

- NOTES:**
1. ALL VENTS SHALL BE LOCATED MIN. HEIGHT OF 3 MTR. ABOVE THE HIGHEST OPERATING LEVEL.
  2. METERING SHALL BE DONE BY ULTRASONIC FLOW METER WITH CONTROL PANEL MOUNTED FLOW COMPUTER. INSTALLATION SHALL BE AS PER AGA9 LATEST EDITION. HOWEVER THERE SHALL BE TWO STREAMS OF METERING (1W+1S) FOR CHECK METERING.
  3. ENVIRONMENTAL ENCLOSURE REQUIRED FOR METERING INSTRUMENTS. INSULATION OF USM METER, METER RUN & IMPLUSE LINES OF METERING INSTRUMENT IS REQUIRED.
  4. PROVISION SHALL BE KEPT TO HOOK UP METERING PR. & TEMP., FLOW PARAMETERS WITH SCADA.
  5. VALVES ACROSS THE USM SHALL BE PROVIDED WITH LIMIT SWITCHES.
  6. INLET & OUTLET OF SKID SHALL BE PROVIDED WITH COMPANION FLANGES.
  7. ALL BALL VALVES SHALL BE FULL BORE ONLY.
  8. SIZE, RATING & SET PRESSURE OF PSV's TO BE DECIDED DURING DETAILED ENGINEERING.
  9. SKID SHALL BE SYMMETRIC ACROSS CENTRE LINE.
  10. PROVISION FOR BI-DIRECTIONAL FLOW HAS BEEN CONSIDERED. HOWEVER, M/S IGGL HAS TO CONFIRM.
  11. EACH VENT LINE SHALL BE COMBINATION OF A BALL VALVE AND A PLUG VALVE/GLOBE VALVE.
  12. NOTE DELETED.
  13. NOTE DELETED.

**CHECK METERING FACILITY  
PROCESS DATA**

LOCATION	FLOW (MMSCMD)	INLET/OUTLET PRESSURE Kg/Cm <sup>2</sup> (G)	TEMPERATURE(DESIGN)	TEMPERATURE(WORKING)	DESIGN PRESSURE	DESIGN CLASS
IPS-3, SECTION-1	3.75	45-55	-29° TO 65°C	0° TO 55°C	92 Kg/Cm <sup>2</sup> (g)	600#

**VALVE LEGEND**

- |—|— BALL VALVE FLANGE END
- |—|— BALL VALVE BW END/UPTO 1/2" SW END.
- |—|— PLUG VALVE BW END/UPTO 1/2" SW END.
- |—|— PLUG VALVE FLANGE END
- |—|— GLOBE VALVE.



**INDRADHANUSH GAS  
GRID LIMITED**



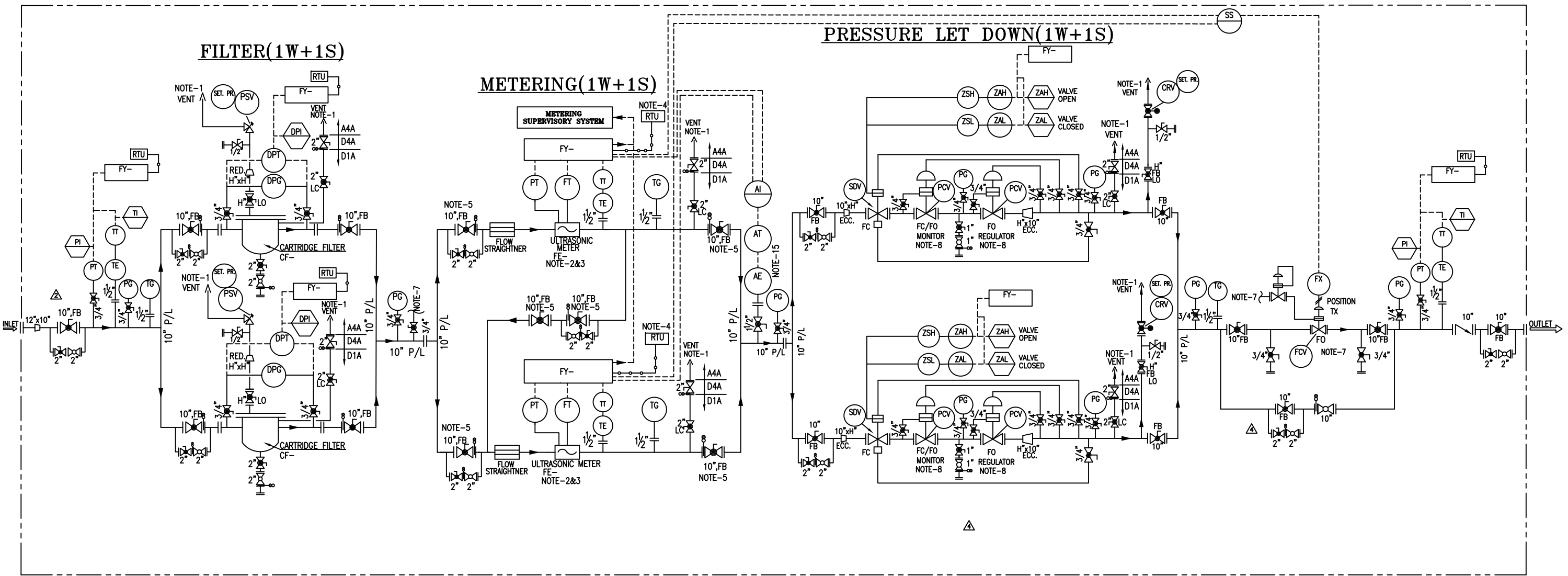
मेकॉन लिमिटेड  
**MECON LIMITED**

SECTION	OIL & GAS	NORTH EAST GAS GRID (PHASE-1 & 2 P/L SECTION)
LOCATION	DELHI	
DESIGNED	UMAR	P & ID FOR CHECK METERING FACILITY AT IPS-3
DRAWN	BOBBY	
CHECKED AND VERIFIED	A.K.BHARTI	SCALE : NTS
APPROVED	SIG (S.KUMAR) DATE 13.09.22	

REV	INST.	CONCURRED BY		12	11	10	9	8	7	6	5	4	3	2	1
REV.NO	DATE	ZONE	DESCRIPTION	BY	VERIFIED	REVISION © Copyright MECON LIMITED - All rights reserved. THIS DRAWING IS THE PROPERTY OF MECON AND ISSUED FOR THE SPECIFIC PROJECT MENTIONED THEREIN. THIS IS NOT TO BE COPIED OR USED FOR OTHER PROJECTS UNLESS EXPRESSLY PERMITTED BY MECON.									

22.08.22	GENERAL REVISION	ANAND	UMAR
06.08.22	AS PER REQUIREMENT	ANAND	UMAR

REFERENCES DRG.NO.  
© Copyright MECON LIMITED - All rights reserved.  
THIS DRAWING IS THE PROPERTY OF MECON AND ISSUED FOR THE SPECIFIC PROJECT MENTIONED THEREIN. THIS IS NOT TO BE COPIED OR USED FOR OTHER PROJECTS UNLESS EXPRESSLY PERMITTED BY MECON.



**CONSUMER'S DETAILS/PROCESS DATA**

**CUSTODY TRANSFER METERING SKID**

CONSUMER	FLOW (MMSCMD)	INLET PRESSURE Kg/Cm <sup>2</sup> (g)	OUTLET PRESSURE Kg/Cm <sup>2</sup> (g)	TEMPERATURE(DESIGN)	TEMPERATURE(WORKING)	DESIGN PRESSURE	DESIGN CLASS
NUMALIGARH REFINERY LIMITED (NRL), SECTION-1	2.5	43-55	40-50	-29° TO 65°C	0° TO 55°C	92 Kg/Cm <sup>2</sup> (g)	600#

**NOTES:**

- ALL VENTS SHALL BE LOCATED MIN. HEIGHT OF 3 MTR. ABOVE THE HIGHEST OPERATING LEVEL.
- METERING SHALL BE DONE BY ULTRASONIC FLOW METER WITH CONTROL PANEL MOUNTED FLOW COMPUTER. INSTALLATION SHALL BE AS PER AG99 LATEST EDITION. HOWEVER THERE SHALL BE TWO STREAMS OF METERING (1W+1S).
- ENVIRONMENTAL ENCLOSURE REQUIRED FOR METERING INSTRUMENTS. INSULATION OF USM, METER RUN & IMPLUSE LINES OF METERING INSTRUMENT IS REQUIRED.
- PROVISION SHALL BE KEPT TO HOOK UP INLET & OUTLET PR. & TEMP., FLOW PARAMETERS WITH SCADA. HOWEVER SCADA IS NOT IN THE SCOPE OF METERING SKID VENDOR.
- ALL ULTRASONIC METERING VALVES SHALL BE PROVIDED WITH LIMIT SWITCHES.
- ALL BALL VALVES SHALL BE FULL BORE ONLY.
- FCV SHALL BE GAS ACTUATED & GAS TAPPING FOR ACTUATION OF FCV SHALL BE BEFORE METERING.
- SDV SHALL BE OF SLAM SHUT VALVE & SHALL BE CLOSED IN EVENT OF HIGH PRESSURE DISCHARGE FROM PRESSURE CONTROL VALVE.
- ALL DRAIN SHALL BE CONNECTED SECTIONWISE (FILTR, METER & PCV ETC.)
- SIZE, RATING & SET PRESSURE OF PSV's AND CRV's TO BE DECIDED DURING DETAILED ENGINEERING.
- SKID SHALL BE SYMMETRIC ACROSS CENTRE LINE.
- INLET & OUTLET OF SKID SHALL BE PROVIDED WITH COMPANION FLANGES.
- EXPANDER/REDUCER ACROSS PRS SHALL BE ECCENTRIC TYPE AND ADEQUATE SLOPE SHALL BE PROVIDED TOWARDS THE DRAIN LINE FOR PROPER CONDENSATE DRAINING (IF ANY).
- EACH VENT LINE SHALL BE COMBINATION OF A BALL VALVE AND A PLUG VALVE/GLOBE VALVE.
- 20D UPSTREAM SHALL BE MAINTAINED FOR GC SAMPLE POINT.
- NOTE DELETED.

**VALVE LEGEND**

- BALL VALVE FLANGE END
- BALL VALVE BW END/upto 1/2" SW END.
- PLUG VALVE BW END/upto 1/2" SW END.
- PLUG VALVE FLANGE END
- GLOBE VALVE.

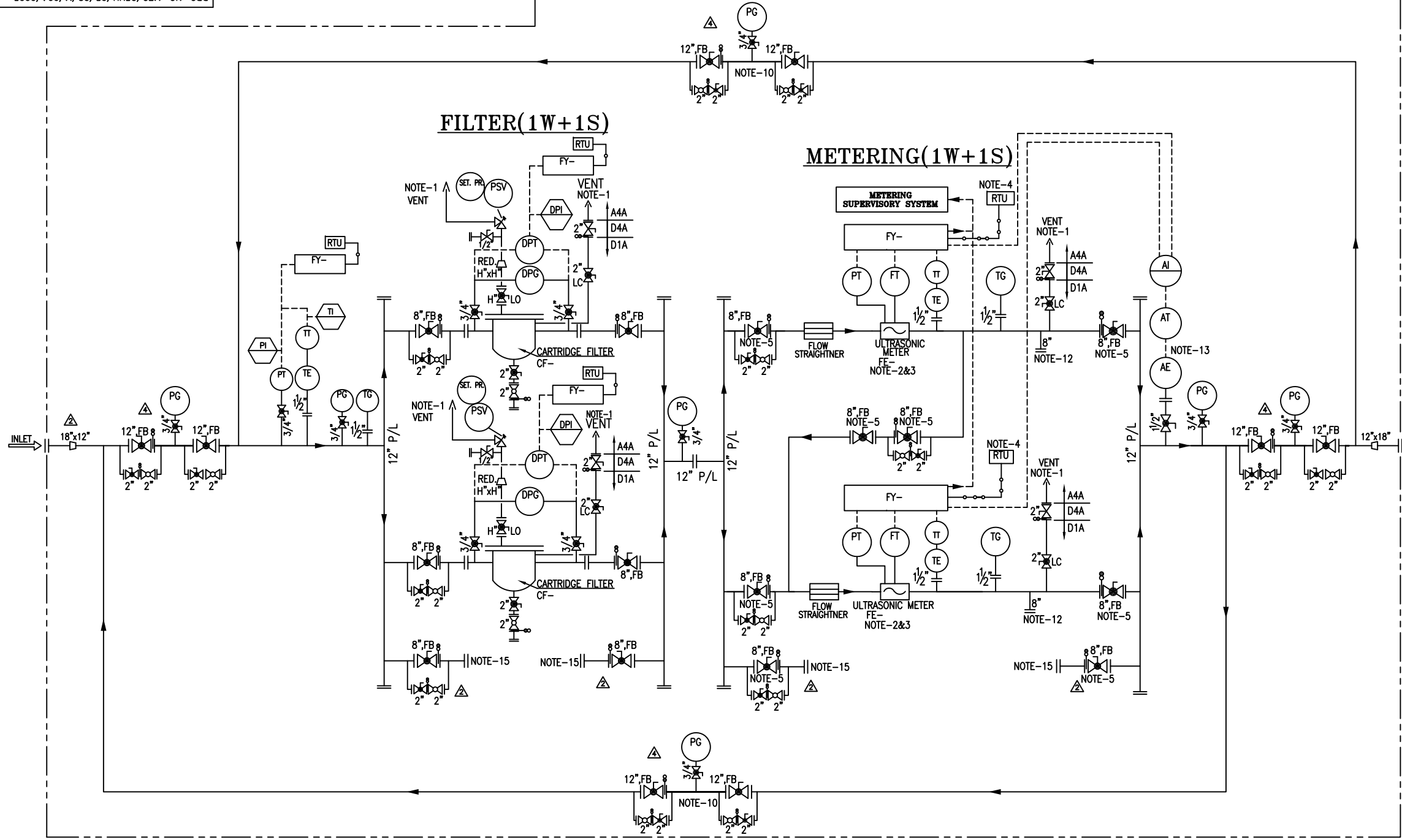
	<b>INDRADHANUSH GAS GRID LIMITED</b>
	<b>मेकॉन लिमिटेड</b>
	<b>MECON LIMITED</b>

SECTION	OIL & GAS	NORTH EAST GAS GRID (PHASE-1 & 2 P/L SECTION)
LOCATION	DELHI	
DESIGNED	UMAR	P & ID FOR CUSTODY TRANSFER METERING SKID FOR NUMALIGARH REFINERY LIMITED
DRAWN	BOBBY	
CHECKED AND VERIFIED	A.K.BHARTI	SCALE : NTS
APPROVED	SIG (S.KUMAR)	
DATE	13.09.22	DRG. NO. MEC/23JU/05/28/M/004/0003

REV.NO	DATE	ZONE	DESCRIPTION	BY	VERIFIED
13.09.22			GENERAL REVISION	UMAR	AKB
22.08.22			GENERAL REVISION	ANAND	UMAR
04.08.22			AS PER REQUIREMENT	ANAND	UMAR

REV	INST.	CONCURRED BY
SEC		

REFERENCES DRG.NO.  
 © Copyright MECON LIMITED - All rights reserved.  
 THIS DRAWING IS THE PROPERTY OF MECON AND ISSUED FOR THE SPECIFIC PROJECT MENTIONED THEREIN. THIS IS NOT TO BE COPIED OR USED FOR OTHER PROJECTS UNLESS EXPRESSLY PERMITTED BY MECON.



