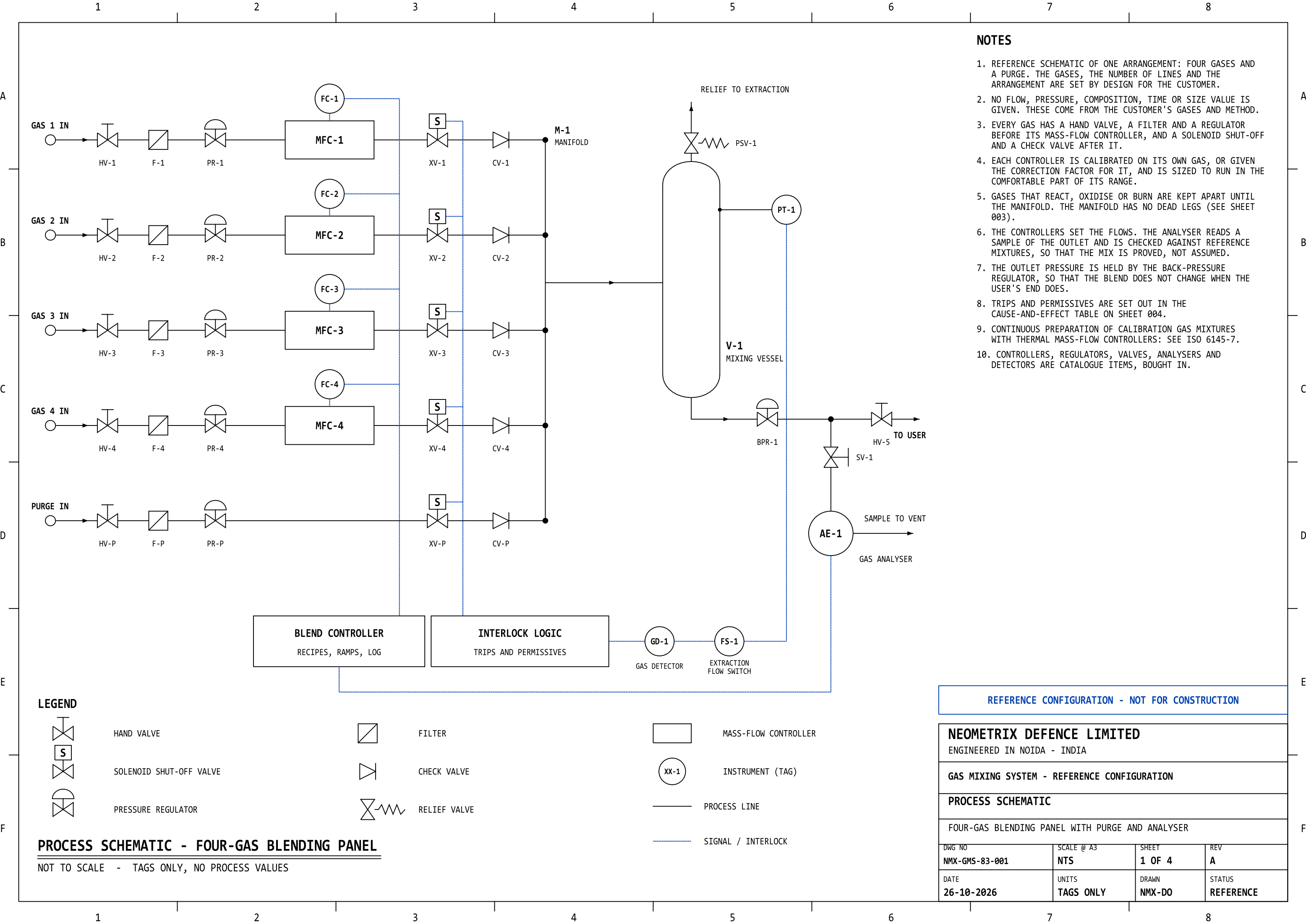




NOTES

1. REFERENCE SCHEMATIC OF ONE ARRANGEMENT: FOUR GASES AND A PURGE. THE GASES, THE NUMBER OF LINES AND THE ARRANGEMENT ARE SET BY DESIGN FOR THE CUSTOMER.
2. NO FLOW, PRESSURE, COMPOSITION, TIME OR SIZE VALUE IS GIVEN. THESE COME FROM THE CUSTOMER'S GASES AND METHOD.
3. EVERY GAS HAS A HAND VALVE, A FILTER AND A REGULATOR BEFORE ITS MASS-FLOW CONTROLLER, AND A SOLENOID SHUT-OFF AND A CHECK VALVE AFTER IT.
4. EACH CONTROLLER IS CALIBRATED ON ITS OWN GAS, OR GIVEN THE CORRECTION FACTOR FOR IT, AND IS SIZED TO RUN IN THE COMFORTABLE PART OF ITS RANGE.
5. GASES THAT REACT, OXIDISE OR BURN ARE KEPT APART UNTIL THE MANIFOLD. THE MANIFOLD HAS NO DEAD LEGS (SEE SHEET 003).
