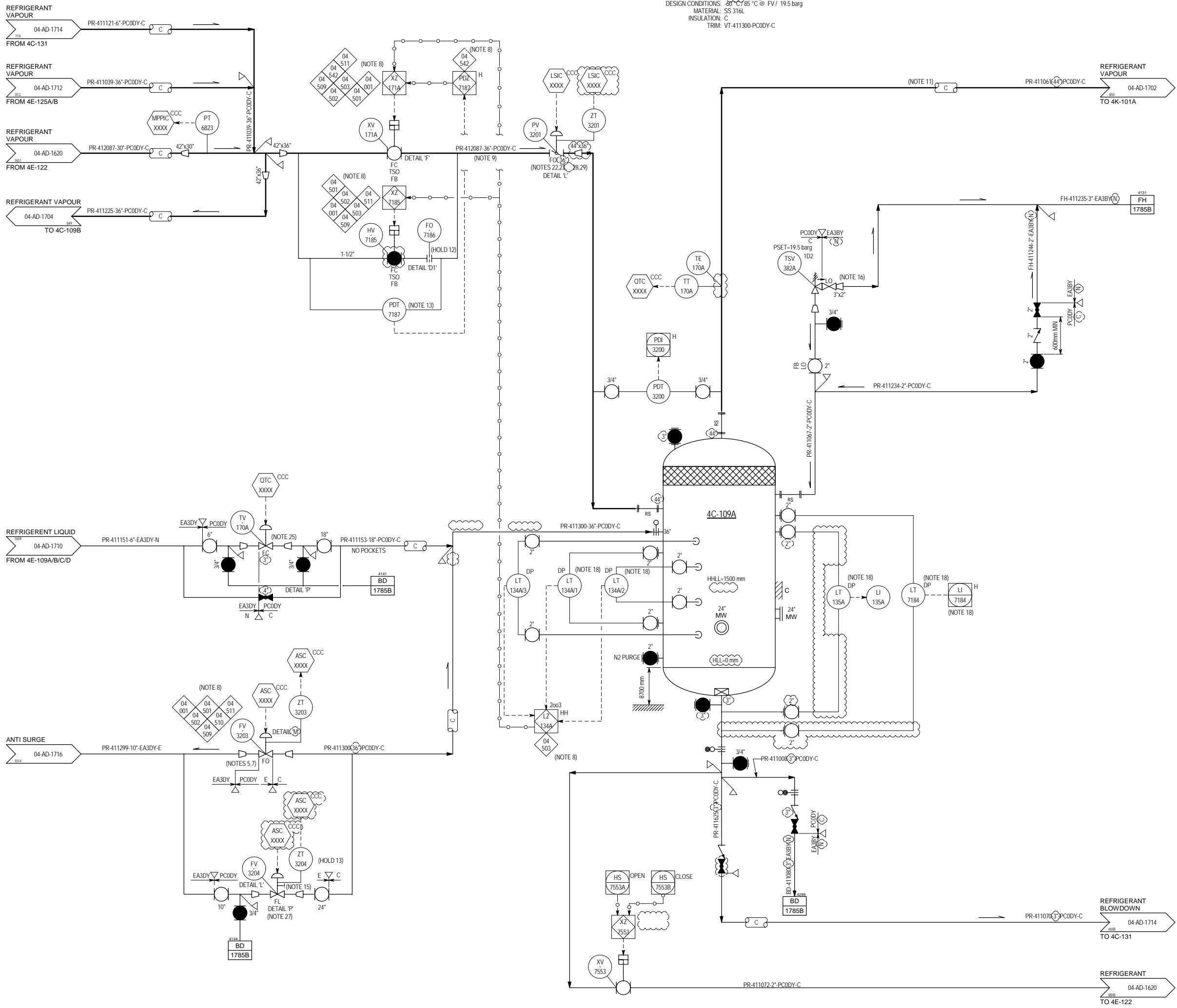


4C-109A
LOW LEVEL SUCTION DRUM
 SIZE: 3600 mm ID x 2300 mm T/T
 OPERATING CONDITIONS: (47 °C) @ 0.3 bara
 DESIGN CONDITIONS: -80 °C / 85 °C @ FV / 19.5 barg
 MATERIAL: SS 316L
 INSULATION: C
 TRIM: VT-411300-PC0DY-C