- NOTES:**
1. ALL VENTS SHALL BE LOCATED MIN. HEIGHT OF 3 MTR. ABOVE THE HIGHEST OPERATING LEVEL.
  2. METERING SHALL BE DONE BY ULTRASONIC FLOW METER WITH CONTROL PANEL MOUNTED FLOW COMPUTER. INSTALLATION SHALL BE AS PER AG99 LATEST EDITION. HOWEVER THERE SHALL BE TWO STREAMS OF METERING (1W+1S) FOR CHECK METERING.
  3. ENVIRONMENTAL ENCLOSURE REQUIRED FOR METERING INSTRUMENTS. INSULATION OF USM METER, METER RUN & IMPLUSE LINES OF METERING INSTRUMENT IS REQUIRED.
  4. PROVISION SHALL BE KEPT TO HOOK UP METERING PR. & TEMP., FLOW PARAMETERS WITH SCADA.
  5. VALVES ACROSS THE USM SHALL BE PROVIDED WITH LIMIT SWITCHES.
  6. INLET & OUTLET OF SKID SHALL BE PROVIDED WITH COMPANION FLANGES.
  7. ALL BALL VALVES SHALL BE FULL BORE ONLY.
  8. SIZE, RATING & SET PRESSURE OF PSV's TO BE DECIDED DURING DETAILED ENGINEERING.
  9. SKID SHALL BE SYMMETRIC ACROSS CENTRE LINE.
  10. PROVISION FOR BI-DIRECTIONAL FLOW HAS BEEN CONSIDERED. HOWEVER, M/S IGGL HAS TO CONFIRM.
  11. EACH VENT LINE SHALL BE COMBINATION OF A BALL VALVE AND A PLUG VALVE/GLOBE VALVE.
  12. PROVISION FOR Z-CONFIGURATION FOR FUTURE METERING STREAMS (IF ANY) HAS BEEN CONSIDERED.
  13. 20D UPSTREAM SHALL BE MAINTAINED FOR GC SAMPLE POINT. APART FROM GC, NECESSARY H2S, TOTAL SULPHUR AND MOISTURE ANALYZER ALSO TO BE INSTALLED FOR MEASUREMENT OF H2S, TOTAL SULPHUR & MOISTURE (IF ANY) IN GAS STREAM.
  14. NOTE DELETED.
  15. FUTURE PROVISION FOR CAPACITY AUGMENTATION HAS BEEN PROVIDED. HOWEVER M/s IGGL HAS TO CONFIRM.

**CHECK METERING FACILITY  
PROCESS DATA**

LOCATION	FLOW (MMSCMD)	INLET/OUTLET PRESSURE Kg/Cm <sup>2</sup> (g)	TEMPERATURE(DESIGN)	TEMPERATURE(WORKING)	DESIGN PRESSURE	DESIGN CLASS
DT GUWAHATI, SECTION-6	1.0	25-55	-29° TO 65°C	0° TO 55°C	92 Kg/Cm2(g)	600#

- VALVE LEGEND**
- |—|— BALL VALVE FLANGE END
  - |—|— BALL VALVE BW END/UPTO 1/2" SW END.
  - |—|— PLUG VALVE BW END/UPTO 1/2" SW END.
  - |—|— PLUG VALVE FLANGE END
  - |—|— GLOBE VALVE.

**INDRADHANUSH GAS GRID LIMITED**

मेकॉन लिमिटेड

**MECON LIMITED**

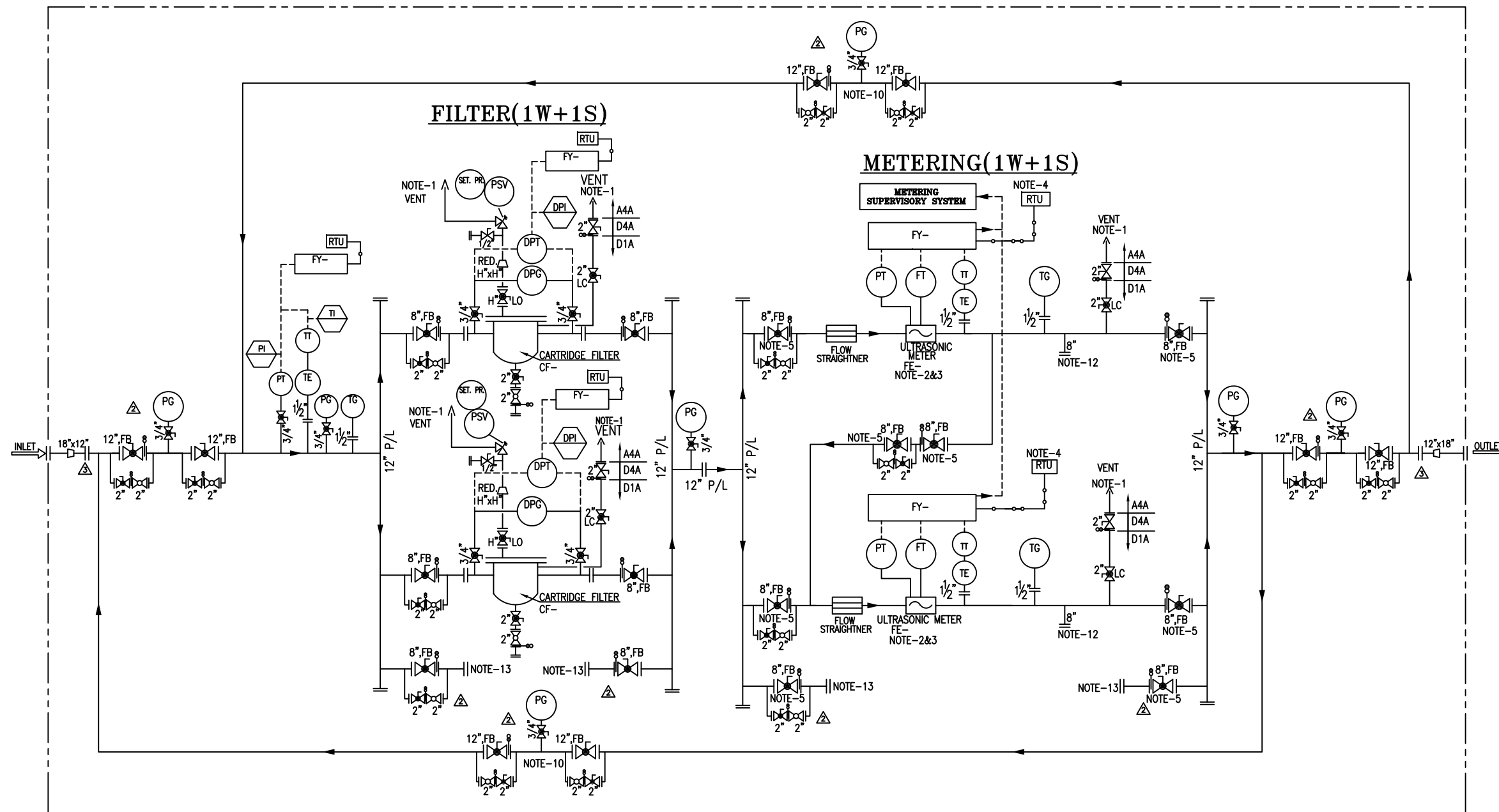
---

SECTION	OIL & GAS
LOCATION	DELHI
DESIGNED	UMAR
DRAWN	BOBBY
CHECKED AND VERIFIED	A.K.BHARTI
APPROVED	SIG (S.KUMAR)
DATE	13.09.22

NORTH EAST GAS GRID (PHASE-1 & 2 P/L SECTION)	
P & ID FOR CHECK METERING FACILITY AT DT GUWAHATI	
SCALE :	NTS
DRG. NO.	MEC/23JU/05/28/M/004/0005
REV	4

REV	INST.	CONCURRED BY	REV.NO	DATE	ZONE	DESCRIPTION	BY	VERIFIED

© Copyright MECON LIMITED - All rights reserved.  
THIS DRAWING IS THE PROPERTY OF MECON AND ISSUED FOR THE SPECIFIC PROJECT MENTIONED THEREIN. THIS IS NOT TO BE COPIED OR USED FOR OTHER PROJECTS UNLESS EXPRESSLY PERMITTED BY MECON.



**NOTES:**

1. ALL VENTS SHALL BE LOCATED MIN. HEIGHT OF 3 MTR. ABOVE THE HIGHEST OPERATING LEVEL.
2. METERING SHALL BE DONE BY ULTRASONIC FLOW METER WITH CONTROL PANEL MOUNTED FLOW COMPUTER. INSTALLATION SHALL BE AS PER AGA9 LATEST EDITION. HOWEVER THERE SHALL BE TWO STREAMS OF METERING (1W+1S) FOR CHECK METERING.
3. ENVIRONMENTAL ENCLOSURE REQUIRED FOR METERING INSTRUMENTS. INSULATION OF USM METER, METER RUN & IMPLUSE LINES OF METERING INSTRUMENT IS REQUIRED.
4. PROVISION SHALL BE KEPT TO HOOK UP METERING PR. & TEMP., FLOW PARAMETERS WITH SCADA.
5. VALVES ACROSS THE USM SHALL BE PROVIDED WITH LIMIT SWITCHES.
6. INLET & OUTLET OF SKID SHALL BE PROVIDED WITH COMPANION FLANGES.
7. ALL BALL VALVES SHALL BE FULL BORE ONLY.
8. SIZE, RATING & SET PRESSURE OF PSV's TO BE DECIDED DURING DETAILED ENGINEERING.
9. SKID SHALL BE SYMMETRIC ACROSS CENTRE LINE.
10. PROVISION FOR BI-DIRECTIONAL FLOW HAS BEEN CONSIDERED. HOWEVER, M/S IGGL HAS TO CONFIRM.
11. EACH VENT LINE SHALL BE COMBINATION OF A BALL VALVE AND A PLUG VALVE/GLOBE VALVE.
12. PROVISION FOR Z-CONFIGURATION FOR FUTURE METERING STREAMS (IF ANY) HAS BEEN CONSIDERED.
13. FUTURE PROVISION FOR CAPACITY AUGMENTATION HAS BEEN PROVIDED. HOWEVER M/s IGGL HAS TO CONFIRM.

**CHECK METERING FACILITY  
PROCESS DATA**

LOCATION	FLOW (MMSCMD)	INLET/OUTLET PRESSURE Kg/Cm <sup>2</sup> (g)	TEMPERATURE(DESIGN)	TEMPERATURE(WORKING)	DESIGN PRESSURE	DESIGN CLASS
IPS-2, SECTION-6	1	25-55	-29° TO 65°C	0° TO 55°C	92 Kg/Cm <sup>2</sup> (g)	600#
RT CUM DT AT PANISAGAR, SECTION-5	1	25-55	-29° TO 65°C	0° TO 55°C	92 Kg/Cm <sup>2</sup> (g)	600#

**VALVE LEGEND**

- BALL VALVE FLANGE END
- BALL VALVE BW END/UPTO 1/2" SW END.
- PLUG VALVE BW END/UPTO 1/2" SW END.
- PLUG VALVE FLANGE END
- GLOBE VALVE.



**INDRADHANUSH GAS  
GRID LIMITED**



मेकॉन लिमिटेड

**MECON LIMITED**

REV	INST.	CONCURRED BY

REV.NO	DATE	ZONE	DESCRIPTION	BY	VERIFIED

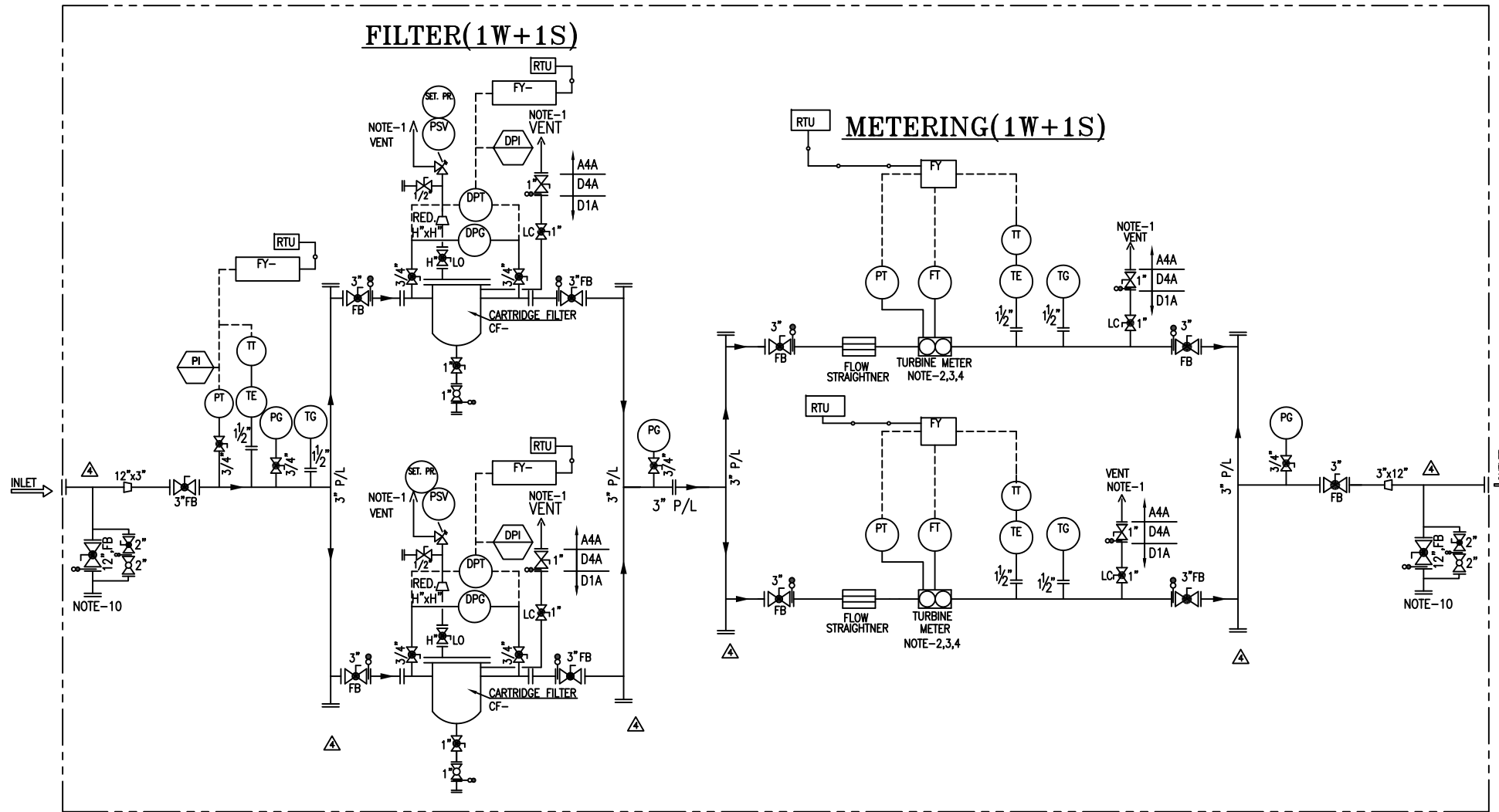
SECTION	OIL & GAS
LOCATION	DELHI
DESIGNED	UMAR
DRAWN	BOBBY
CHECKED AND VERIFIED	A.K.BHARTI
APPROVED	SIG (S.KUMAR) DATE 13.09.22

**NORTH EAST GAS GRID  
(PHASE-1 & 2 P/L SECTION)**

**P & ID FOR CHECK METERING FACILITY AT IPS-2  
(SEC.-6) & RT CUM DT AT PANISAGAR (SEC.-5)**

© Copyright MECON LIMITED - All rights reserved.  
THIS DRAWING IS THE PROPERTY OF MECON AND ISSUED FOR THE SPECIFIC PROJECT MENTIONED THEREIN. THIS IS NOT TO BE COPIED OR USED FOR OTHER PROJECTS UNLESS EXPRESSLY PERMITTED BY MECON.

SCALE : NTS  
DRG. NO. MEC/23JU/05/28/M/004/0006  
189 of 626  
3



- NOTES:**
1. ALL VENTS SHALL BE LOCATED MIN. HEIGHT OF 3 MTR. ABOVE THE HIGHEST OPERATING LEVEL.
  2. METERING SHALL BE DONE BY TURBINE FLOW METER WITH PANEL BASED FLOW COMPUTER WITH GSM. INSTALLATION SHALL BE AS PER AGA7 LATEST EDITION. HOWEVER THERE SHALL BE TWO STREAMS OF METERING (1W+1S).
  3. ENVIRONMENTAL ENCLOSURE REQUIRED FOR METERING INSTRUMENTS. INSULATION OF TURBINE METER, METER RUN & IMPLUSE LINES OF METERING INSTRUMENT IS REQUIRED.
  4. PROVISION SHALL BE KEPT TO HOOK UP METERING PR. & TEMP., FLOW PARAMETERS WITH SCADA. HOWEVER SCADA IS NOT IN THE SCOPE OF METERING SKID VENDOR.
  5. INLET & OUTLET OF SKID SHALL BE PROVIDED WITH COMPANION FLANGES.
  6. ALL BALL VALVES SHALL BE FULL BORE ONLY.
  7. SIZE, RATING & SET PRESSURE OF PSV's TO BE DECIDED DURING DETAILED ENGINEERING.
  8. SKID SHALL BE SYMMETRIC ACROSS CENTRE LINE.
  9. EACH VENT LINE SHALL BE COMBINATION OF A BALL VALVE AND A PLUG VALVE/GLOBE VALVE.
  10. FUTURE PROVISION FOR CAPACITY AUGMENTATION HAS BEEN PROVIDED. HOWEVER M/s IGGL HAS TO CONFIRM.