6. THE CONTROLLERS SET THE FLOWS. THE ANALYSER READS A SAMPLE OF THE OUTLET AND IS CHECKED AGAINST REFERENCE MIXTURES, SO THAT THE MIX IS PROVED, NOT ASSUMED.
7. THE OUTLET PRESSURE IS HELD BY THE BACK-PRESSURE REGULATOR, SO THAT THE BLEND DOES NOT CHANGE WHEN THE USER'S END DOES.
8. TRIPS AND PERMISSIVES ARE SET OUT IN THE CAUSE-AND-EFFECT TABLE ON SHEET 004.
9. CONTINUOUS PREPARATION OF CALIBRATION GAS MIXTURES WITH THERMAL MASS-FLOW CONTROLLERS: SEE ISO 6145-7.
10. CONTROLLERS, REGULATORS, VALVES, ANALYSERS AND DETECTORS ARE CATALOGUE ITEMS, BOUGHT IN.

REFERENCE CONFIGURATION - NOT FOR CONSTRUCTION

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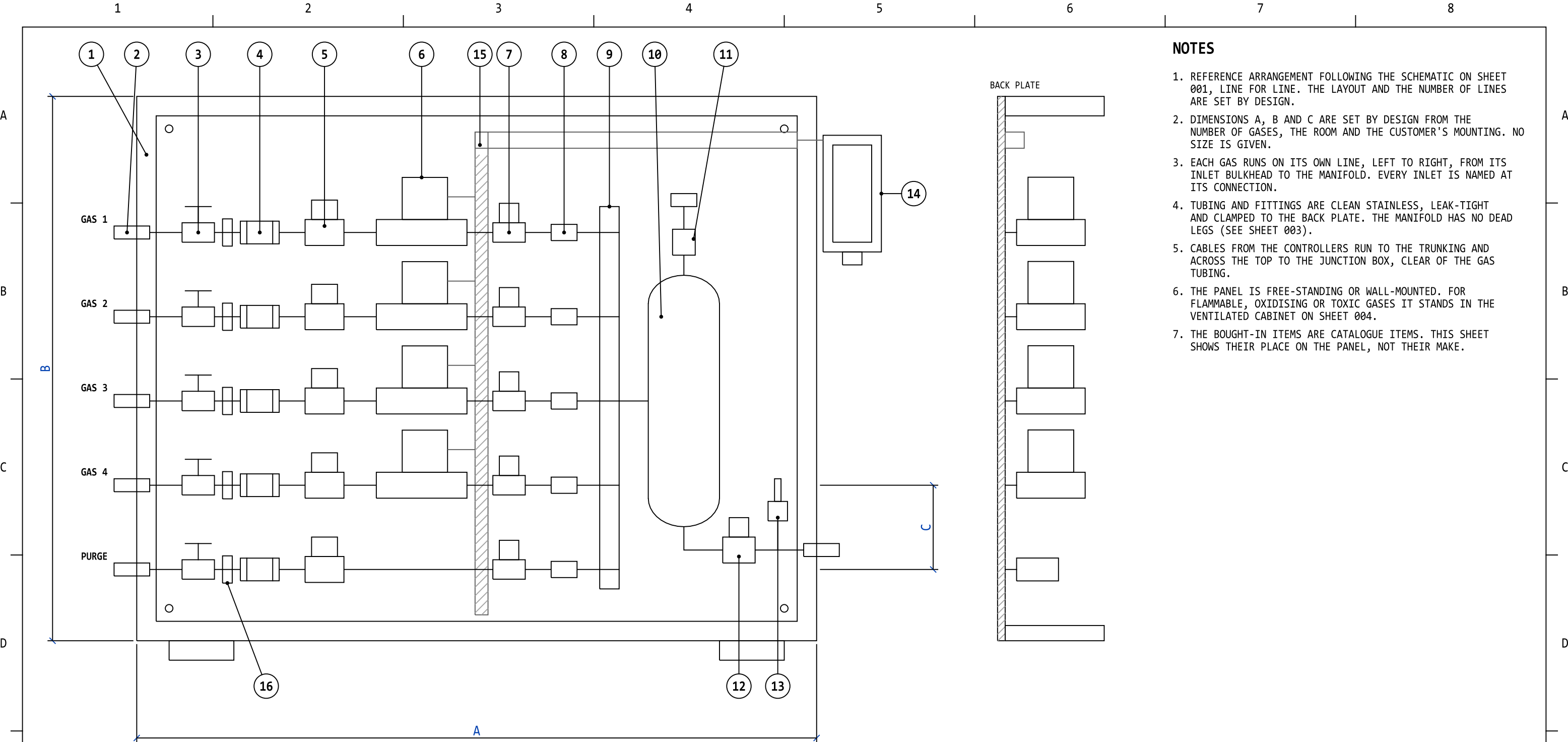
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GAS MIXING SYSTEM - REFERENCE CONFIGURATION