NOTES

1. FOR P&ID SYMBOLS AND TYPICAL DETAILS REFER TO DRAWINGS 5248-00-AD-4300 TO 5248-00-AD-4309.
2. ALL INSTRUMENTS ON THIS DRAWING ARE PREFIXED BY '41' UNLESS OTHERWISE INDICATED.
3. DELETED.
4. DELETED.
5. ANTI-SURGE VALVE TO BE LOCATED AT HIGH POINT.
6. DELETED.
7. COMPRESSOR ANTI-SURGE VALVES TO BE QUICK OPENING VALVES COMPLETE WITH LIMIT SWITCHES/POSITION INDICATORS. EQUIPMENT SPECIFICATION BY COMPRESSOR VENDOR. EQUIPMENT SUPPLY LATER.
8. FOR DETAILS OF ASSOCIATED SHUTDOWN LOGICS REFER TO CAUSE AND EFFECT DIAGRAM DOCUMENT NUMBER 5248-41-BB-4301.
9. ALL PROPANE VAPOUR LINES RETURNING FROM CHILLERS TO DRUM 4C-109A MUST BE FREE DRAINING TO DRUM.
10. DELETED.
11. COMPRESSOR SUCTION LINES TO BE CHEMICALLY CLEANED AS PER DGS.
12. DELETED.
13. HIGH DIFFERENTIAL PRESSURE PREVENTS OPENING OF MAIN ESD VALVE.
14. DELETED.
15. CAPACITY CONTROL VALVE TO BE SUPPLIED BY COMPRESSOR VENDOR.
16. VALVE STEM TO BE HORIZONTAL.
17. KEY INTERLOCKED VALVES.
18. DCS AND ESD TRANSMITTERS TO HAVE IDENTICAL RANGES AND TAPPING ELEVATIONS, AND VERIFICATIONS IN THE FORM OF A CONFIGURED DISCREPANCY ALARM.
19. DELETED.
20. DELETED.
21. DELETED.
22. SUCTION THROTTLING VALVE TO BE MINIMUM DISTANCE FROM COMPRESSOR.
23. PRESSURE DROP ACROSS FULLY OPEN VALVE TO BE MINIMUM.
24. DELETED.
25. CONTROL VALVE LOCATED AT GRADE MINIMUM FROM 4C-109A
26. FOR DRAINS AND VENTS IN PROPANE SERVICE ISOLATION VALVE SHOULD BE SEPARATED BY 600mm (MINIMUM) TO AVOID FREEZING.
27. FV-3204 TO FAIL IN LAST POSITION AND DRIVE TO OPEN.
28. SUCTION THROTTLING VALVE TO BE DRIVEN OPEN AT COMPRESSOR SHUTDOWN TO ENABLE THE SYSTEM TO BE DEPRESSURISED VIA HV-144A
29. COMPRESSOR VENDOR TO DETERMINE WHETHER SUCTION THROTTLING VALVES ARE REQUIRED TO PREVENT THE SECOND COMPRESSOR TRIPPING IN THE EVENT OF THE FIRST COMPRESSOR TRIPPING. IF SUCTION THROTTLING VALVES ARE REQUIRED COMPRESSOR VENDOR TO DETERMINE WHETHER MINIMUM STOP IS REQUIRED ON VALVES.
30. DELETED.
31. DELETED.

HOLDS:

1. PSV SIZES, INLET AND OUTLET LINE SIZES.
2. DELETED.
3. CONTROL VALVE SIZES.
4. DELETED.
5. DELETED.
6. DELETED.
7. DELETED.
8. DELETED.
9. DELETED.
10. DELETED.
11. DELETED.
12. TO DETERMINE SIZE OF ORIFICE AND PRESSURISATION BYPASS FOR START-UP.
13. NEED AND EXTENT OF ACOUSTIC INSULATION.
14. TRIP & ALARM SET POINTS.
15. CONTROL SETTINGS.
16. DELETED.
17. DELETED.

0	06 JUL 10	ISSUED FOR APPROVAL	SHW	JHK	JY	SS
D	29 MAR 10	ISSUED FOR HAZOP REVIEW	SHW	JHK	JY	SS
C	02 FEB 10	ISSUED FOR COMPANY REVIEW	SHW	JHK	JY	SS
B	17 NOV 09	ISSUED FOR INFORMATION	SHW	JHK	JY	TY
A	28 OCT 09	ISSUED FOR INTERNAL REVIEW	SHW	JHK	JY	TY

REV.	DATE	DESCRIPTION	DRWN	CHKD	APPD	APPD	COMP
SCALE	NONE	DWG. SIZE	A1	DOC. CODE	B03		

ABU DHABI GAS INDUSTRIES LTD

RUWAIS 4th NGL TRAIN PROJECT



PIPING AND INSTRUMENTATION DIAGRAM
 REFRIGERATION COMPRESSOR LOW LEVEL
 SUCTION DRUM A
 TRAIN 4

GASCO JOB NO.	DRAWING NO.	REV.
5248	5248-04-AD-1700	0
PIL/GS E&C JOB NO.	CONTRACT NO.	
7754	13524801	