**CHECK METERING FACILITY  
PROCESS DATA**

LOCATION	FLOW (MMSCMD)	INLET/OUTLET PRESSURE Kg/Cm <sup>2</sup> (g)	TEMPERATURE(DESIGN)	TEMPERATURE(WORKING)	DESIGN PRESSURE	DESIGN CLASS
SILIGURI DT	0.07	25-55	-29° TO 65°C	0° TO 55°C	92 Kg/Cm <sup>2</sup> (g)	600#

**VALVE LEGEND**

- BALL VALVE FLANGE END
- BALL VALVE BW END/UPTO 1/2" SW END.
- PLUG VALVE BW END/UPTO 1/2" SW END.
- PLUG VALVE FLANGE END
- GLOBE VALVE.



**INDRADHANUSH GAS  
GRID LIMITED**

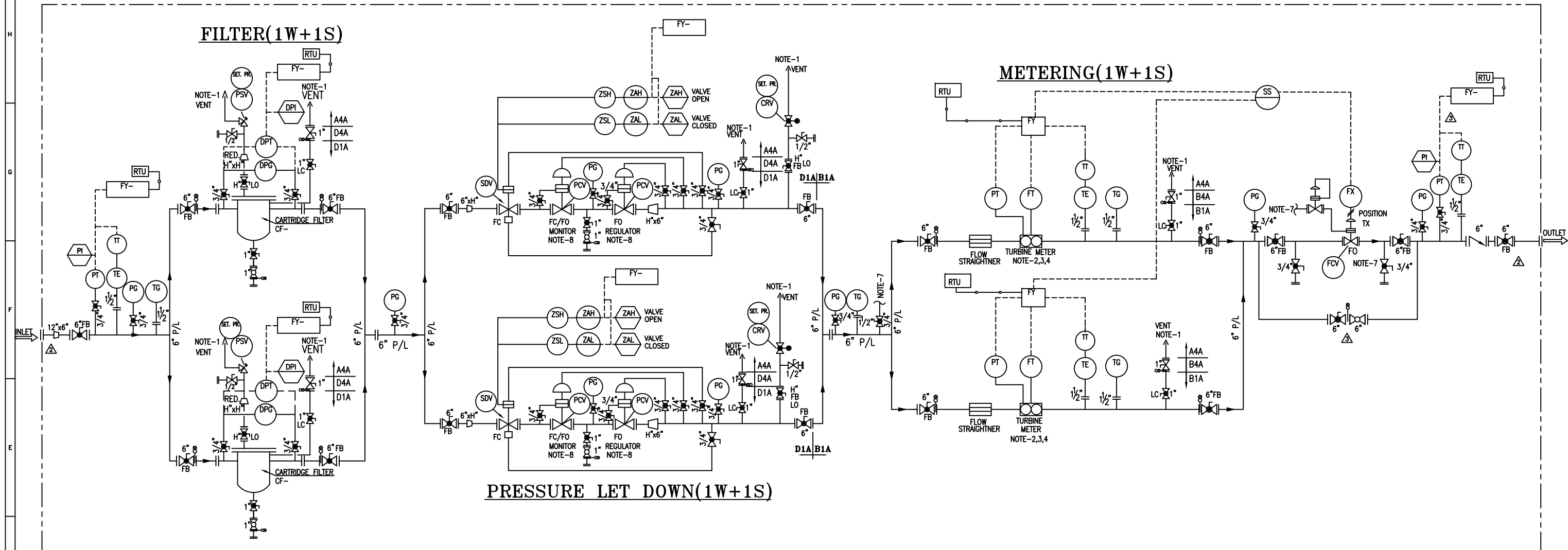


मेकॉन लिमिटेड  
**MECON LIMITED**

REV	INST.	CONCURRED BY

REV.NO	DATE	ZONE	DESCRIPTION	BY	VERIFIED

SECTION	OIL & GAS	LOCATION	DELHI	DESIGNED	UMAR	DRAWN	BOBBY	CHECKED AND VERIFIED	A.K.BHARTI	APPROVED	SIG (S.KUMAR)	DATE	13.09.22	SCALE : NTS	DRG. NO.	M/004/0007	REV	4
<p><b>NORTH EAST GAS GRID (PHASE-1 &amp; 2 P/L SECTION)</b></p> <p><b>P &amp; ID FOR CHECK METERING FACILITY AT SILIGURI DT</b></p>																		
<p>© Copyright MECON LIMITED - All rights reserved. THIS DRAWING IS THE PROPERTY OF MECON AND ISSUED FOR THE SPECIFIC PROJECT MENTIONED THEREIN. THIS IS NOT TO BE COPIED OR USED FOR OTHER PROJECTS UNLESS EXPRESSLY PERMITTED BY MECON.</p>																		



**CONSUMER'S DETAILS/PROCESS DATA**

CONSUMER	FLOW (MMSCMD)	INLET PRESSURE Kg/Cm <sup>2</sup> (g)	OUTLET PRESSURE Kg/Cm <sup>2</sup> (g)	TEMPERATURE(DESIGN)	TEMPERATURE(WORKING)	DESIGN PRESSURE	DESIGN CLASS
NEEPCO AGARTALA, SECTION-13	0.5	25-55	20-35	-29° TO 65°C	0° TO 55°C	92/49 Kg/Cm2(g)	600#/300#

**CUSTODY TRANSFER METERING SKID**

**NOTES:**

1. ALL VENTS SHALL BE LOCATED MIN. HEIGHT OF 3 MTR. ABOVE THE HIGHEST OPERATING LEVEL.
2. METERING SHALL BE DONE BY TURBINE FLOW METER WITH PANEL BASED FLOW COMPUTER WITH GSM. INSTALLATION SHALL BE AS PER AGA7 LATEST EDITION. HOWEVER THERE SHALL BE TWO STREAMS OF METERING (1W+1S).
3. ENVIRONMENTAL ENCLOSURE REQUIRED FOR METERING INSTRUMENTS. INSULATION OF TURBINE METER, METER RUN & IMPLUSE LINES OF METERING INSTRUMENT IS REQUIRED.
4. PROVISION SHALL BE KEPT TO HOOK UP INLET & OUTLET PR. & TEMP., FLOW PERAMETERS WITH SCADA. HOWEVER SCADA IS NOT IN THE SCOPE OF METERING SKID VENDOR.
5. NOTE DELETED.
6. ALL BALL VALVES SHALL BE FULL BORE ONLY.
7. FCV SHALL BE GAS ACTUATED & GAS TAPPING FOR ACTUATION OF FCV SHALL BE BEFORE METERING.
8. SDV SHALL BE OF SLAM SHUT VALVE & SHALL BE CLOSED IN EVENT OF HIGH PRESSURE DISCHARGE FROM PRESSURE CONTROL VALVE.
9. ALL DRAIN SHALL BE CONNECTED SECTIONWISE (FILTR, METER & PCV ETC.)
10. SIZE, RATING & SET PRESSURE OF PSV's AND CRV's TO BE DECIDED DURING DETAILED ENGINEERING.
11. SKID SHALL BE SYMMETRIC ACROSS CENTRE LINE.
12. INLET & OUTLET OF SKID SHALL BE PROVIDED WITH COMPANION FLANGES.
13. EACH VENT LINE SHALL BE COMBINATION OF A BALL VALVE AND A PLUG VALVE/GLOBE VALVE.
14. EXPANDER/REDUCER ACROSS PRS SHALL BE ECCENTRIC TYPE AND ADEQUATE SLOPE SHALL BE PROVIDED TOWARDS THE DRAIN LINE FOR PROPER CONDENSATE DRAINING (IF ANY).
15. NOTE DELETED.

**VALVE LEGEND**

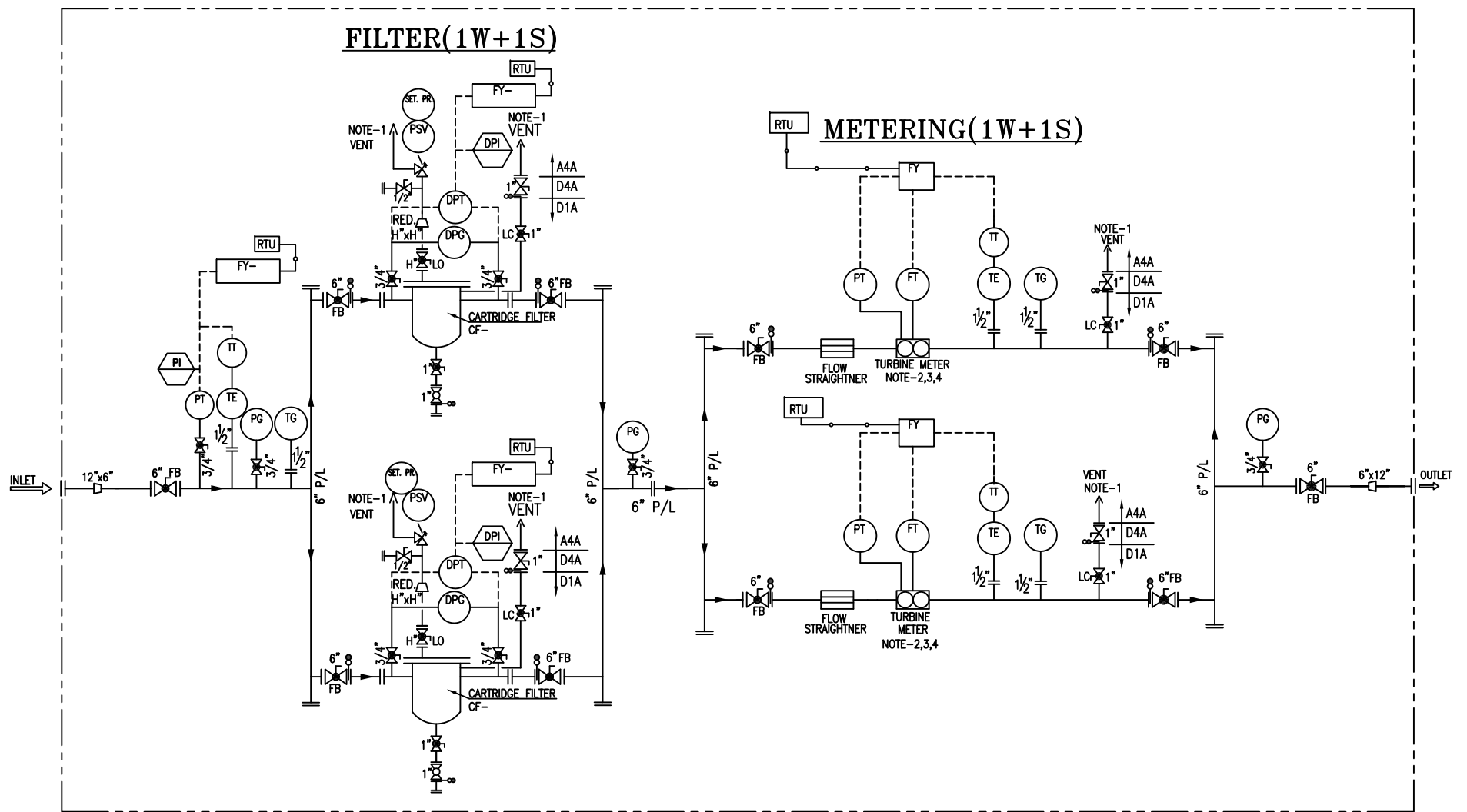
- |X|- BALL VALVE FLANGE END
- |X|- BALL VALVE BW END/UP TO 1/2" SW END.
- |X|- PLUG VALVE BW END/UP TO 1/2" SW END.
- |X|- PLUG VALVE FLANGE END
- |X|- GLOBE VALVE.

	<b>INDRADHANUSH GAS GRID LIMITED</b>
	मेकॉन लिमिटेड
	<b>MECON LIMITED</b>

SECTION	OIL & GAS	NORTH EAST GAS GRID (PHASE-1 & 2 P/L SECTION)
LOCATION	DELHI	
DESIGNED	UMAR	P & ID OF CUSTODY TRANSFER METERING SKID FOR NEEPCO AGARTALA
DRAWN	BOBBY	
CHECKED AND VERIFIED	A.K.BHARTI	SCALE : NTS
APPROVED	SIG (S.KUMAR)	DATE 13.09.22

REV	INST.	CONCURRED BY	REV.NO	DATE	ZONE	DESCRIPTION	BY	VERIFIED
△			22.08.22			GENERAL REVISION	ANAND	UMAR
△			06.08.22			AS PER REQUIREMENT	ANAND	UMAR

© Copyright MECON LIMITED - All rights reserved.  
THIS DRAWING IS THE PROPERTY OF MECON AND ISSUED FOR THE SPECIFIC PROJECT MENTIONED THEREIN. THIS IS NOT TO BE COPIED OR USED FOR OTHER PROJECTS UNLESS EXPRESSLY PERMITTED BY MECON.



- NOTES:**
1. ALL VENTS SHALL BE LOCATED MIN. HEIGHT OF 3 MTR. ABOVE THE HIGHEST OPERATING LEVEL.
  2. METERING SHALL BE DONE BY TURBINE FLOW METER WITH PANEL BASED FLOW COMPUTER WITH GSM. INSTALLATION SHALL BE AS PER AGA7 LATEST EDITION. HOWEVER THERE SHALL BE TWO STREAMS OF METERING (1W+1S).
  3. ENVIRONMENTAL ENCLOSURE REQUIRED FOR METERING INSTRUMENTS. INSULATION OF TURBINE METER, METER RUN & IMPLUSE LINES OF METERING INSTRUMENT IS REQUIRED.
  4. PROVISION SHALL BE KEPT TO HOOK UP METERING PR. & TEMP., FLOW PARAMETERS WITH SCADA. HOWEVER SCADA IS NOT IN THE SCOPE OF METERING SKID VENDOR.
  5. INLET & OUTLET OF SKID SHALL BE PROVIDED WITH COMPANION FLANGES.
  6. ALL BALL VALVES SHALL BE FULL BORE ONLY.
  7. SIZE, RATING & SET PRESSURE OF PSV's TO BE DECIDED DURING DETAILED ENGINEERING.
  8. SKID SHALL BE SYMMETRIC ACROSS CENTRE LINE.
  9. EACH VENT LINE SHALL BE COMBINATION OF A BALL VALVE AND A PLUG VALVE/GLOBE VALVE.

**CHECK METERING FACILITY  
PROCESS DATA**

LOCATION	△ FLOW (MMSCMD)	INLET/OUTLET PRESSURE Kg/Cm <sup>2</sup> (G)	TEMPERATURE(DESIGN)	TEMPERATURE(WORKING)	DESIGN PRESSURE	DESIGN CLASS
GNPL SV-15 FOR DIMAPUR, SECTION-8	0.5	25-55	-29° TO 65°C	0° TO 55°C	92 Kg/Cm2(g)	600#

- VALVE LEGEND**
- |—|— BALL VALVE FLANGE END
  - |—|— BALL VALVE BW END/UPTO 1/2" SW END.
  - |—|— PLUG VALVE BW END/UPTO 1/2" SW END.
  - |—|— PLUG VALVE FLANGE END
  - |—|— GLOBE VALVE.