PROCESS SCHEMATIC

FOUR-GAS BLENDING PANEL WITH PURGE AND ANALYSER

DWG NO	SCALE @ A3	SHEET	REV
NMX-GMS-83-001	NTS	1 OF 4	A
DATE	UNITS	DRAWN	STATUS
26-10-2026	TAGS ONLY	NMX-DO	REFERENCE



FRONT ELEVATION

NOT TO SCALE - A, B AND C SET BY DESIGN

SIDE VIEW

FROM THE RIGHT

ITEM	DESCRIPTION	QTY
1	FRAME AND BACK PLATE	ONE
2	GAS INLET BULKHEAD, NAMED AT ITS CONNECTION	PER GAS
3	HAND ISOLATION VALVE	PER GAS
4	FILTER	PER GAS
5	PRESSURE REGULATOR	PER GAS
6	MASS-FLOW CONTROLLER	PER GAS
7	SOLENOID SHUT-OFF VALVE	PER GAS
8	CHECK VALVE	PER GAS

ITEM	DESCRIPTION	QTY
9	MANIFOLD, NO DEAD LEGS	ONE
10	MIXING VESSEL	ONE
11	RELIEF VALVE, VENTED TO EXTRACTION	ONE
12	BACK-PRESSURE REGULATOR	ONE
13	SAMPLE VALVE AND ANALYSER CONNECTION	ONE
14	JUNCTION BOX	ONE
15	CABLE TRUNKING	ONE
16	TUBE CLAMPS, TO THE BACK PLATE	AS REQUIRED

NOTES

- REFERENCE ARRANGEMENT FOLLOWING THE SCHEMATIC ON SHEET 001, LINE FOR LINE. THE LAYOUT AND THE NUMBER OF LINES ARE SET BY DESIGN.
- DIMENSIONS A, B AND C ARE SET BY DESIGN FROM THE NUMBER OF GASES, THE ROOM AND THE CUSTOMER'S MOUNTING. NO SIZE IS GIVEN.
- EACH GAS RUNS ON ITS OWN LINE, LEFT TO RIGHT, FROM ITS INLET BULKHEAD TO THE MANIFOLD. EVERY INLET IS NAMED AT ITS CONNECTION.
- TUBING AND FITTINGS ARE CLEAN STAINLESS, LEAK-TIGHT AND CLAMPED TO THE BACK PLATE. THE MANIFOLD HAS NO DEAD LEGS (SEE SHEET 003).
- CABLES FROM THE CONTROLLERS RUN TO THE TRUNKING AND ACROSS THE TOP TO THE JUNCTION BOX, CLEAR OF THE GAS TUBING.
- THE PANEL IS FREE-STANDING OR WALL-MOUNTED. FOR FLAMMABLE, OXIDISING OR TOXIC GASES IT STANDS IN THE VENTILATED CABINET ON SHEET 004.
- THE BOUGHT-IN ITEMS ARE CATALOGUE ITEMS. THIS SHEET SHOWS THEIR PLACE ON THE PANEL, NOT THEIR MAKE.

