAL DETAILS SEE DWG'S 3981-00-DE-PR-PID-045 THRU 3981-00-DE-PR-PID-055</div> <div>2. EACH INSTRUMENT TAG NUMBER HAS A PLANT IDENTIFICATION NUMBER(PROJECT CODE=81) WHICH WILL NOT BE SHOWN ON THE PID'S.</div> <div>3. FUNCTIONAL IDENTIFICATION OF INSTRUMENT SIGNALS SUFFIXED WITH AN ASTERISK (*) ARE INCLUDED IN THE CATALYST REGENERATION CONTROL SYSTEM. THE SUPPLIER OF THE CATALYST REGENERATION CONTROL SYSTEM SHALL PROVIDE DETAILS FOR THESE SIGNALS.</div>									
HOLDS									
<div>1. CONTROL VALVE, ITS ISOLATION, BY PASS VALVE SIZE AND NUMBER OF EXPANDER/REDUCER</div> <div>2. PSV ORIFICE SIZE, ITS INLET/OUTLET LINE SIZE AND CORRESPONDING VESSEL NOZZLE SIZE.</div> <div>3. ELEVATION.</div> <div>4. FLOWMETER CONNECTION SIZE</div>									
01	ISSUED FOR APPROVAL	16-Dec-2025	M.KHERADKAR	M.JAMSHIDI	M.H.ESHRAGHI				
00	ISSUED FOR COMMENT	13-Aug-2025	M.KHERADKAR	M.JAMSHIDI	M.H.ESHRAGHI				
REV.	PURPOSE OF ISSUE	ISSUE DATE	PREPARE	CHECKED	APPROVED				
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DOC NO.:	PROJ.CODE	Sec.	PHASE	DEP.	SERIAL NO.				
	3981	30	DE	PR	PID 025				
SCALE:	SIZE: A1	SHEET NO: 1 OF 1		REVISION: 01	CLASS: 1				

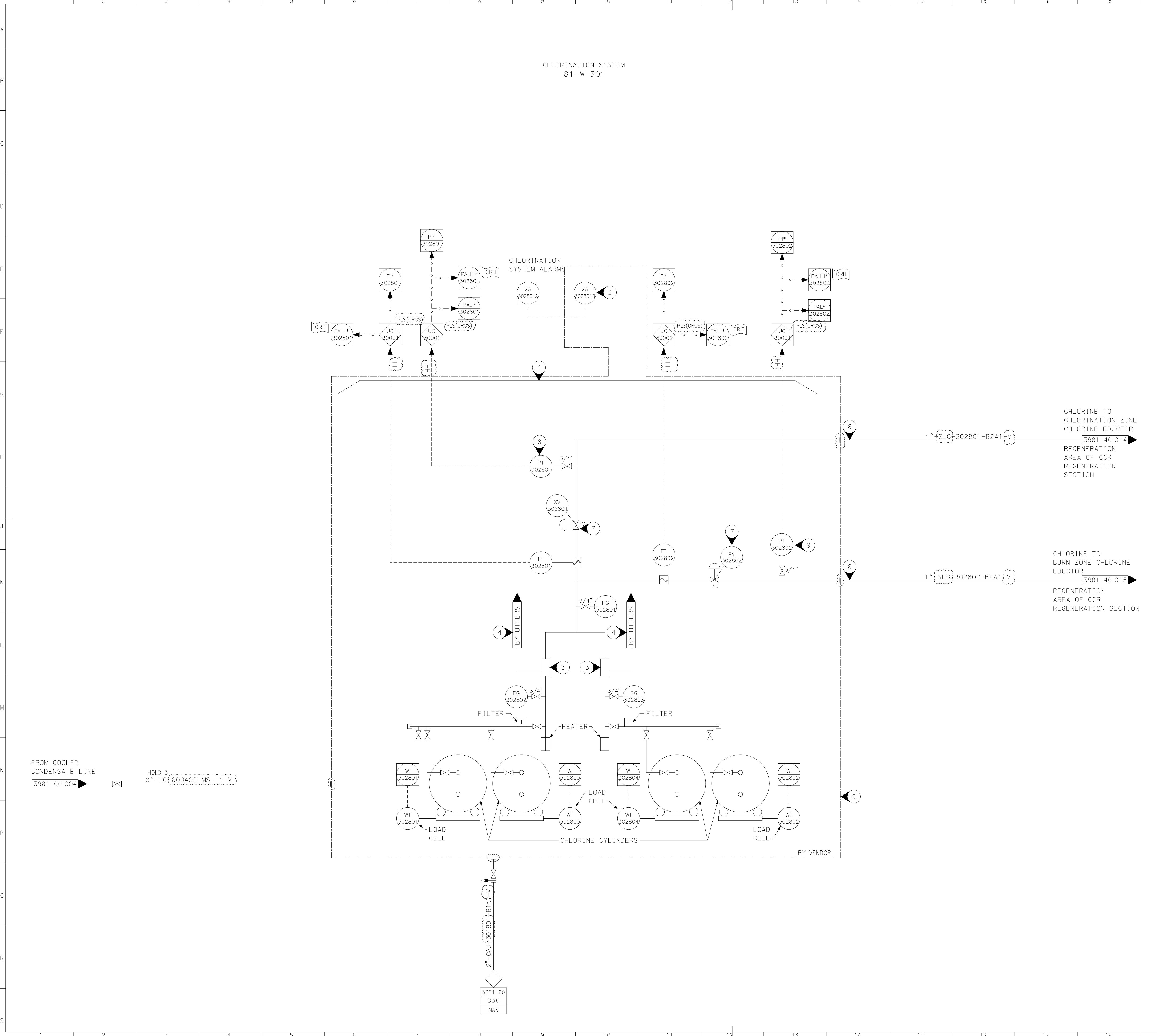
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19	20	21	22	23		
REFERENCE			DRAWINGS			
NOTES						
<p>1. THIS PNEUMATIC CATALYST TRANSFER LINE SHALL CONSIST OF ONE HORIZONTAL, ONE VERTICAL AND ONE DOWNWARD SLOPING SECTION (SLOPING IN DIRECTION OF CATALYST FLOW) WITH NO BENDS. THE TOTAL LENGTH OF THE HORIZONTAL AND DOWNWARD SLOPING SECTION SHALL BE HELD TO A MINIMUM (15000 MAXIMUM PER CATALYST TRANSPORT LINE). THIS MINIMUM MAY BE GOVERNED BY PIPING FLEXIBILITY REQUIRED TO ACCOMMODATE STRUCTURAL MOVEMENT AND/OR THERMAL EXPANSION. VERTICAL SECTION MUST BE WITHIN 0.5% OF VERTICAL AND DOWNWARD SLOPING SECTION MUST BE 20%<math>\frac{3}{4}</math> 0.5% FROM HORIZONTAL WHEN ALL EQUIPMENT IS AT NORMAL OPERATING TEMPERATURE</p> <p>2. THIS PNEUMATIC CATALYST TRANSFER LINE SHALL CONSIST OF ONE VERTICAL AND ONE DOWNWARD SLOPING SECTION (SLOPING IN DIRECTION OF CATALYST FLOW) WITH NO BENDS. THE TOTAL LENGTH OF THE DOWNWARD SLOPING SECTIONS SHALL BE HELD TO A MINIMUM (15000 MAXIMUM PER CATALYST TRANSPORT