**INDRADHANUSH GAS  
GRID LIMITED**

मेकॉन लिमिटेड

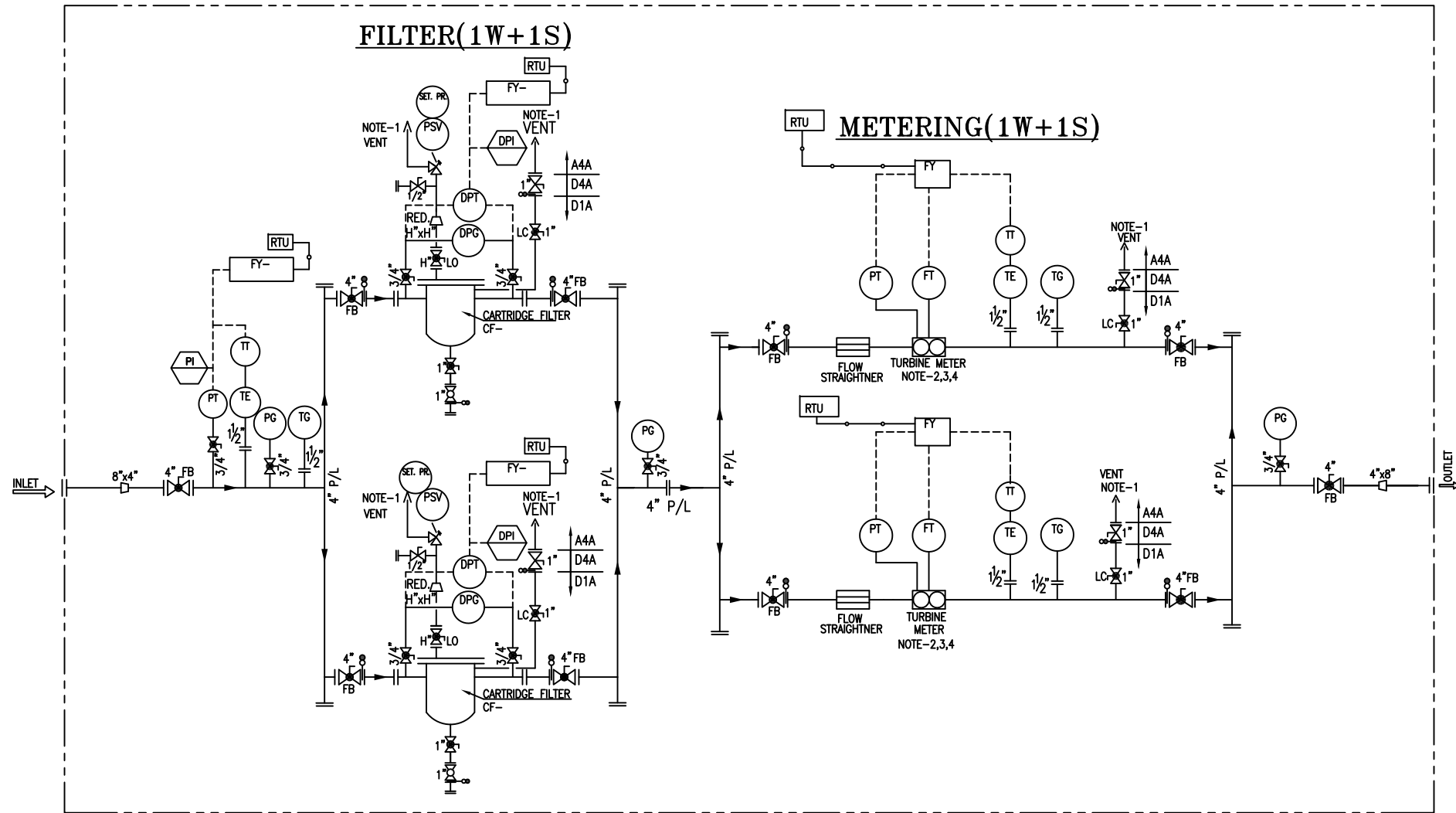
**MECON LIMITED**

SECTION	OIL & GAS	NORTH EAST GAS GRID (PHASE-1 & 2 P/L SECTION)
LOCATION	DELHI	
DESIGNED	UMAR	P & ID FOR CHECK METERING FACILITY AT SV-15 CUM DT FOR DIMAPUR
DRAWN	BOBBY	
CHECKED AND VERIFIED	A.K.BHARTI	SCALE : NTS
APPROVED	SIG (S.KUMAR)	
DATE	13.09.22	DRG. NO. MEC/23JU/05/28/M/004/0009

REV.NO	DATE	ZONE	DESCRIPTION	BY	VERIFIED
△	13.09.22		GENERAL REVISION	UMAR	AKB
△	22.08.22		GENERAL REVISION	ANAND	UMAR
△	06.08.22		AS PER REQUIREMENT	ANAND	UMAR

REV	INST.	CONCURRED BY
SEC		

© Copyright MECON LIMITED - All rights reserved.  
THIS DRAWING IS THE PROPERTY OF MECON AND ISSUED FOR THE SPECIFIC PROJECT MENTIONED THEREIN. THIS IS NOT TO BE COPIED OR USED FOR OTHER PROJECTS UNLESS EXPRESSLY PERMITTED BY MECON.



- NOTES:**
1. ALL VENTS SHALL BE LOCATED MIN. HEIGHT OF 3 MTR. ABOVE THE HIGHEST OPERATING LEVEL.
  2. METERING SHALL BE DONE BY TURBINE FLOW METER WITH PANEL BASED FLOW COMPUTER WITH GSM. INSTALLATION SHALL BE AS PER AGA7 LATEST EDITION. HOWEVER THERE SHALL BE TWO STREAMS OF METERING (1W+1S).
  3. ENVIRONMENTAL ENCLOSURE REQUIRED FOR METERING INSTRUMENTS. INSULATION OF TURBINE METER, METER RUN & IMPLUSE LINES OF METERING INSTRUMENT IS REQUIRED.
  4. PROVISION SHALL BE KEPT TO HOOK UP METERING PR. & TEMP., FLOW PARAMETERS WITH SCADA. HOWEVER SCADA IS NOT IN THE SCOPE OF METERING SKID VENDOR.
  5. INLET & OUTLET OF SKID SHALL BE PROVIDED WITH COMPANION FLANGES.
  6. ALL BALL VALVES SHALL BE FULL BORE ONLY.
  7. SIZE, RATING & SET PRESSURE OF PSV's TO BE DECIDED DURING DETAILED ENGINEERING.
  8. SKID SHALL BE SYMMETRIC ACROSS CENTRE LINE.
  9. EACH VENT LINE SHALL BE COMBINATION OF A BALL VALVE AND A PLUG VALVE/GLOBE VALVE.

**CHECK METERING FACILITY  
PROCESS DATA**

LOCATION	△ FLOW (MMSCMD)	INLET/OUTLET PRESSURE Kg/Cm <sup>2</sup> (G)	TEMPERATURE(DESIGN)	TEMPERATURE(WORKING)	DESIGN PRESSURE	DESIGN CLASS
GNPL SV-10 FOR ITANAGAR, SECTION-2	0.25	25-55	-29° TO 65°C	0° TO 55°C	92 Kg/Cm2(g)	600#

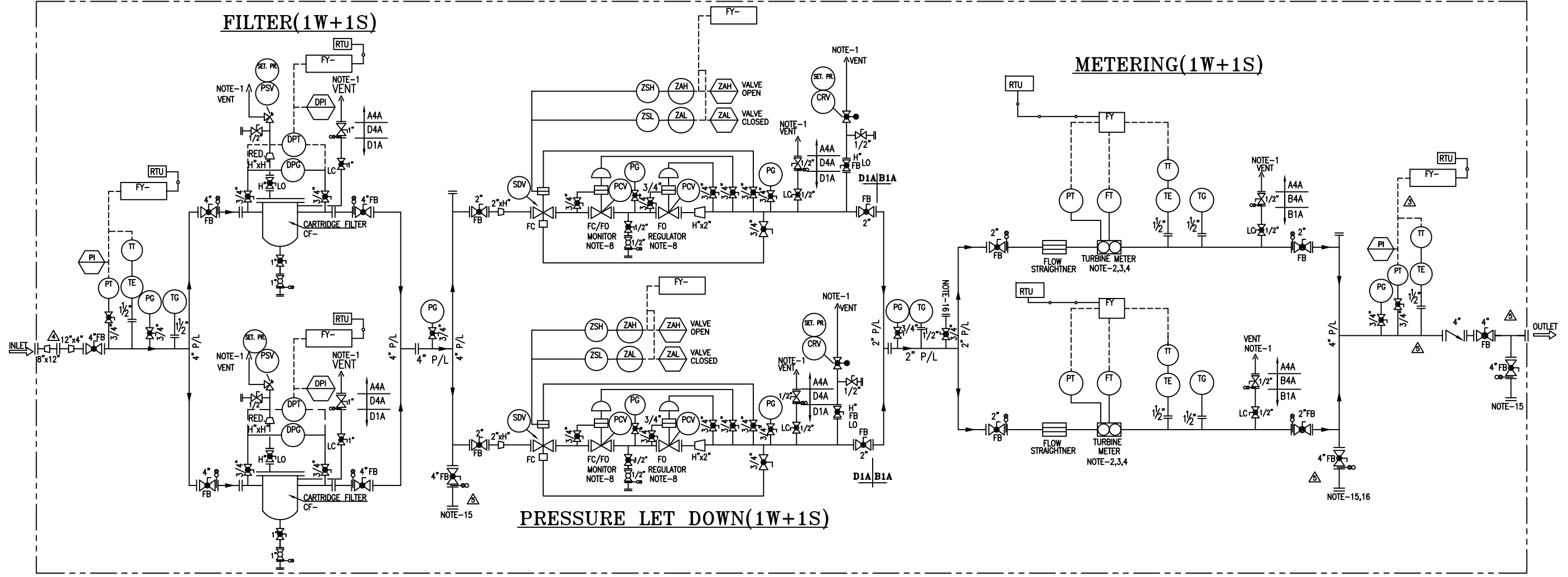
- VALVE LEGEND**
- ⊞ BALL VALVE FLANGE END
  - ⊞ BALL VALVE BW END/UPTO 1/2" SW END.
  - ⊞ PLUG VALVE BW END/UPTO 1/2" SW END.
  - ⊞ PLUG VALVE FLANGE END
  - ⊞ GLOBE VALVE.

	<b>INDRADHANUSH GAS GRID LIMITED</b>
	<b>मेकॉन लिमिटेड</b>
	<b>MECON LIMITED</b>
SECTION OIL & GAS	<b>NORTH EAST GAS GRID (PHASE-1 &amp; 2 P/L SECTION)</b>
LOCATION DELHI	<b>P &amp; ID FOR CHECK METERING FACILITY AT SV-10 CUM DT FOR ITANAGAR</b>
DESIGNED UMAR	SCALE : NTS
DRAWN BOBBY	DRG. NO. MEC/23JU/05/28/M/004/0010
CHECKED AND VERIFIED A.K.BHARTI	REV 4
APPROVED SIG (S.KUMAR) DATE 13.09.22	

REV	INST.	CONCURRED BY	REV.NO	DATE	ZONE	DESCRIPTION	BY	VERIFIED
△			13.09.22			GENERAL REVISION	UMAR	AKB
△								
△								
△								

REFERENCES DRG.NO.  
 © Copyright MECON LIMITED - All rights reserved.  
 THIS DRAWING IS THE PROPERTY OF MECON AND ISSUED FOR THE SPECIFIC PROJECT MENTIONED THEREIN. THIS IS NOT TO BE COPIED OR USED FOR OTHER PROJECTS UNLESS EXPRESSLY PERMITTED BY MECON.





**PROCESS DATA**

**METERING SKID FOR CGD (TYP-1)**

FLOW (SCMH) $\Delta$	INLET PRESSURE Kg/Cm <sup>2</sup> (g)	OUTLET PRESSURE Kg/Cm <sup>2</sup> (g)	TEMPERATURE(DESIGN)	TEMPERATURE(WORKING)	DESIGN PRESSURE	DESIGN CLASS
2300	25-55	20-35	-29° TO 65°C	0° TO 55°C	92/49 Kg/Cm <sup>2</sup> (g)	600#/300#

**NOTES:**

1. ALL VENTS SHALL BE LOCATED MIN. HEIGHT OF 3 MTR. ABOVE THE HIGHEST OPERATING LEVEL.
2. METERING SHALL BE DONE BY TURBINE FLOW METER WITH PANEL BASED FLOW COMPUTER WITH GSM. INSTALLATION SHALL BE AS PER AGA7 LATEST EDITION. HOWEVER THERE SHALL BE TWO STREAMS OF METERING (1W+1S).
3. ENVIRONMENTAL ENCLOSURE REQUIRED FOR METERING INSTRUMENTS. INSULATION OF TURBINE METER, METER RUN & IMPLUSE LINES OF METERING INSTRUMENT IS REQUIRED.
4. PROVISION SHALL BE KEPT TO HOOK UP INLET & OUTLET PR. & TEMP., FLOW PERAMETERS WITH SCADA. HOWEVER SCADA IS NOT IN THE SCOPE OF METERING SKID VENDOR.
5. NOTE DELETED.
6. ALL BALL VALVES SHALL BE FULL BORE ONLY.
7. FCV SHALL BE GAS ACTUATED & GAS TAPPING FOR ACTUATION OF FCV SHALL BE BEFORE METERING.
8. SDV SHALL BE OF SLAM SHUT VALVE & SHALL BE CLOSED IN EVENT OF HIGH PRESSURE DISCHARGE FROM PRESSURE CONTROL VALVE.
9. ALL DRAIN SHALL BE CONNECTED SECTIONWISE (FILTR, METER & PCV ETC.)
10. SIZE, RATING & SET PRESSURE OF PSV's AND CRV's TO BE DECIDED DURING DETAILED ENGINEERING.
11. SKID SHALL BE SYMMETRIC ACROSS CENTRE LINE.
12. INLET & OUTLET OF SKID SHALL BE PROVIDED WITH COMPANION FLANGES.
13. EACH VENT LINE SHALL BE COMBINATION OF A BALL VALVE AND A PLUG VALVE/GLOBE VALVE.
14. EXPANDER/REDUCER ACROSS PRS SHALL BE ECCENTRIC TYPE AND ADEQUATE SLOPE SHALL BE PROVIDED TOWARDS THE DRAIN LINE FOR PROPER CONDENSATE DRAINING (IF ANY).
15. FUTURE PROVISION FOR CAPACITY AUGMENTATION HAS BEEN PROVIDED. PROVISION TO BE KEPT FOR 4" PRS & METERING STREAMS IN PLOT PLAN.
16. PROVISION FOR FCV (IF REQUIRED).

**VALVE LEGEND**

- BALL VALVE FLANGE END
- BALL VALVE BW END/ UPTO 1/2" SW END.
- PLUG VALVE BW END/ UPTO 1/2" SW END.
- PLUG VALVE FLANGE END
- GLOBE VALVE.

	<b>INDRADHANUSH GAS GRID LIMITED</b>
	मेकॉन लिमिटेड
	<b>MECON LIMITED</b>

REV	INST.	CONCURRED BY	REV.NO	DATE	ZONE	DESCRIPTION	BY	VERIFIED	REFERENCES	DRG.NO.	CHECKED AND VERIFIED	SIG	(S.KUMAR)	DATE	14.10.22	SCALE : NTS	REV
			14.10.22			AS PER REQUIREMENT	UMAR	AKB									
			13.09.22			GENERAL REVISION	UMAR	AKB									
			22.08.22			GENERAL REVISION	ANAND	UMAR									
			04.08.22			AS PER REQUIREMENT	ANAND	UMAR									

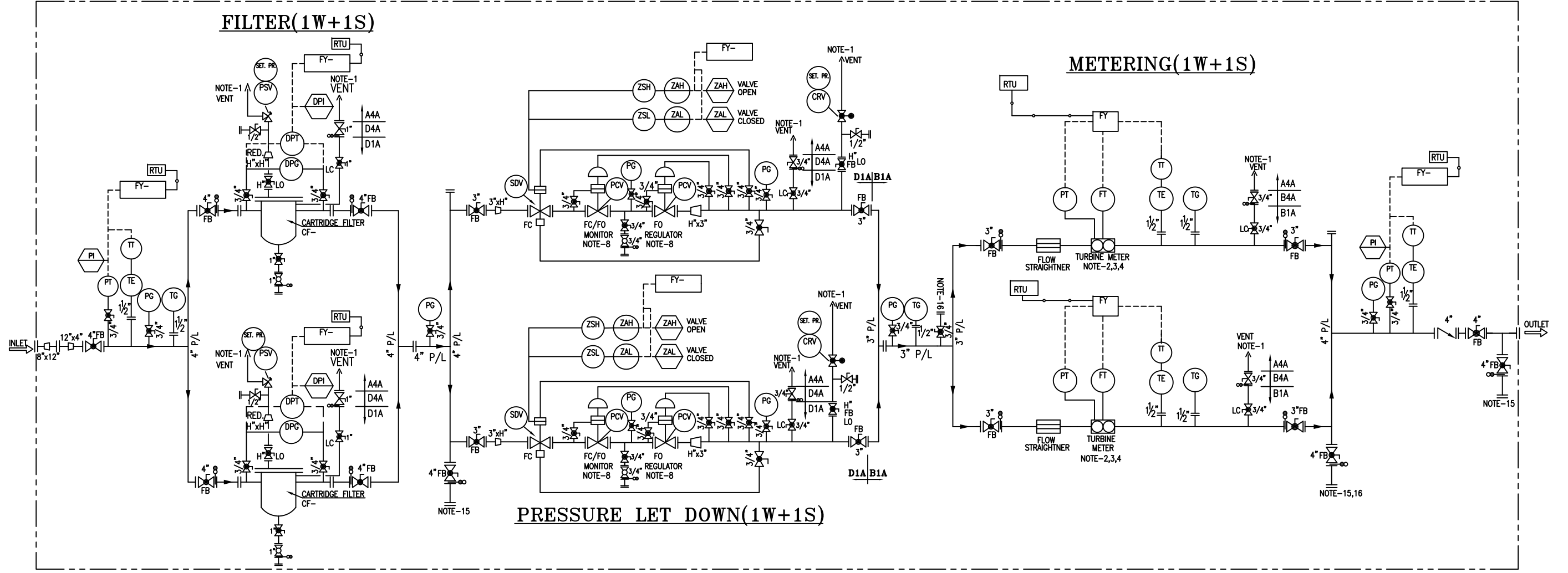
**NORTH EAST GAS GRID (PHASE-1 & 2 P/L SECTION)**