REFERENCE CONFIGURATION - NOT FOR CONSTRUCTION

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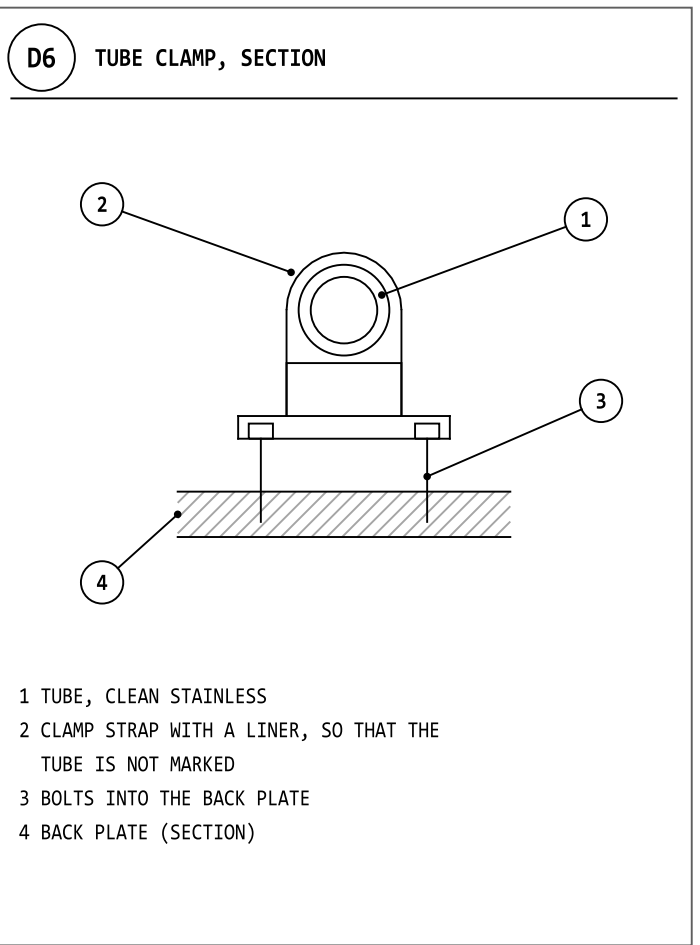
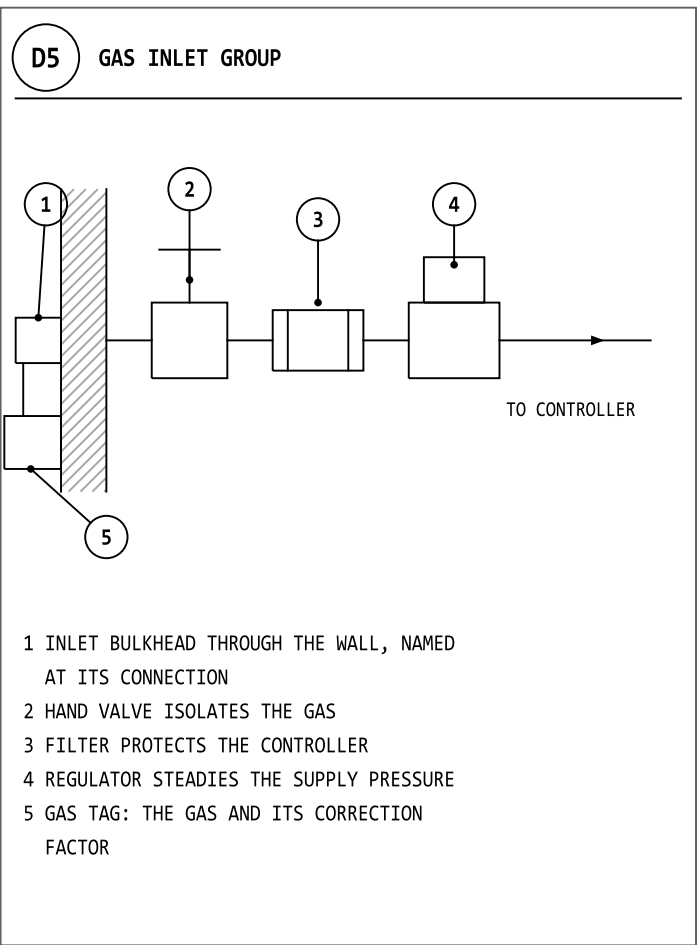
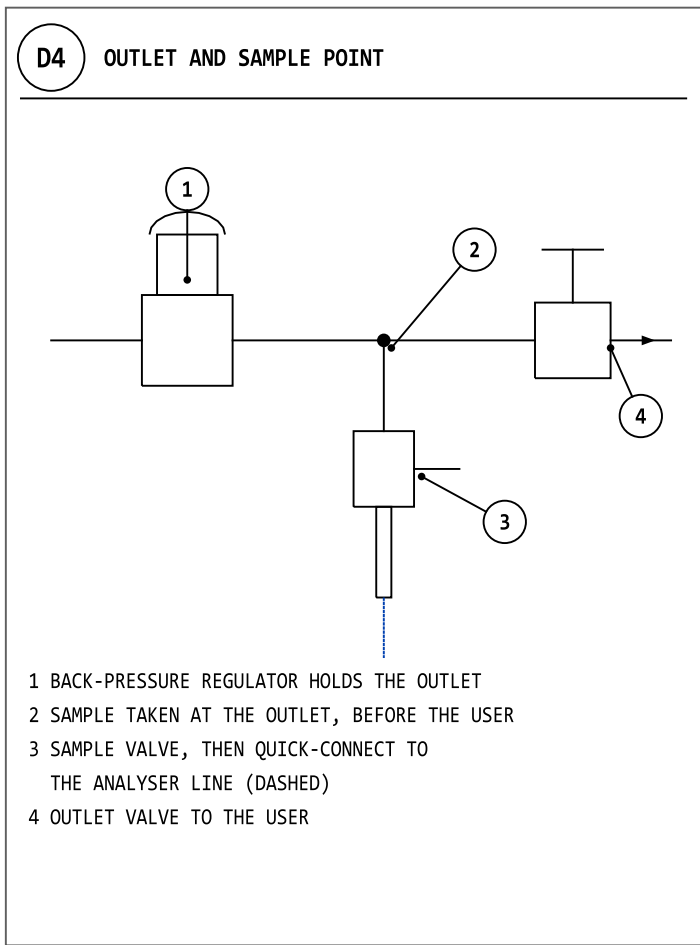
