



LIDCO, Pars SEE Zone, Assaluyeh,  
Integrated Methanol and Ammonia  
Plant 3000 MTPD MeOH / 900 MTPD NH3 PROJECT



Piping & Instrument Diagram

Document No. 17735-03

Page

Project No.	Vendor Doc.	P.O. No.	Department	Document Type	Serial No	Revision	Page
N278	VD	6019	PR	PID	0002	01	Page 1 of 4

**General Comments:**

**PR-1:** The title of the document (including package tag Number) on the first page to be provided

**PR-2:** Symbol and legend shall be added, or project symbol and legend shall be followed

**PR-3:** Numbering of piping, instruments and equipment Tag Nrs shall be based on project specification

Code-3  
M. Vakili

REV.	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED
01	14-09-2023	Issued for Approval	S.K.	J.J.	S.K.

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Page

Project No.	Vendor Doc.	P.O. No.	Department	Document Type	Serial No	Revision	Page
N278	VD	6019	PR	PID	0002	01	Page 2 of 4

LIST OF REVISED PAGES

Rev. Page	01	02	03	04	05	Rev. Page	01	02	03	04	05	Rev. Page	01	02	03	04	05	Rev. Page	01	02	03	04	05
1	X					26						51						76					
2	X					27						52						77					
3	X					28						53						78					
4	X					29						54						79					
5						30						55						80					
6						31						56						81					
7						32						57						82					
8						33						58						83					
9						34						59						84					
10						35						60						85					
11						36						61						86					
12						37						62						87					
13						38						63						88					
14						39						64						89					
15						40						65						90					
16						41						66						91					
17						42						67						92					
18						43						68						ATTACHMENT					
19						44						69						1					
20						45						70						2					
21						46						71						3					
22						47						72						4					
23						48						73						5					
24						49						74						6					
25						50						75						7					

**PR-17:** DP of tube side also shall be specified.  
10/13 rule shall be considered or PSV shall be installed

**PR-19:** All design temperature shall be checked based on project sizing criteria:  
- Maximum operating temperature +15 °C  
- Design temperature shall be rounded up to full 5 °C steps.

COMPRESSOR	MAIN MOTOR	INTERCOOLER	AFTERCOOLER	PULSATION DAMPER INLET	PULSATION DAMPER 1ST STAGE DISCHARGE	PULSATION DAMPER 2ND STAGE SUCTION	PULSATION DAMPER 2ND STAGE DISCHARGE
Tagnumber: C-001 Type: 2-stage oilfree piston Modelnumber: RBV-130 Discharge capacity: 35 Nm <sup>3</sup> /h Operating pressure: 30 bar(g) Speed: 410 rpm	Tagnumber: M-001 Rated power: 11 kW Speed: 1485 rpm Power supply: 400 V/ 50 Hz/ 3 ph Ingress protection: IP-55 Hazardous area class: Safe Area	Tagnumber: E-001 Flow air side: 35 Nm <sup>3</sup> /hr Flow water side: .. Nm <sup>3</sup> /hr OP / DP: 23,3 bar(g) / 25 bar(g) OT / DT: 157 °C / 165 °C Design: TEMA C, ASME VIII Div. 1 Material: CS shell, SS316 tubes	Tagnumber: E-002 Flow air side: 35 Nm <sup>3</sup> /hr Flow water side: .. Nm <sup>3</sup> /hr OP / DP: 30 bar(g) / 34 bar(g) OT / DT: 116 °C / 125 °C Design: TEMA C, ASME VIII Div. 1 Material: CS shell, SS316 tubes	Tagnumber: V-001 Volume: 30 L OP / DP: 9,5 bar(g) / 12,5 bar(g) OT / DT: 46 °C / 50 °C Design: ASME VIII Div. 1 Material: CS	Tagnumber: V-002 Volume: 30 L OP / DP: 23,3 bar(g) / 25 bar(g) OT / DT: 157 °C / 165 °C Design: ASME VIII Div. 1 Material: CS	Tagnumber: V-003 Volume: 30 L OP / DP: 22,1 bar(g) / 25 bar(g) OT / DT: 60 °C / 70 °C Design: ASME VIII Div. 1 Material: CS	Tagnumber: V-004 Volume: 30 L OP / DP: 30 bar(g) / 34 bar(g) OT / DT: 116 °C / 125 °C Design: ASME VIII Div. 1 Material: CS

**PR-4:** It conflicts with our tag numbers, to be corrected.

**PR-5:** OT: 46 °C  
DT: 75 °C

The inlet and outlet size of all PSVs to be specified.  
LO isolation Valve shall be considered for PSVs.

Is it shaft driven?(if motor drive, to be added in consumption list)

**PR-8:** Compressor shall not be started at the Low suction pressure. I.e. Permissive to start signal shall be generated from NOT low low condition of suction pressure.

please recheck the ratio of design pressure to operating pressure to ascertain that PSV does not act during normal operation (because of pressure pulsation in the discharge side of compressor).  
In other words, Design pressure of inter stage equipment, Instruments and piping shall be rechecked. Distance between design and normal pressure is lower than 10 %.

**PR-18:** Set = 75 °C

**PR-18:** Set = 75 °C

**PR-11:** Set point for PCV shall be specified  
**PR-12:** Positioner for control valve with related alarm in control room will be considered.