**P & ID OF METERING SKID FOR CGD (TYPE-1)**

SCALE : NTS

DRG. NO. MEC/23JU/05/28/M/004/0004

194 of 626



**PROCESS DATA**

**METERING SKID FOR CGD (TYP-2)**

FLOW (SCMH)	INLET PRESSURE Kg/Cm <sup>2</sup> (g)	OUTLET PRESSURE Kg/Cm <sup>2</sup> (g)	TEMPERATURE(DESIGN)	TEMPERATURE(WORKING)	DESIGN PRESSURE	DESIGN CLASS
5000	25-55	20-35	-29° TO 65°C	0° TO 55°C	92/49 Kg/Cm <sup>2</sup> (g)	600#/300#

**NOTES:**

1. ALL VENTS SHALL BE LOCATED MIN. HEIGHT OF 3 MTR. ABOVE THE HIGHEST OPERATING LEVEL.
2. METERING SHALL BE DONE BY TURBINE FLOW METER WITH PANEL BASED FLOW COMPUTER WITH GSM. INSTALLATION SHALL BE AS PER AGA7 LATEST EDITION. HOWEVER THERE SHALL BE TWO STREAMS OF METERING (1W+1S).
3. ENVIRONMENTAL ENCLOSURE REQUIRED FOR METERING INSTRUMENTS. INSULATION OF TURBINE METER, METER RUN & IMPLUSE LINES OF METERING INSTRUMENT IS REQUIRED.
4. PROVISION SHALL BE KEPT TO HOOK UP INLET & OUTLET PR. & TEMP., FLOW PERAMETERS WITH SCADA. HOWEVER SCADA IS NOT IN THE SCOPE OF METERING SKID VENDOR.
5. NOTE DELETED.
6. ALL BALL VALVES SHALL BE FULL BORE ONLY.
7. FCV SHALL BE GAS ACTUATED & GAS TAPPING FOR ACTUATION OF FCV SHALL BE BEFORE METERING.
8. SDV SHALL BE OF SLAM SHUT VALVE & SHALL BE CLOSED IN EVENT OF HIGH PRESSURE DISCHARGE FROM PRESSURE CONTROL VALVE.
9. ALL DRAIN SHALL BE CONNECTED SECTIONWISE (FILTR, METER & PCV ETC.)
10. SIZE, RATING & SET PRESSURE OF PSV's AND CRV's TO BE DECIDED DURING DETAILED ENGINEERING.
11. SKID SHALL BE SYMMETRIC ACROSS CENTRE LINE.
12. INLET & OUTLET OF SKID SHALL BE PROVIDED WITH COMPANION FLANGES.
13. EACH VENT LINE SHALL BE COMBINATION OF A BALL VALVE AND A PLUG VALVE/GLOBE VALVE.
14. EXPANDER/REDUCER ACROSS PRS SHALL BE ECCENTRIC TYPE AND ADEQUATE SLOPE SHALL BE PROVIDED TOWARDS THE DRAIN LINE FOR PROPER CONDENSATE DRAINING (IF ANY).
15. FUTURE PROVISION FOR CAPACITY AUGMENTATION HAS BEEN PROVIDED. PROVISION TO BE KEPT FOR 4" PRS & METERING STREAMS IN PLOT PLAN.
16. PROVISION FOR FCV (IF REQUIRED).

**VALVE LEGEND**

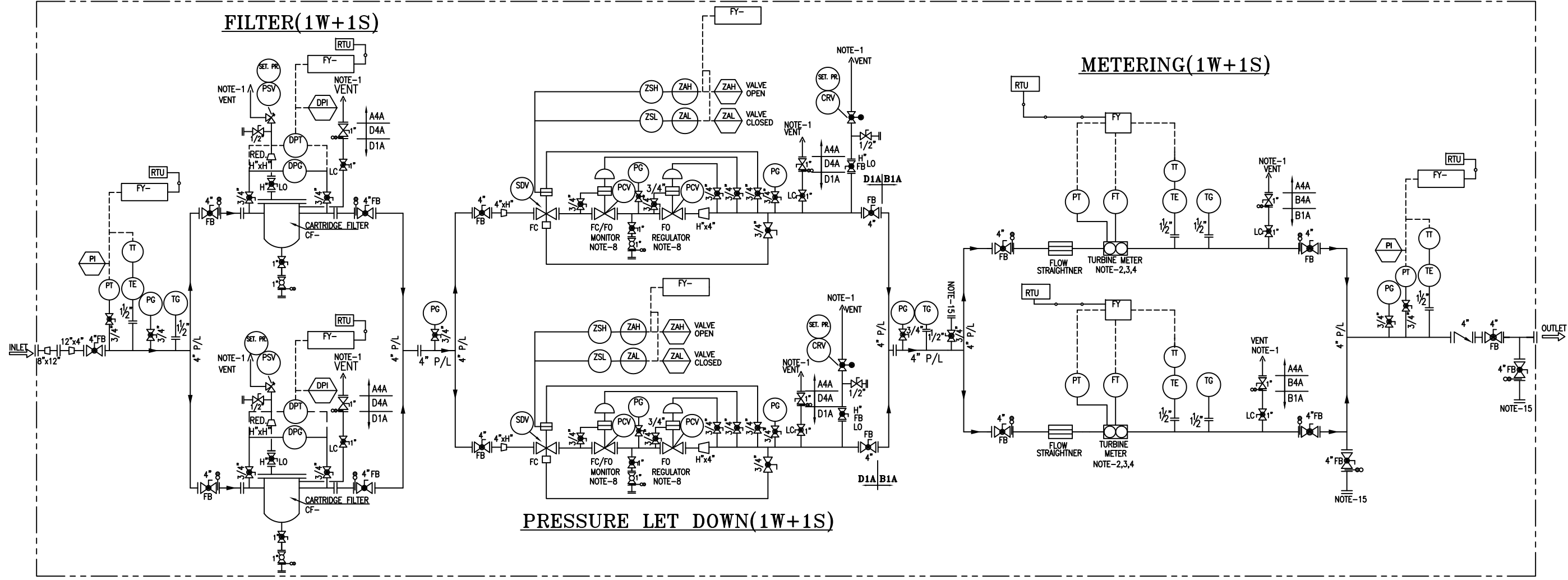
- BALL VALVE FLANGE END
- BALL VALVE BW END/UPTO 1/2" SW END.
- PLUG VALVE BW END/UPTO 1/2" SW END.
- PLUG VALVE FLANGE END
- GLOBE VALVE.

	<b>INDRADHANUSH GAS GRID LIMITED</b>
	मेकॉन लिमिटेड
	<b>MECON LIMITED</b>

SECTION	OIL & GAS	NORTH EAST GAS GRID (PHASE-1 & 2 P/L SECTION)
LOCATION	DELHI	
DESIGNED	UMAR	
DRAWN	BOBBY	
CHECKED AND VERIFIED	A.K.BHARTI	P & ID OF METERING SKID FOR CGD (TYPE-2)
APPROVED	SIG (S.KUMAR)	
DATE	14.10.22	SCALE : NTS
		DRG. NO. MEC/23JU/05/28/M/004/0011
		195 of 626
		REV 5

REV	INST.	CONCURRED BY	REV.NO	DATE	ZONE	DESCRIPTION	BY	VERIFIED

REFERENCES DRG.NO.  
 © Copyright MECON LIMITED - All rights reserved.  
 THIS DRAWING IS THE PROPERTY OF MECON AND ISSUED FOR THE SPECIFIC PROJECT MENTIONED THEREIN. THIS IS NOT TO BE COPIED OR USED FOR OTHER PROJECTS UNLESS EXPRESSLY PERMITTED BY MECON.



**PROCESS DATA**

**METERING SKID FOR CGD (TYP-3)**

FLOW (SCMH)	INLET PRESSURE Kg/Cm <sup>2</sup> (g)	OUTLET PRESSURE Kg/Cm <sup>2</sup> (g)	TEMPERATURE(DESIGN)	TEMPERATURE(WORKING)	DESIGN PRESSURE	DESIGN CLASS
9000	25-55	20-35	-29° TO 65°C	0° TO 55°C	92/49 Kg/Cm <sup>2</sup> (g)	600#/300#

**NOTES:**

1. ALL VENTS SHALL BE LOCATED MIN. HEIGHT OF 3 MTR. ABOVE THE HIGHEST OPERATING LEVEL.
2. METERING SHALL BE DONE BY TURBINE FLOW METER WITH PANEL BASED FLOW COMPUTER WITH GSM. INSTALLATION SHALL BE AS PER AGA7 LATEST EDITION. HOWEVER THERE SHALL BE TWO STREAMS OF METERING (1W+1S).
3. ENVIRONMENTAL ENCLOSURE REQUIRED FOR METERING INSTRUMENTS. INSULATION OF TURBINE METER, METER RUN & IMPLUSE LINES OF METERING INSTRUMENT IS REQUIRED.
4. PROVISION SHALL BE KEPT TO HOOK UP INLET & OUTLET PR. & TEMP., FLOW PERAMETERS WITH SCADA. HOWEVER SCADA IS NOT IN THE SCOPE OF METERING SKID VENDOR.
5. NOTE DELETED.
6. ALL BALL VALVES SHALL BE FULL BORE ONLY.
7. FCV SHALL BE GAS ACTUATED & GAS TAPPING FOR ACTUATION OF FCV SHALL BE BEFORE METERING.
8. SDV SHALL BE OF SLAM SHUT VALVE & SHALL BE CLOSED IN EVENT OF HIGH PRESSURE DISCHARGE FROM PRESSURE CONTROL VALVE.
9. ALL DRAIN SHALL BE CONNECTED SECTIONWISE (FILTR, METER & PCV ETC.)
10. SIZE, RATING & SET PRESSURE OF PSV's AND CRV's TO BE DECIDED DURING DETAILED ENGINEERING.
11. SKID SHALL BE SYMMETRIC ACROSS CENTRE LINE.
12. INLET & OUTLET OF SKID SHALL BE PROVIDED WITH COMPANION FLANGES.
13. EACH VENT LINE SHALL BE COMBINATION OF A BALL VALVE AND A PLUG VALVE/GLOBE VALVE.
14. EXPANDER/REDUCER ACROSS PRS SHALL BE ECCENTRIC TYPE AND ADEQUATE SLOPE SHALL BE PROVIDED TOWARDS THE DRAIN LINE FOR PROPER CONDENSATE DRAINING (IF ANY).
15. PROVISION FOR FCV (IF REQUIRED).

**VALVE LEGEND**

- |—|— BALL VALVE FLANGE END
- |—|— BALL VALVE BW END/UPTO 1/2" SW END.
- |—|— PLUG VALVE BW END/UPTO 1/2" SW END.
- |—|— PLUG VALVE FLANGE END
- |—|— GLOBE VALVE.

	<b>INDRADHANUSH GAS GRID LIMITED</b>	
	मेकॉन लिमिटेड	
	<b>MECON LIMITED</b>	
	NORTH EAST GAS GRID (PHASE-1 & 2 P/L SECTION)	
SECTION OIL & GAS		P & ID OF METERING SKID FOR CGD (TYPE-3)
LOCATION DELHI		
DESIGNED UMAR		SCALE : NTS
DRAWN BOBBY		
CHECKED AND VERIFIED A.K.BHARTI		REV 0
APPROVED SIG (S.KUMAR) DATE 14.10.22		

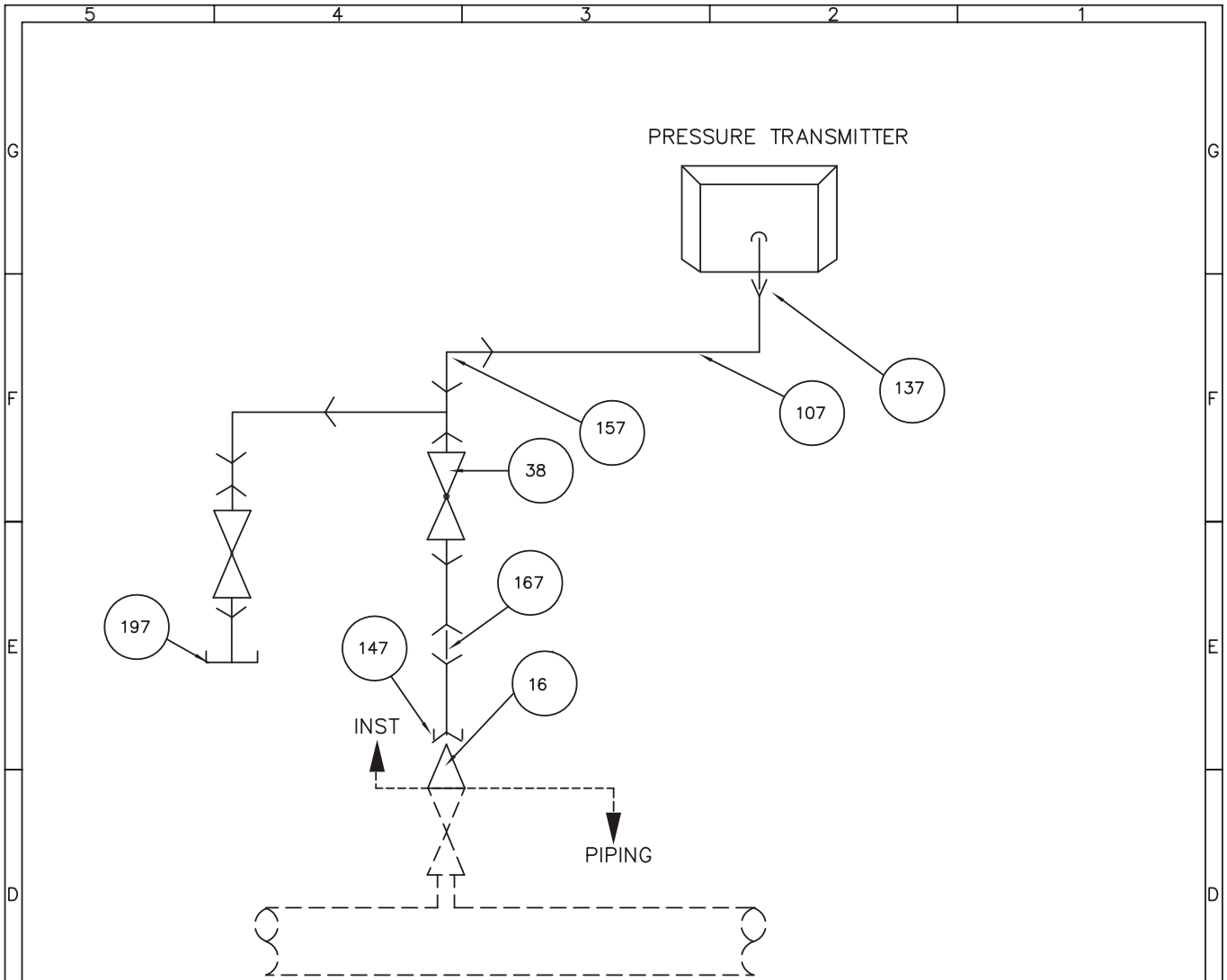
REV	INST.	CONCURRED BY	REV.NO	DATE	ZONE	DESCRIPTION	BY	VERIFIED

REFERENCES DRG.NO. THIS DRAWING IS THE PROPERTY OF MECON AND ISSUED FOR THE SPECIFIC PROJECT MENTIONED THEREIN. THIS IS NOT TO BE COPIED OR USED FOR OTHER PROJECTS UNLESS EXPRESSLY PERMITTED BY MECON.