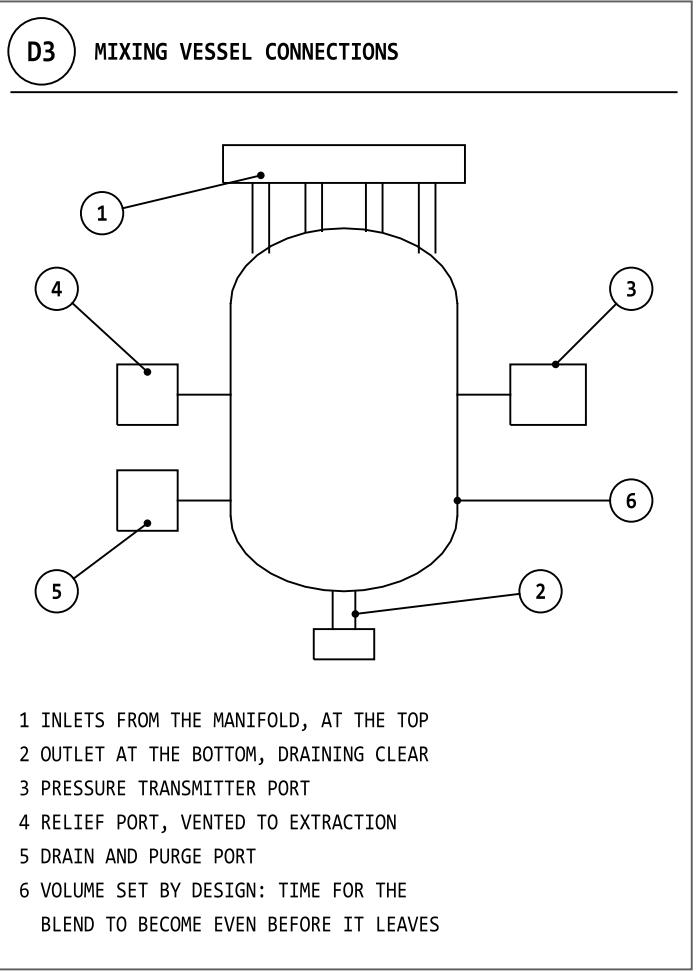
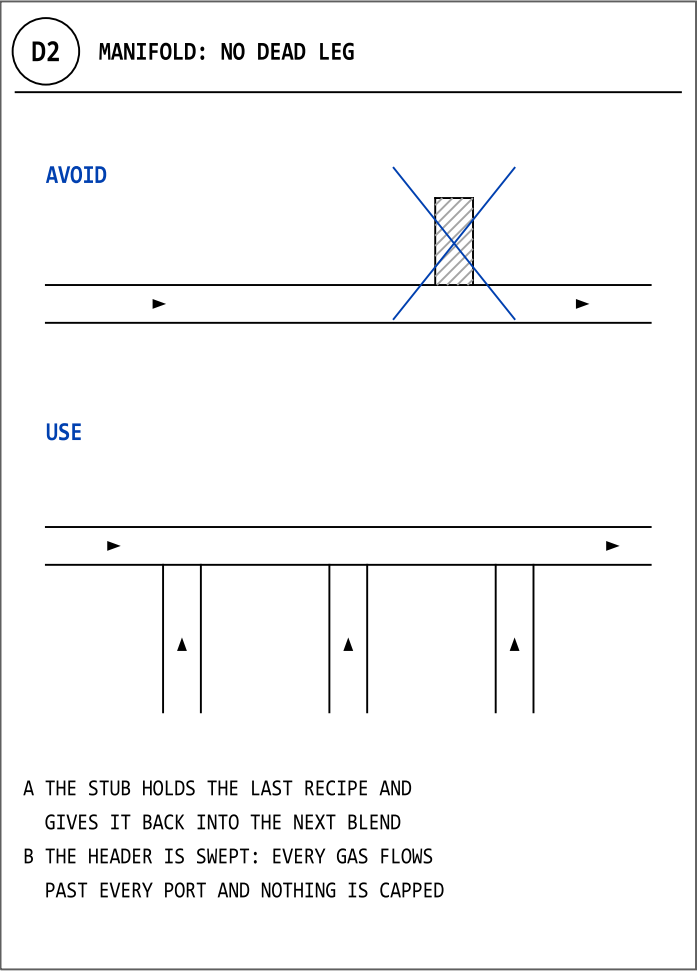
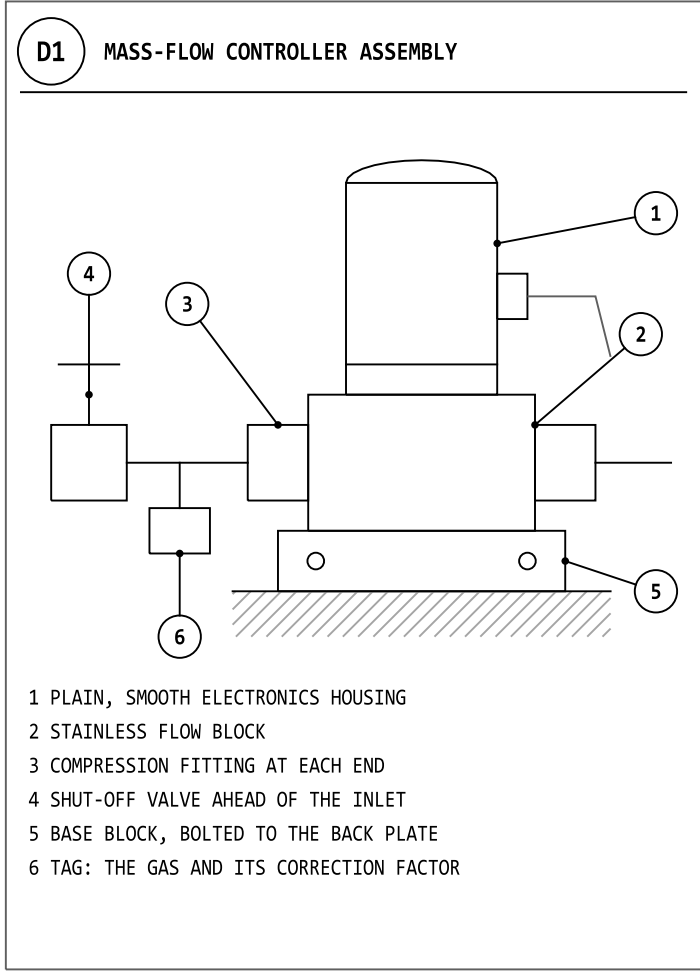
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GAS MIXING SYSTEM - REFERENCE CONFIGURATION