LINE). THIS MINIMUM MAY BE GOVERNED BY PIPING FLEXIBILITY REQUIRED TO ACCOMMODATE STRUCTURAL MOVEMENT AND/OR THERMAL EXPANSION. VERTICAL SECTION MUST BE WITHIN 0.5% OF VERTICAL AND DOWNWARD SLOPING SECTION MUST BE 20%<math>\frac{3}{4}</math> 0.5% FROM HORIZONTAL WHEN ALL EQUIPMENT IS AT NORMAL OPERATING TEMPERATURE</p> <p>3. DETAIL "L", SEE DWG 3981-30-DE-PR-PID-008</p> <p>4. DETAIL "M", SEE DWG 3981-30-DE-PR-PID-008</p> <p>5. SEE STD DWG 8-130</p> <p>6. PROVIDE CLEARANCE TO PLATFORM/GRADE AND ACCESS FOR 55 GALLON DRUM (1200 MIN)</p> <p>7. REMOVABLE SPOOL PIECE</p> <p>8. FILLER FLANGE WITH SCREEN INSERT (DETAIL "H", SEE DWG 3981-30-DE-PR-PID-008)</p> <p>9. DUAL PLATE CHECK VALVE</p> <p>10. SETPOINT</p> <p>11. CATALYST PIPING FROM INTERMEDIATE DISENGAGING HOPPER TO DETAIL "M" SHALL CONSIST ENTIRELY OF VERTICAL AND 45% SECTIONS AS SHOWN</p> <p>12. REDUCING FLANGE</p> <p>13. IMPACTLESS ELBOW SHOULD BE INSTALLED ON LAST REACTOR STRUCTURE IN ORDER TO FACILITATE MINIMIZATION OF THE UPSTREAM HORIZONTAL RUN</p> <p>14. THE OTHER PT SIGNAL WHICH IS PRODUCED PD1-302706 AND PDLA-302706 WILL BE SPECIFIED BY CRCS VENDOR.</p>						
GENERAL NOTES:						
<p>1. FOR GENERAL LEGEND, ABBREVIATIONS, NOMENCLATURE, INSTRUMENTATION, EQUIPMENT SYMBOLOGY AND GENERAL DETAILS SEE DWG'S 3981-00-DE-PR-PID-045 THRU 3981-00-DE-PR-PID-055</p> <p>2. EACH INSTRUMENT TAG NUMBER HAS A PLANT IDENTIFICATION NUMBER (PROJECT CODE=81) WHICH WILL NOT BE SHOWN ON THE PID'S.</p> <p>3. FUNCTIONAL IDENTIFICATION OF INSTRUMENT (SIGNALS) SUFFIXED WITH AN ASTERISK (*) ARE INCLUDED IN THE CATALYST REGENERATION CONTROL SYSTEM. THE SUPPLIER OF THE CATALYST REGENERATION CONTROL SYSTEM SHALL PROVIDE DETAILS FOR THESE SIGNALS.</p>						
HOLDS						
<p>1. CONTROL VALVE, ITS ISOLATION, BY PASS VALVE SIZE AND NUMBER OF EXPANDER/REDUCER</p> <p>2. ELEVATION</p> <p>3. FLOWMETER CONNECTION SIZE</p> <p>4. COOLING WATER REQUIREMENT.</p>						
01	ISSUED FOR APPROVAL	16-Dec-2025	M.KHERADKAR	M.JAMSHIDI	M.H.ESHRAIGHI	
00	ISSUED FOR COMMENT	13-Aug-2025	M.KHERADKAR	M.JAMSHIDI	M.H.ESHRAIGHI	
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PROJECT TITLE:						
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PIPING AND INSTRUMENT DIAGRAM INTERMEDIATE DISENGAGING HOPPER						