**ANNEXURE - IV**  
**INSTALLATION DRAWING**


**LIST OF STANDARD DRAWINGS**

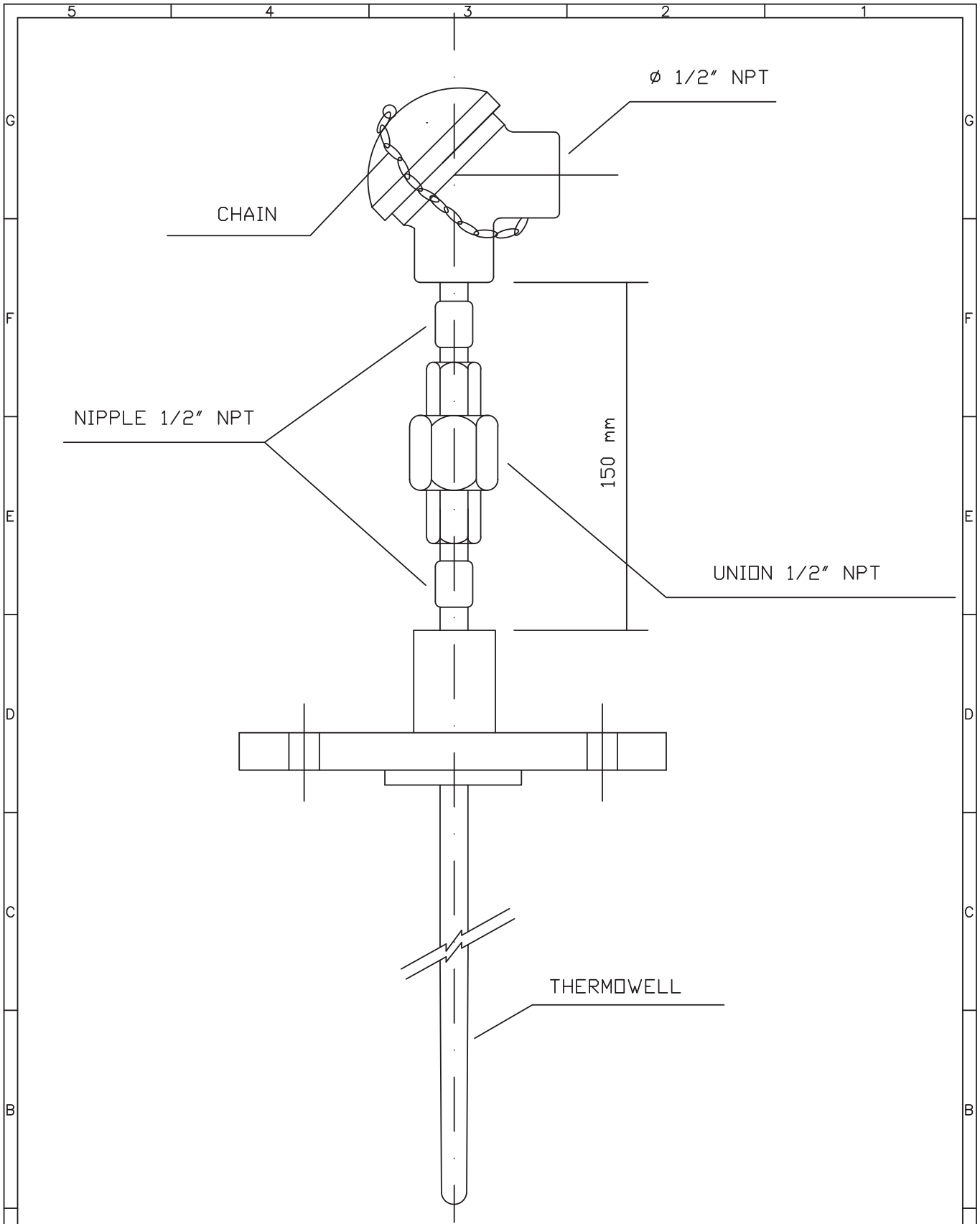
<b>Sl. No.</b>	<b>DRAWING No.</b>	<b>DESCRIPTION</b>	<b>REV.</b>
1	MEC/05/E5/SD/PT/001	INSTALLATION DIAGRAM FOR PRESSURE TRANSMITTER.	0
2	MEC/05/E5/SD/RTD/002	MOUNTING DETAILS FOR RTD ON THERMOWELLS.	0
3	MEC/05/E5/SD/DPG/003	INSTALLATION DIAGRAM FOR DIFERENTIAL PRESSURE GAUGE.	0
4	MEC/05/E5/SD/PG/004	INSTALLATION DIAGRAM FOR PRESSURE GUAGE.	0
5	MEC/05/E5/SD/TG-RTD/005	INSTALLATION DIAGRAM FOR TEMPERATURE GUAGE & RTD.	0
6	MEC/05/E5/SD/RTD-TW/006	MOUNTING DETAILS FOR THERMOWELLS (RTD).	0
7	MEC/05/E5/SD/TG-TW/007	MOUNTING DETAILS FOR THERMOWELLS (T G).	0
8	MEC/05/E5/SD/JB/009	SUPPORT DETAILS FOR JUNCTION BOXES.	0
9	MEC/05/E5/SD/CY/011	FABRICATED CANOPY FOR INSTRUMENTS.	0




### LIST OF MATERIAL

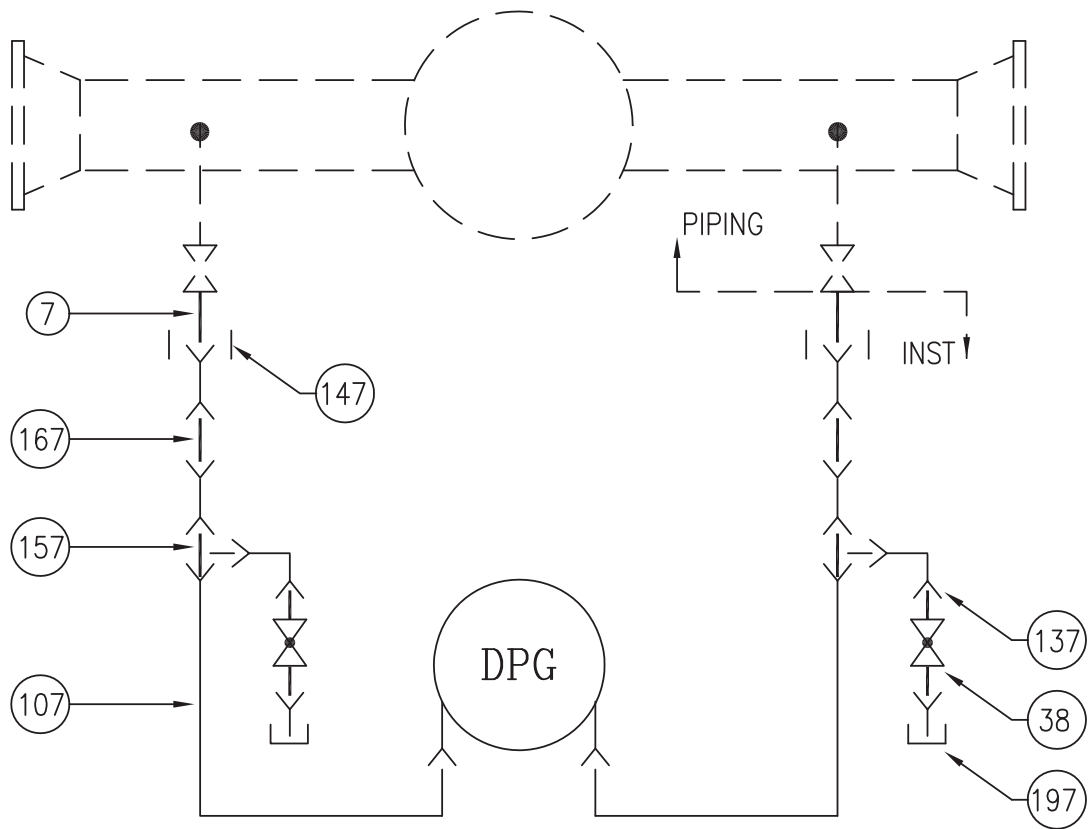
ITEM NO	DESCRIPTION	SIZE	QUANTITY (NOS.)	MATERIAL
16	SWAGE NIPPLE PLXTH	3/4"x1/2"	1	S.S
137	MALE CONNECTOR	1/2"TH 1/2"OD	5	S.S
147	FEMALE CONNECTOR	1/2"TH 1/2"OD	1	S.S
38	BALL VALVE SCR D	1/2"	2	S.S
157	UNION TEE SCR D	1/2"OD	1	S.S
107	TUBE	1/2"OD	A/R	S.S
167	TUBE UNION	1/2"OD	1	S.S
197	PLUG SCR D	1/2"OD	1	S.S

REV NO	DATE	ZONE	DESCRIPTIONS	BY	APPRD	REFERENCES	DRG. NO.			
			REVISIONS							
THIS DRAWING IS PROPERTY OF MECON AND IS ISSUED FOR THE SPECIFIC PROJECT MENTIONED THEREIN. THIS IS NOT TO BE COPIED OR USED FOR OTHER PROJECTS UNLESS EXPRESSLY PERMITTED BY MECON.										
SECTION : ELECTRICAL/INSTN.				<b>INSTALLATION DIAGRAM FOR PRESSURE TRANSMITTER</b>		 <b>मेकॉन लिमिटेड</b> <b>MECON LIMITED</b>				
DSGN	R.K.S	DATE	CHKD					P.S	SCALE : NTS	REV 0
DRWN	IRFAN								DRG.NO. MEC/05/E5/SD/PT/001	
APPROVED	D.G.M									



THIS DRAWING IS PROPERTY OF MECON AND IS ISSUED FOR THE SPECIFIC PROJECT MENTIONED THEREIN. THIS IS NOT TO BE COPIED OR USED FOR OTHER PROJECTS UNLESS EXPRESSLY PERMITTED BY MECON.


A	SECTION	INSTRUMENTATION			INSTALLATION DIAGRAM		मेकॉन लिमिटेड	A
		NAME	SIG.	DATE			MECON LIMITED	
	DSGN.	R.K.S			MOUNTING DETAILS FOR RTD ON THERMOWELLS	SCALE : 1:50	REV 0	
	DRWN	IRFAN				DRG.NO.:MEC/05/E5/SD/RTD/002		
	CHKD. & VERIFIED	P.S						
APPROVED	D.G.M			200 of 626				



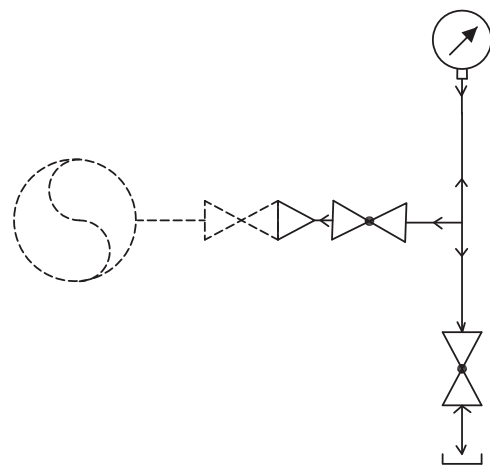
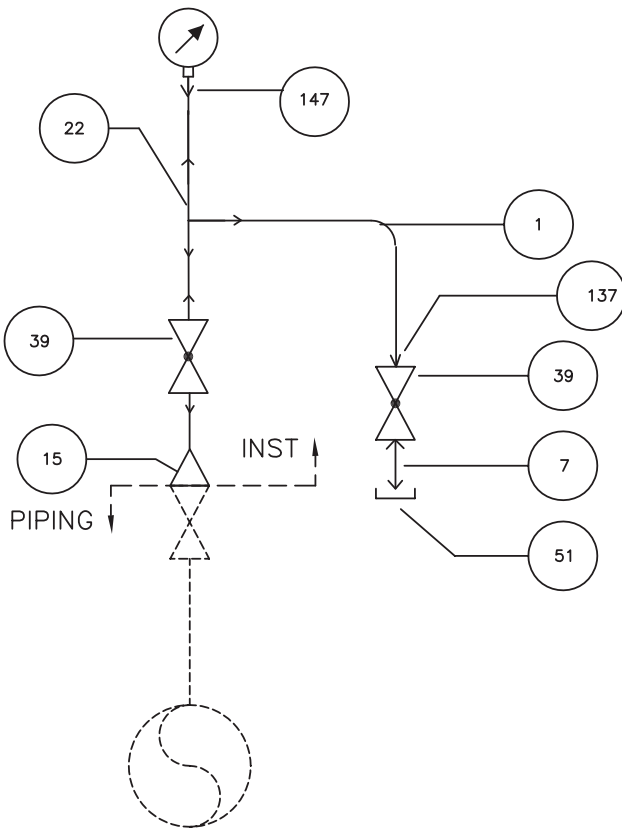
**LIST OF MATERIAL**

ITEM NO.	DESCRIPTION	SIZE	QUANTITY (NOS.)	MATERIAL
197	PLUG SCRD	1/2"	2	S.S
157	UNION TEE SCRD	1/2" OD	2	S.S
167	TUBE UNION	1/2" OD	2	S.S
38	BALL VALVE SCRD	1/2"	2	S.S
137	MALE CONNECTOR	1/2" TH X 1/2" OD	6	S.S
107	TUBE	1/2"	A/R	S.S
7	NIPPLE PLXTH	1/2"	2	S.S
147	FEMALE CONNECTOR	1/2" TH X 1/2" OD	2	S.S

THIS DRAWING IS PROPERTY OF MECON AND IS ISSUED FOR THE SPECIFIC PROJECT MENTIONED THEREIN. THIS IS NOT TO BE COPIED OR USED FOR OTHER PROJECTS UNLESS EXPRESSLY PERMITTED BY MECON.

SECTION	INSTRUMENTATION			INSTALLATION DIAGRAM FOR DIFFERENTIAL PRESSURE GAUGE		मेकॉन लिमिटेड	
	NAME	SIG.	DATE			MECON LIMITED	
DSGN.	RKS.						
DRWN	IRFAN						
CHKD. & VERIFIED	P.S.						
APPROVED	D.G.M.						
					SCALE : 1:50		
					DRG.NO.MEC/05/E5/SD/DPG/003	REV 0	





LIST OF MATERIALS


QUANTITY (NOS.)	ITEM NO.	DESCRIPTION	SIZE	MATERIAL
A/R	1	TUBE	1/2"	S.S
2	7	NIPPLE PL X TH	1/2"	S.S
3	147	FEMALE CONNECTOR	1/2"THx1/2"OD	S.S
1	22	EQUAL TEE	1/2"	S.S
2	39	BALL VALVE SCRD	1/2"	S.S
1	51	PLUG	1/2"	SS
1	15	SWAGE NIPPLE PLXTH	3/4" X 1/2"	SS
2	137	MALE CONNECTOR	1/2"THx1/2" OD	S.S

REV NO	DATE	ZONE	DESCRIPTIONS	BY	APPRD	REFERENCES	DRG. NO.
			REVISIONS				

THIS DRAWING IS PROPERTY OF MECON AND IS ISSUED FOR THE SPECIFIC PROJECT MENTIONED THEREIN. THIS IS NOT TO BE COPIED OR USED FOR OTHER PROJECTS UNLESS EXPRESSLY PERMITTED BY MECON.