PANEL GENERAL ARRANGEMENT

FRONT ELEVATION, SIDE VIEW AND ITEM LIST

DWG NO NMX-GMS-83-002	SCALE @ A3 NTS	SHEET 2 OF 4	REV A
DATE 26-10-2026	UNITS TAGS ONLY	DRAWN NMX-DO	STATUS REFERENCE



NOTES

1. DETAILS ARE DIAGRAMMATIC AND NOT TO SCALE. THEY SHOW HOW EACH JOINT AND CONNECTION IS MADE, NOT HOW BIG IT IS.
2. NO SIZE, RATING OR PRESSURE VALUE IS GIVEN. THESE ARE FIXED BY DESIGN FOR THE GASES AND THE METHOD.
3. A DEAD LEG HOLDS THE LAST RECIPE AND GIVES IT BACK INTO THE NEXT BLEND. THE MANIFOLD IS SWEEP, WITH EVERY PORT IN THE FLOW (D2).
4. THE TAG AT EACH CONTROLLER RECORDS THE GAS IT IS SET FOR AND THE CORRECTION FACTOR USED IN THE RECIPE (D1).
5. THE SAMPLE IS TAKEN AT THE OUTLET, AFTER THE BACK-PRESSURE REGULATOR AND BEFORE THE USER (D4).
6. MATERIALS ARE CLEAN STAINLESS UNLESS THE GASES CALL FOR ANOTHER. THE MATERIAL IS CHECKED AGAINST EVERY GAS IN THE RECIPE.
7. THE BOUGHT-IN ITEMS ARE SHOWN FOR THEIR PLACE, NOT THEIR MAKE.