DOC NO.:	PROJ.CODE	Sec.	PHASE	DEP.	DOC. TYPE	SERIAL NO.
	3981	30	DE	PR	PID	027
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REFERENCE				DRAWINGS		
NOTES						
1. LOCATE IN HEATED SHELTER REMOTE FROM PROCESS AREA 2. LOCATE OUTSIDE SHELTER AT ENTRANCES.THE TOXIC GAS DETECTION SYSTEM INCLUDING THE QUANTITY AND TYPE AND LOCATION TO BE FURNISHED BY VENDOR 3. VACUUM REGULATORS WITH AUTOMATIC SWITCHOVER 4. VENT TO CHLORIDE ADSORPTION VESSEL 5. A TYPICAL FUNCTIONAL LAYOUT IS SHOWN FOR THE CHLORINATION SYSTEM. DETAILS WILL VARY SLIGHTLY DEPENDING ON EQUIPMENT FURNISHED. SEE PROJECT SPECIFICATION 972 OF THIS PROJECT FOR FULL DESCRIPTION OF REQUIREMENTS AND FEATURES. ALL EQUIPMENT WITHIN ENVELOPE, INCLUDING INSTRUMENTATION IS FURNISHED WITH THE CHLORINATION SYSTEM, EXCEPT FOR THE CHLORINE CYLINDERS 6. SIZE AND SPECIFICATION BY CHLORINATION SYSTEM VENDOR 7. DETAIL "E", SEE DWG 3981-30-DE-PR-PID-009 8. LOCATE A MINIMUM DISTANCE FROM CHLORINATION ZONE CHLORINE EDUCTOR 9. LOCATE A MINIMUM DISTANCE FROM BURN ZONE CHLORINE EDUCTOR						
GENERAL NOTES:						
1. FOR GENERAL LEGEND, ABBREVIATIONS, NOMENCLATURE, INSTRUMENTATION, EQUIPMENT SYMBOLOGY AND GENERAL DETAILS SEE DWG'S 3981-00-DE-PR-PID-045 THRU 3981-00-DE-PR-PID-055 2. EACH INSTRUMENT TAG NUMBER HAS A PLANT IDENTIFICATION NUMBER(PROJECT CODE=81) WHICH WILL NOT BE SHOWN ON THE PID'S. 3. FUNCTIONAL IDENTIFICATION OF INSTRUMENT(SIGNALS) SUFFIXED WITH AN ASTERISK (*) ARE INCLUDED IN THE (CATALYST)REGENERATION CONTROL SYSTEM. THE SUPPLIER OF THE (CATALYST) REGENERATION CONTROL SYSTEM SHALL PROVIDE DETAILS FOR THESE SIGNALS.						
HOLDS						
1. PACKAGE DETAILS WITHIN VENDOR BATTERY LIMIT. 2. REQUIRED UTILITY AND SIZE FOR THE PACKAGE. 3. LINE SIZE.						
01	ISSUED FOR APPROVAL	16-Dec-2025	M.KHERADKAR	M.JAMSHIDI	M.H.ESHRAGHI	
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OWNER:		MC:	CONTRACTOR/CONSULTANT:			
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DOCUMENT TITLE:						
PIPING AND INSTRUMENT DIAGRAM CHLORINATION SYSTEM						
DOC NO.:	PROJ.CODE	Sec.	PHASE	DEP.	DOC. TYPE	SERIAL NO.
	3981	30	DE	PR	PID	028
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