**PR-15:** Cooling rate shall be specified

**PR-9:** Size of all Lines shall be added in PID.

**PR-14:** TG and Globe valve shall be considered

**PR-13:** Outlet T shall be specified

All tags, Should be mentioned as per sample

Skids should be Considered or move here

All suffix tag should be start 82XX

**PR-16:** P&ID for High Pressure Air Compressor K020

comment for both coolers:  
Vent/drain with valve to be considered on both sides.  
MOM: vent/drain for water side and drain for gas side will be added

- NOTES
- All tagnumbers have prefix 320
  - Instrument / control air tubing size: 12mm
  - TT and TG process connection is 3/4" NPT
  - TW process connection is 1 1/2" flange
  - PT and PG process connection is 1/2" NPT
  - Process connection of control valve is 300# flanged ANSI
  - Main process line piping material is SS316
  - Cooling water process line piping material is carbon steel

- Instrument comment:
- All instruments tag should follow project spec (N278-000-CI-JSD-1500-001-02)
  - Prefix "320" to be added to all instruments number.
  - **The Legend shall be considered (Consist of all instrument, equipment and line ...)**
  - all line size(Line No.) should be mentioned
  - All PSV and CV Sizes will be finalized after the approval Instrument calculation sheet document.
  - As per project specification, thermowells shall be installed at least on 6" line size.

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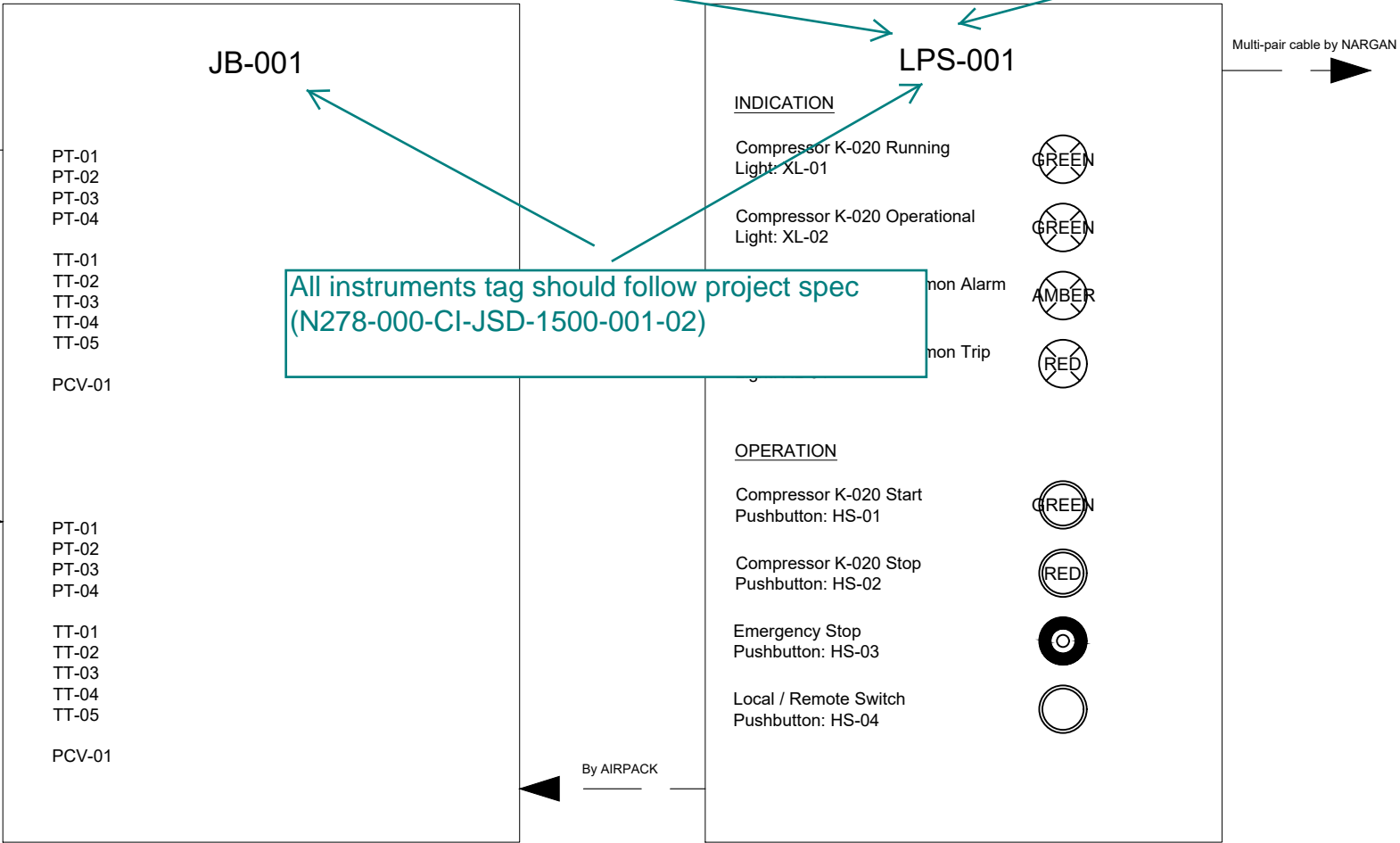
Integrated Methanol and Ammonia Plant				
5-03 P&ID				
P.O. No.				SC.
6019				SIZE: A3
DEPARTMENT	DOC. TYPE	SERIAL No.	REV.	SHEET No.
PR	PID	0002	01	1 OF 2

All abbreviations should be mentioned in legend page

As per VPIS should be renamed to LCP

PR-20: Interlock IP922 / IP920 from process for package start / stop shall be shown.

All instruments tag should follow project spec (N278-000-CI-JSD-1500-001-02)



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N278	VD	6019	PR	PID	0002	01	2 OF 2

- NOTES
- All tagnumbers have prefix '101.'
  - Package will be DCS controlled (by others)