REFERENCE CONFIGURATION - NOT FOR CONSTRUCTION

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GAS MIXING SYSTEM - REFERENCE CONFIGURATION

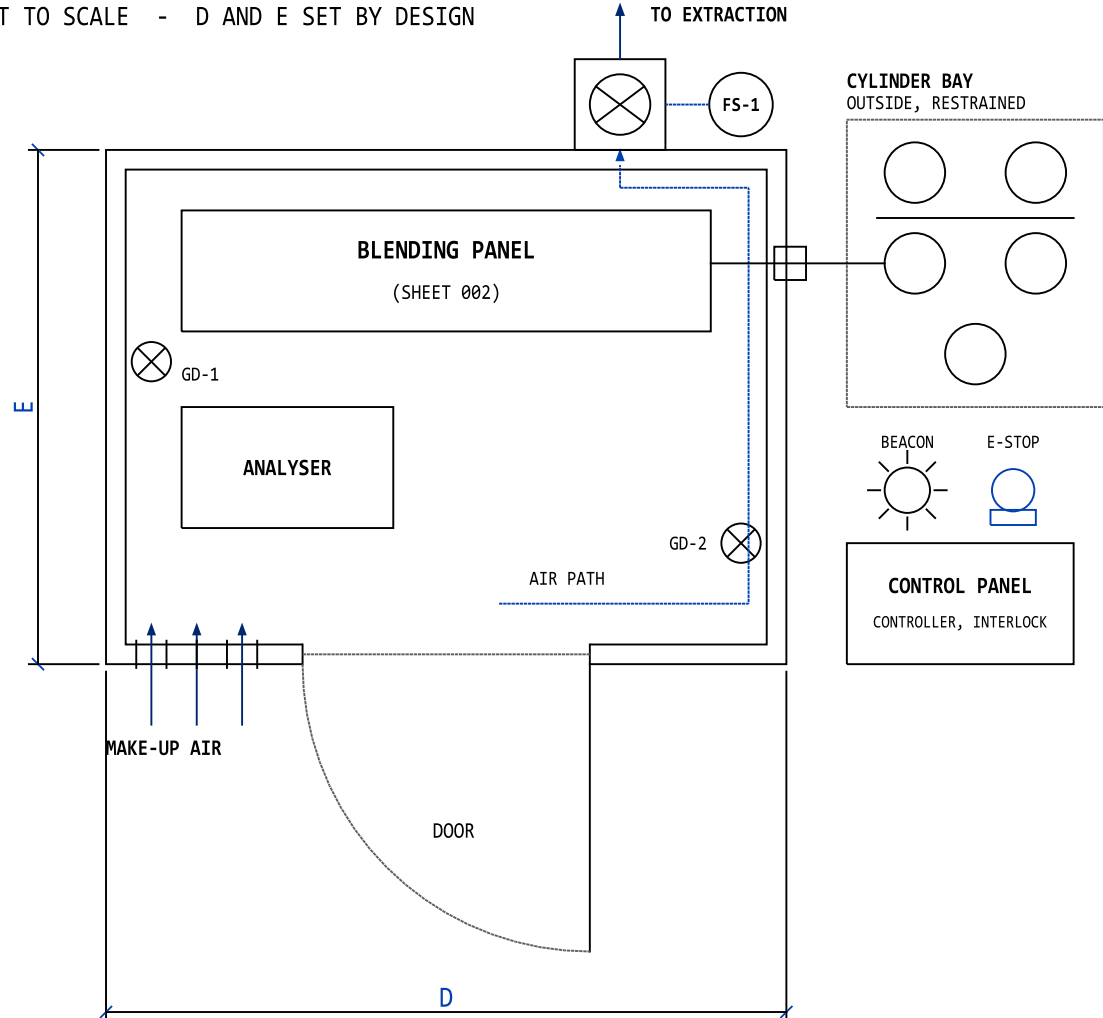
DETAILS D1 TO D6

HOW EACH JOINT AND CONNECTION IS MADE

DWG NO NMX-GMS-83-003	SCALE @ A3 NTS	SHEET 3 OF 4	REV A
DATE 26-10-2026	UNITS TAGS ONLY	DRAWN NMX-DO	STATUS REFERENCE

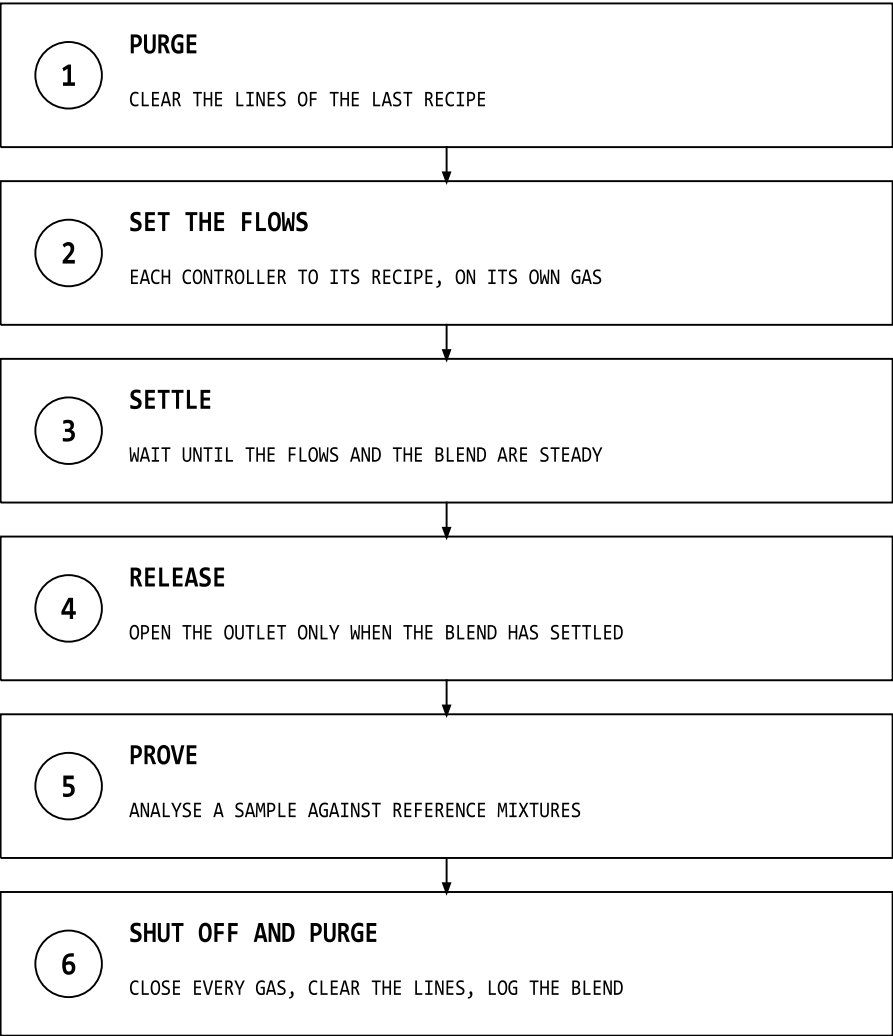
PLAN - HAZARDOUS-GAS BLENDING CABINET

NOT TO SCALE - D AND E SET BY DESIGN



OPERATING SEQUENCE

EVERY BLEND, IN THIS ORDER



A TRIP AT ANY STEP GOES TO THE TABLE BELOW.

NOTES

1. REFERENCE ARRANGEMENT FOR GASES THAT ARE FLAMMABLE, OXIDISING OR TOXIC. THE PANEL STANDS IN A VENTILATED CABINET; THE CYLINDERS STAND OUTSIDE, IN A BAY, RESTRAINED.
2. THE CABINET IS VENTILATED, AND THE EXTRACTION FLOW IS PROVED BY A FLOW SWITCH. IF THE FLOW IS LOST THE SYSTEM TRIPS.
3. THE GAS LINES ENTER THROUGH THE CABINET WALL AT A BULKHEAD, EACH NAMED AT ITS CONNECTION.
4. GAS DETECTORS ARE PLACED FROM THE DENSITY OF THE GASES AND THE AIR PATH. TYPE, RANGE AND TRIP SETTING ARE SET BY DESIGN: NO VALUE IS GIVEN.
5. DIMENSIONS D AND E ARE SET BY DESIGN. NO SIZE IS GIVEN.