SECTION : ELECTRICAL/INSTN.				
NAME	DATE	CHKD	DATE	
DSGN R.K.S		P.S		
DRWN IRFAN				
APPROVED	D.G.M			

INSTALLATION DIAGRAM FOR  
PRESSURE GAUGE



**मेकॉन लिमिटेड**  
**MECON LIMITED**

SCALE : NTS

DRG.NO. MEC/05/E5/SD/PG/004

REV 0

5 4 3 2 1

G G

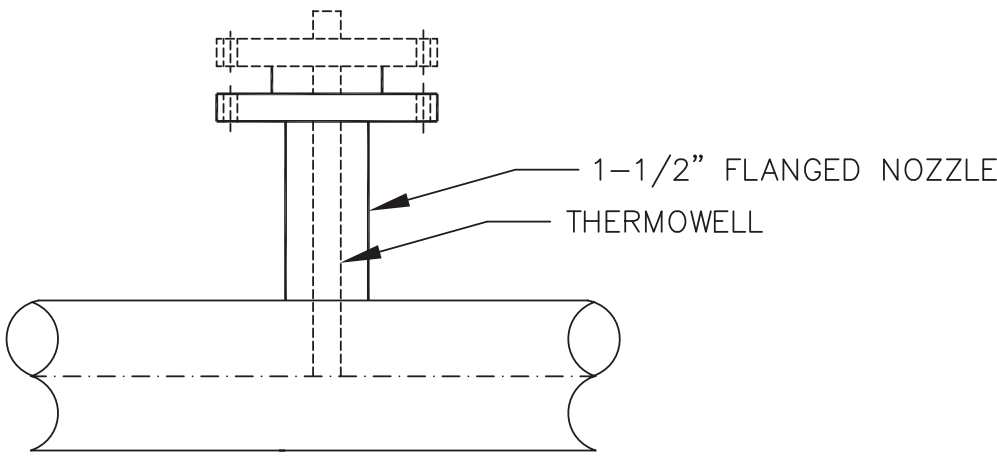
F F

E E

D D

C C

B B

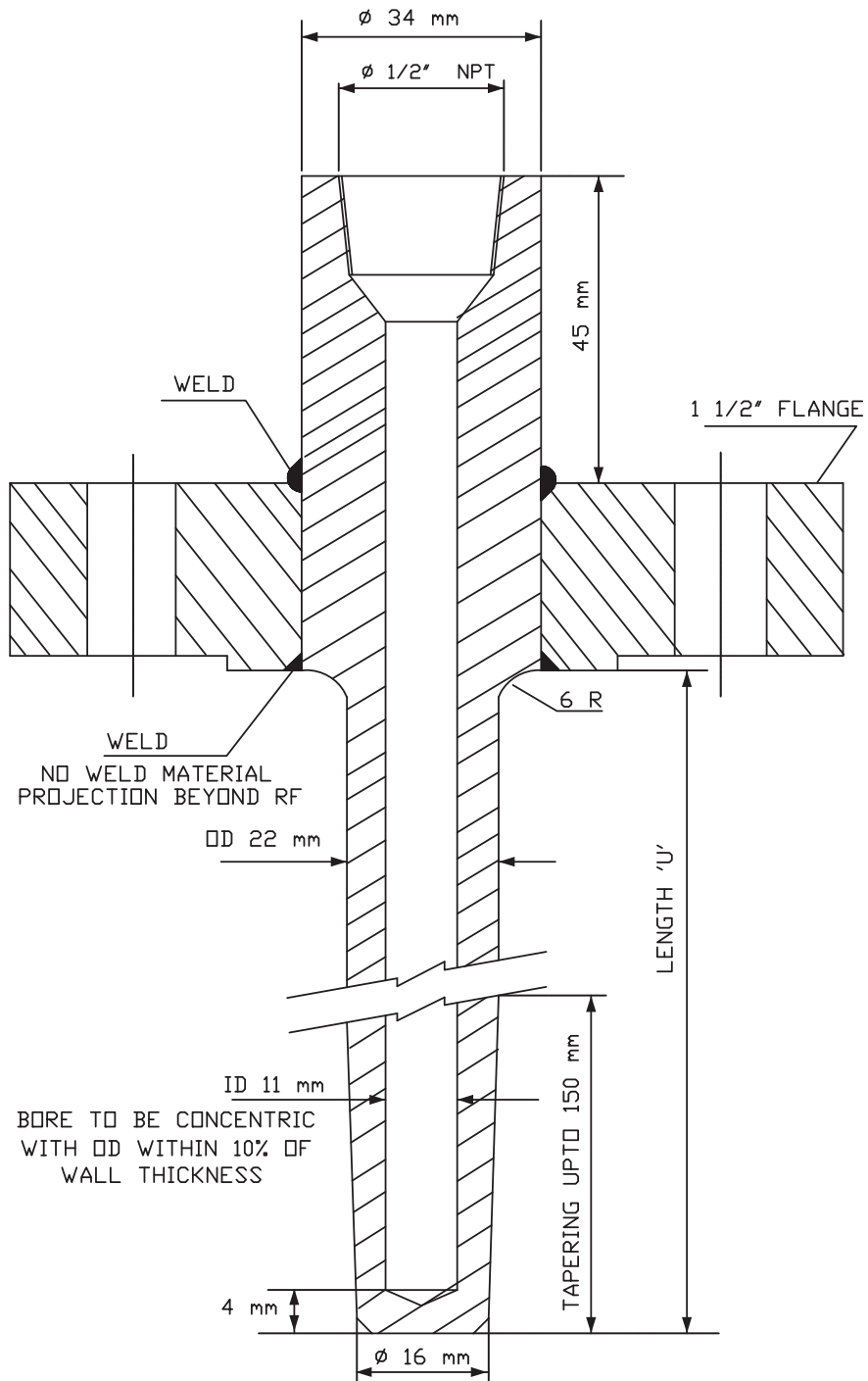


----- - INSTRUMENTATION SCOPE  
 \_\_\_\_\_ - PIPING SCOPE

NOTES:

- 1) PIPING SCOPE INCLUDES SUPPLY & INSTALLATION OF 1-1/2" SOCK-O-LET 1-1/2" NOZZLE, 1-1/2" FLANGE ALONG WITH GASKET, STUD & NUTS.
- 2) INSTRUMENTATION SCOPE INCLUDES SUPPLY OF FLANGED THERMOWELL ALONG WITH THE INSTRUMENT.

REV NO	DATE	ZONE	DESCRIPTIONS			BY	APPRD	REFERENCES	DRG. NO.		
			REVISIONS								
THIS DRAWING IS PROPERTY OF MECON AND IS ISSUED FOR THE SPECIFIC PROJECT MENTIONED THEREIN. THIS IS NOT TO BE COPIED OR USED FOR OTHER PROJECTS UNLESS EXPRESSLY PERMITTED BY MECON.											
<b>SECTION</b> : ELECTRICAL/INSTN.				<b>INSTALLATION DIAGRAM FOR TEMPERATURE GAUGE &amp; RTD</b>			<b>मेकन लिमिटेड</b> <b>MECON LIMITED</b>		SCALE : DRG.NO. MEC/05/E5/SD/TG-RTD/005		
DSGN	R.K.S	DATE	CHKD								DATE
DRWN	IRFAN										
APPROVED		D.G.M									
5	4	3	2	1	203 of 626						



THIS DRAWING IS PROPERTY OF MECON AND IS ISSUED FOR THE SPECIFIC PROJECT MENTIONED THEREIN. THIS IS NOT TO BE COPIED OR USED FOR OTHER PROJECTS UNLESS EXPRESSLY PERMITTED BY MECON.

SECTION	INSTRUMENTATION		
	NAME	SIG.	DATE
DSGN.	R.K.S		
DRWN	IRFAN.		
CHKD. & VERIFIED	P.S		
APPROVED	D.G.M		

INSTALLATION DIAGRAM

MOUNTING DETAILS FOR  
THERMOWELLS (RTD)



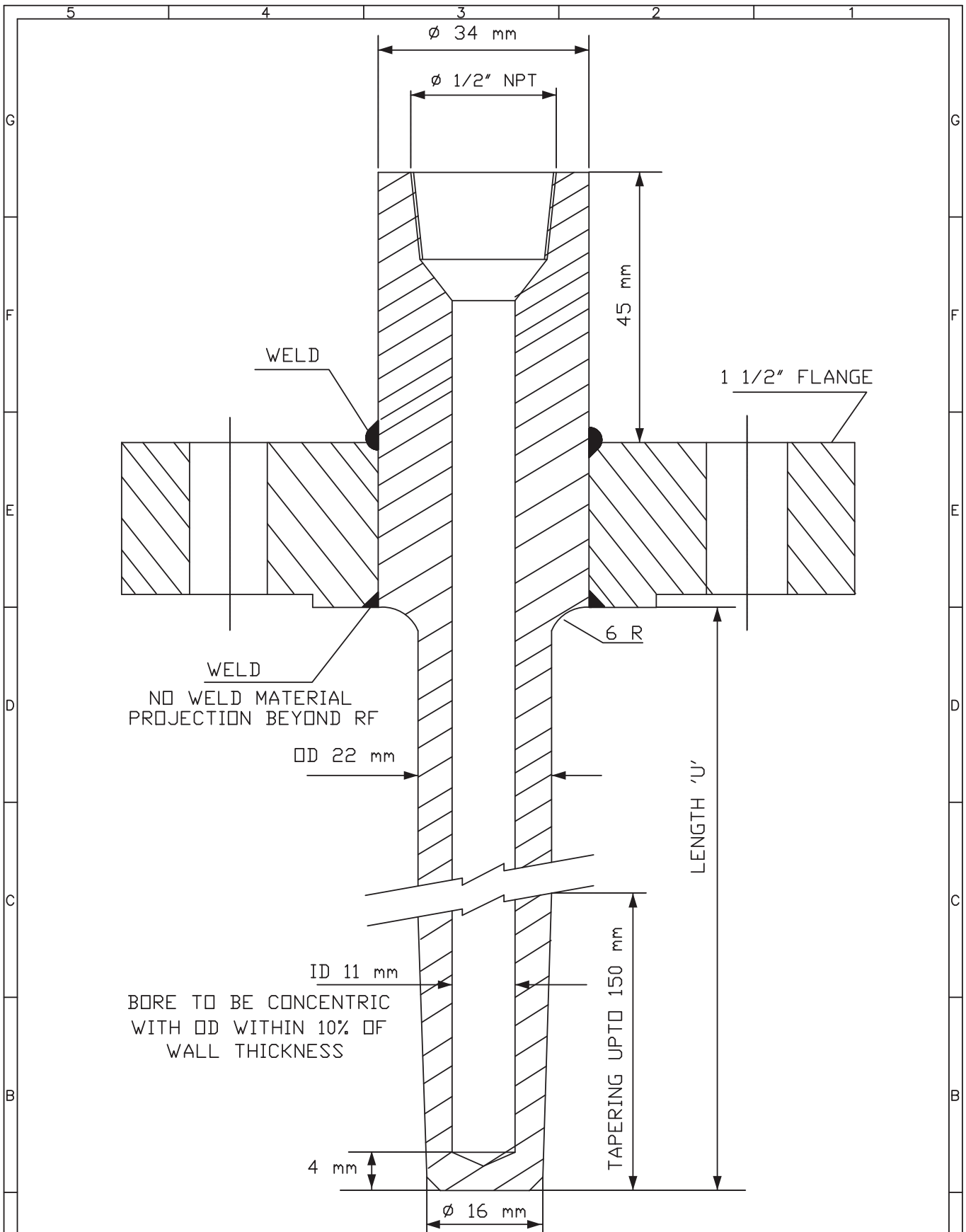
मेकॉन लिमिटेड

MECON LIMITED


SCALE : 1:50

DRG.NO.: MEC/05/E5/SD/RTD-TW/006

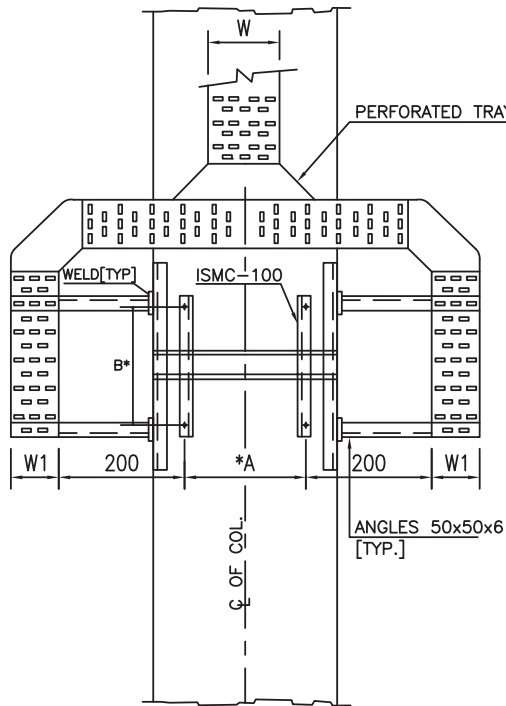
REV  
0



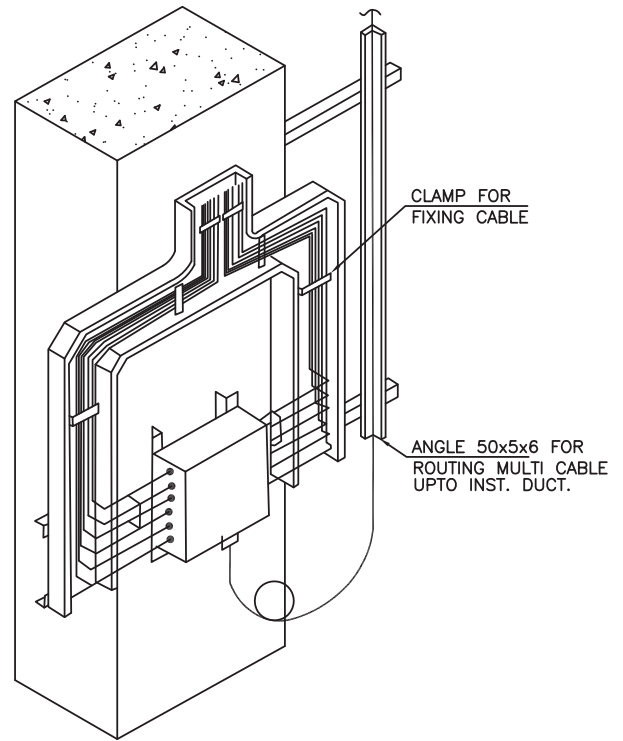
THIS DRAWING IS PROPERTY OF MECON AND IS ISSUED FOR THE SPECIFIC PROJECT MENTIONED THEREIN. THIS IS NOT TO BE COPIED OR USED FOR OTHER PROJECTS UNLESS EXPRESSLY PERMITTED BY MECON.

SECTION	INSTRUMENTATION			INSTALLATION DIAGRAM	 <b>मेकॉन लिमिटेड</b>	
	NAME	SIG.	DATE			
DSGN.	RKS.			<b>MOUNTING DETAILS FOR THERMOWELLS (TG)</b>	<b>MECON LIMITED</b>	
DRWN	IRFAN.					
CHKD. & VERIFIED	PS				SCALE : 1:50	REV 0
APPROVED	D.G.M				DRG.NO.: MEC/05/E5/SD/TG-TW/007	

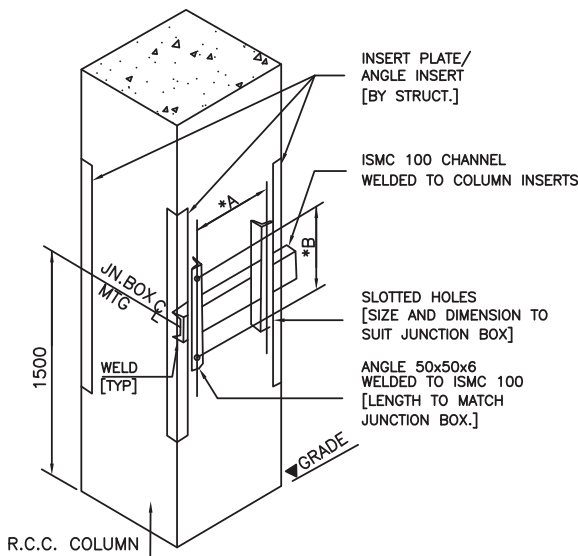
TRAY ARRANGEMENT FOR JUNCTION BOXES



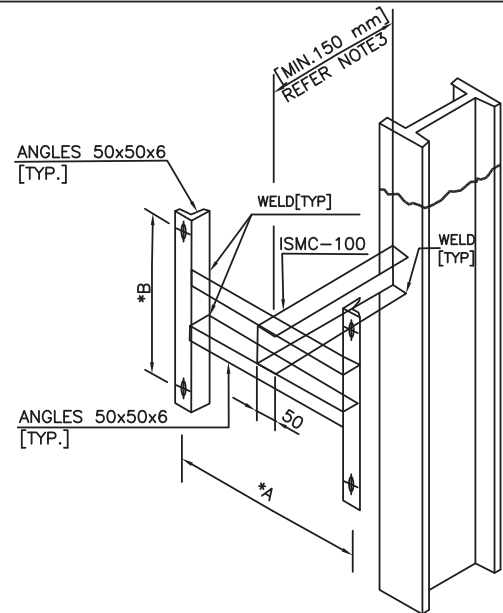
CABLE ROUTING FOR JUNCTION BOXES



JN. BOX MOUNTING FRAME [R.C.C. COLUMN]



JN. BOX MOUNTING FRAME [STEEL COLUMN]



\* DIMENSIONS 'A AND B' TO SUIT JUNCTION BOX.