6. A RECIPE THAT COULD ITSELF BE FLAMMABLE IS CHECKED BEFORE IT RUNS. THE SETTLE IS SET BY DESIGN AND RECORDED FOR EVERY BLEND.
7. THE SEQUENCE AND THE TABLE ARE THE SAME FOR EVERY SYSTEM; WHAT CHANGES WITH THE GASES IS THE DETECTION, THE MATERIALS AND THE CAUSES LISTED.
8. APPROVAL OF THE ARRANGEMENT RESTS WITH THE CUSTOMER AND THE AUTHORITY THEY NAME. NONE IS CLAIMED HERE.

CAUSE AND EFFECT - TRIPS AND PERMISSIVES

TRIPS ARE LATCHED: A PERSON RESETS THEM AFTER CHECKING THE CAUSE

CAUSE (TAG)	CLOSE ALL GAS SHUT-OFFS	OPEN PURGE	STOP THE RECIPE	SOUND ALARM	HOLD OUTLET CLOSED
GAS DETECTED IN THE CABINET (GD-1, GD-2)	X	X	X	X	X
EXTRACTION FLOW LOST (FS-1)	X		X	X	X
VESSEL PRESSURE HIGH (PT-1)	X		X	X	X
A GAS SUPPLY LOST (REGULATOR LOW)	X	X	X	X	X
ANALYSER READS OUTSIDE THE RECIPE (AE-1)			X	X	X
EMERGENCY STOP PRESSED	X	X	X	X	X

X = ACTION TAKEN. A BLANK CELL = NO ACTION FOR THAT CAUSE.

REFERENCE CONFIGURATION - NOT FOR CONSTRUCTION

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GAS MIXING SYSTEM - REFERENCE CONFIGURATION

HAZARDOUS-GAS CABINET AND TRIPS

PLAN, OPERATING SEQUENCE, CAUSE AND EFFECT

DWG NO NMX-GMS-83-004	SCALE @ A3 NTS	SHEET 4 OF 4	REV A
DATE 26-10-2026	UNITS TAGS ONLY	DRAWN NMX-DO	STATUS REFERENCE