NOTES:

1. ALL DIMENSIONS ARE IN mm.
2. CLAMP MULTICABLE ON ANGLE WITH 25mm WIDE PVC COVERED ALLUMINIUM STRIP.
3. ADD 50mm WHERE-EVER FIRE INSULATION IS PROVIDED.

TRAY WIDTH

JN. BOX	W	W1
12 PAIR	300	150
8 TRIAD	300	150
8 PAIR	150	100
6 TRIAD	150	100

REV NO	DATE	ZONE	DESCRIPTIONS	BY	APPRD
REVISIONS					

REFERENCES	DRG. NO.

SECTION: INSTRUMENTATION				
NAME	DATE	CHKD	DATE	
DSGN R.K.S		P.S		
DRWN SUNIL				
APPROVED	D.G.M			

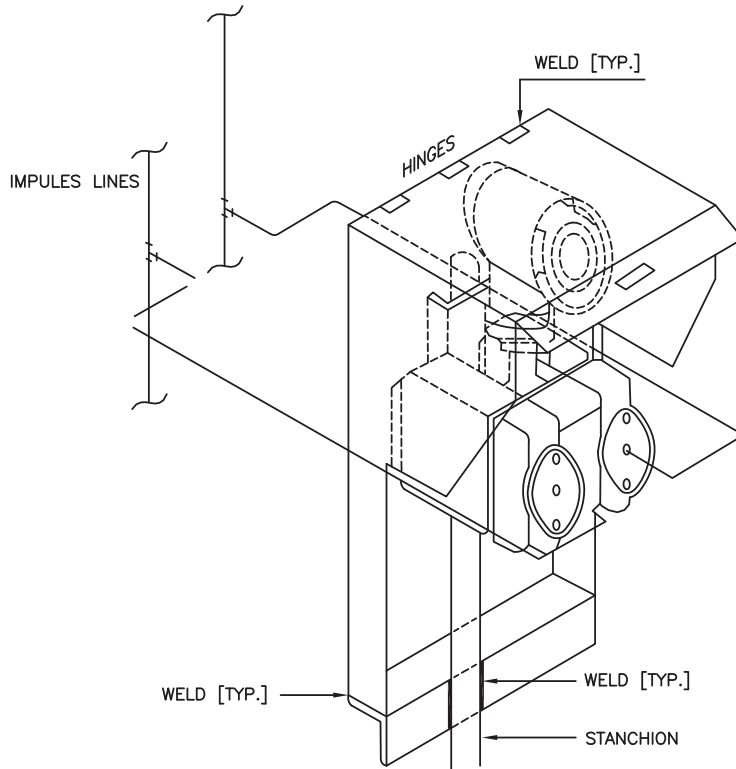
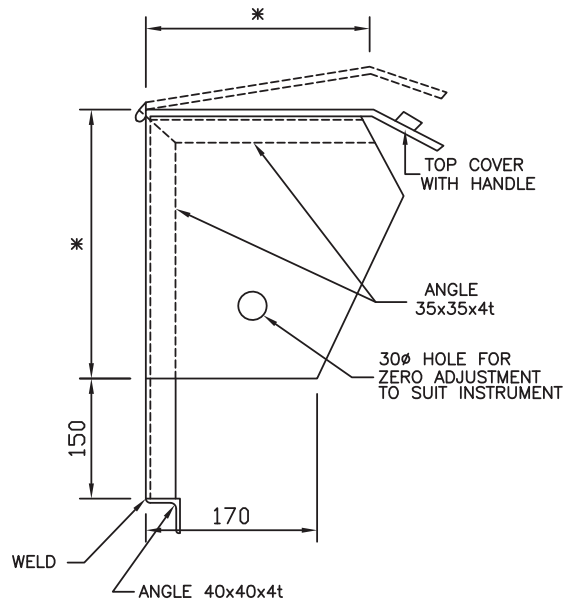
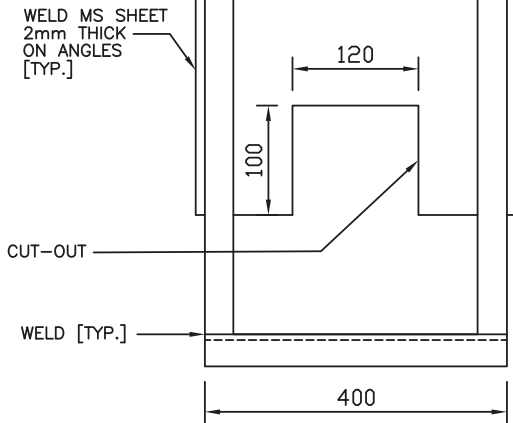
SUPPORT DETAILS FOR JUNCTION BOXES



मेकॉन लिमिटेड

MECON LIMITED

SCALE : N.T.S. (SH. 1 OF 1) REV  
 DRG.NO MEC/05/E5/SD/JB/009 206 of 626 0



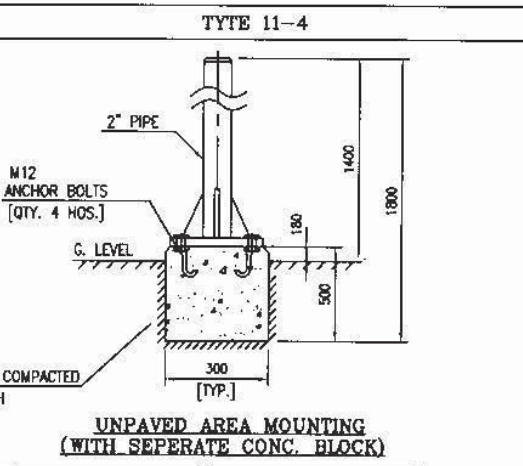
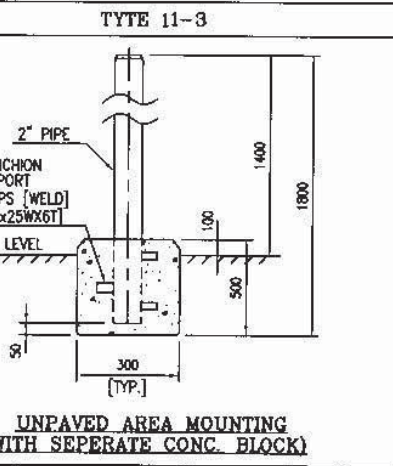
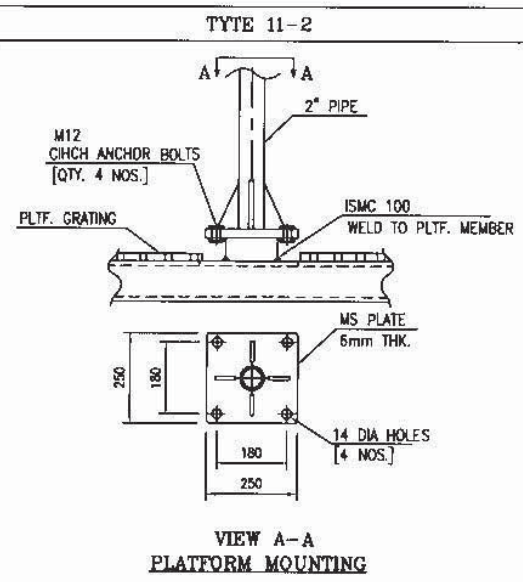
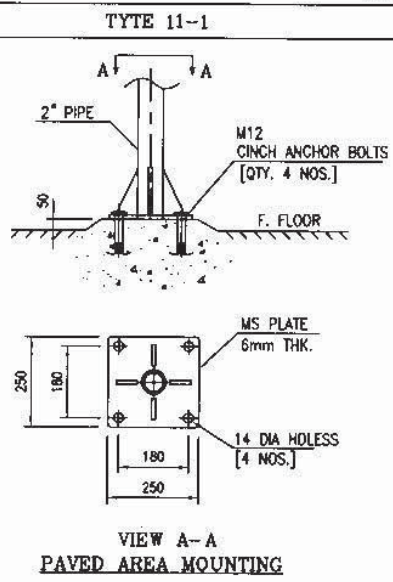
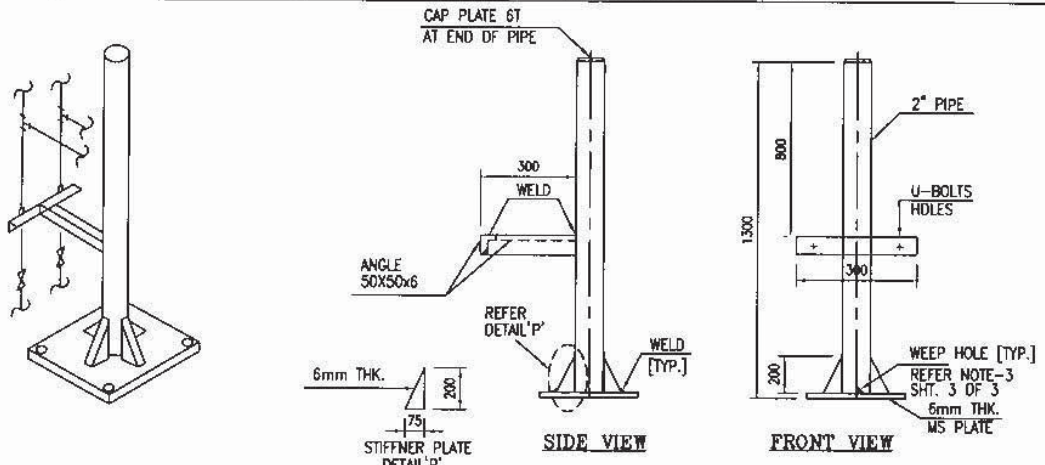
**NOTES:**

1. ALL DIMENSIONS ARE IN mm.
2. \*-TO SUIT INSTRUMENT DIMENSIONS.
3. HINGES SHALL BE OF STAINLESS STEEL.
4. A MINIMUM OF TWO COATS PAINTING SHALL BE CARRIED OUT AFTER A MINIMUM OF ONE COAT OF RED OXIDE ZINC CHROMATE PRIMER. THE COLOUR OF THE PAINT SHALL BE AS PER IS-5.

REV NO	DATE	ZONE	DESCRIPTIONS	BY	APPRD	REFERENCES	DRG. NO.															
REVISIONS																						
REFERENCES																						
DRG. NO.																						
<b>SECTION: INSTRUMENTATION</b>			<b>FABRICATED CANOPY FOR INSTRUMENTS</b>																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>NAME</th> <th>DATE</th> <th>CHKD</th> <th>DATE</th> </tr> <tr> <td>R.K.S</td> <td></td> <td>P.S.</td> <td></td> </tr> <tr> <td>SUNIL</td> <td></td> <td></td> <td></td> </tr> </table>						NAME	DATE	CHKD	DATE	R.K.S		P.S.		SUNIL				<b>मेकॉन लिमिटेड</b>		<b>MECON LIMITED</b>		
NAME	DATE	CHKD				DATE																
R.K.S		P.S.																				
SUNIL																						
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>DSGN</th> <th>DATE</th> <th>CHKD</th> <th>DATE</th> </tr> <tr> <td>R.K.S</td> <td></td> <td>P.S.</td> <td></td> </tr> <tr> <td>SUNIL</td> <td></td> <td></td> <td></td> </tr> </table>			DSGN	DATE	CHKD	DATE	R.K.S		P.S.		SUNIL				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>SCALE : N.T.S.</td> <td style="text-align: right;">(SH. 1 OF 1)</td> <td>REV</td> </tr> <tr> <td>DRG.NO MEC/05/E5/SD/CY/011</td> <td style="text-align: right;">207 of 626</td> <td style="text-align: right;">0</td> </tr> </table>		SCALE : N.T.S.	(SH. 1 OF 1)	REV	DRG.NO MEC/05/E5/SD/CY/011	207 of 626	0
DSGN	DATE	CHKD	DATE																			
R.K.S		P.S.																				
SUNIL																						
SCALE : N.T.S.	(SH. 1 OF 1)	REV																				
DRG.NO MEC/05/E5/SD/CY/011	207 of 626	0																				
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>APPROVED</td> <td colspan="3" style="text-align: center;">D.G.M.</td> </tr> </table>			APPROVED	D.G.M.			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="text-align: center;"> </td> </tr> </table>															
APPROVED	D.G.M.																					

TYTE 11

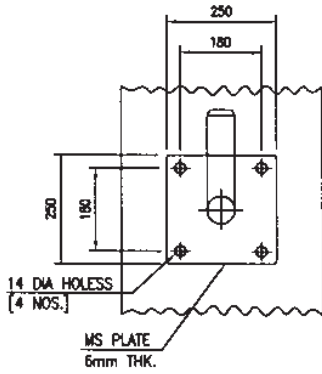
SINGLE INSTRUMENT SUPPORT - GENERAL ARRANGEMENT



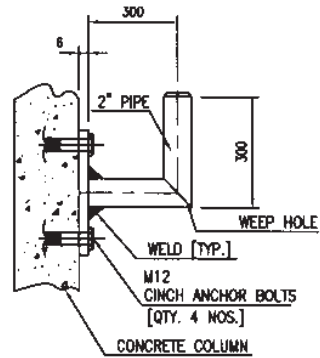
REV NO	DATE	ZONE	DESCRIPTIONS	BY	APPRD	REFERENCES	DRG. NO.
SECTION: INSTRUMENTATION			REVISIONS		REFERENCES		DRG. NO.
A	DSGN	R.K.5	DATE	CHKD	DATE	INSTRUMENT SUPPORT SINGLE INSTRUMENT	
	DRWN	SUNIL		P.S.		MECON LIMITED	
APPROVED		D.G.M		SCALE : N.T.S.		(SH. 1 OF 3)	REV
						DRG.NO MEC/05/E5/SD/IS/010 A	

TYTE 12

CONCRETE COLOUMN MOUNTING



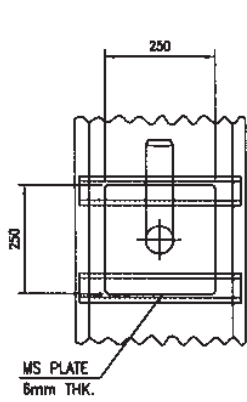
FRONT VIEW



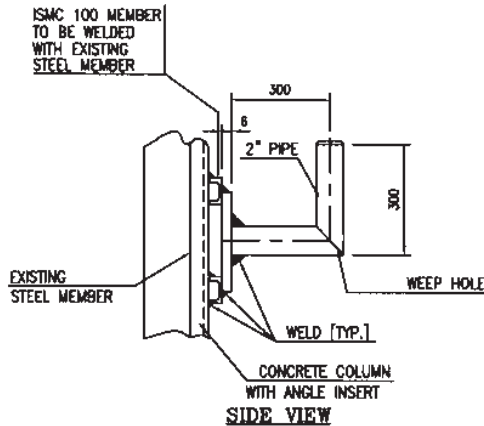
SIDE VIEW

TYTE 13

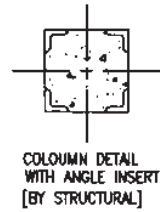
CONCRETE COLUMN [WITH ANGLE INSERT] MOUNTING



FRONT VIEW

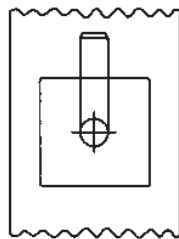


SIDE VIEW

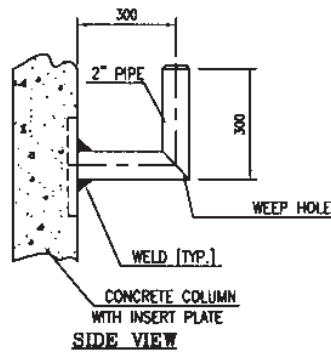


TYTE 14

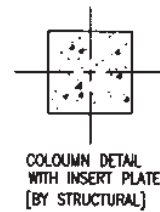
CONCRETE COLUMN [WITH INSERT PLATE] MOUNTING




FRONT VIEW



SIDE VIEW



REV NO	DATE	ZONE	DESCRIPTIONS	BY	APPRO	REFERENCES	DRG. NO.
REVISIONS							
SECTION: INSTRUMENTATION							
DSGN	R.K.S	DATE	CHKD	DATE	<p align="center"><b>CONCRETE COLOUMN MOUNTING</b></p>		
DRWN	SUNIL		P.S				
APPROVED				D.G.M			
 <p align="center"><b>मेकॉन लिमिटेड</b> <b>MECON LIMITED</b></p>						SCALE : N.T.S.	(SH. 2 OF 3)
DRG.NO MEC/D5/E5/SD/IS/D1D A						REV	0