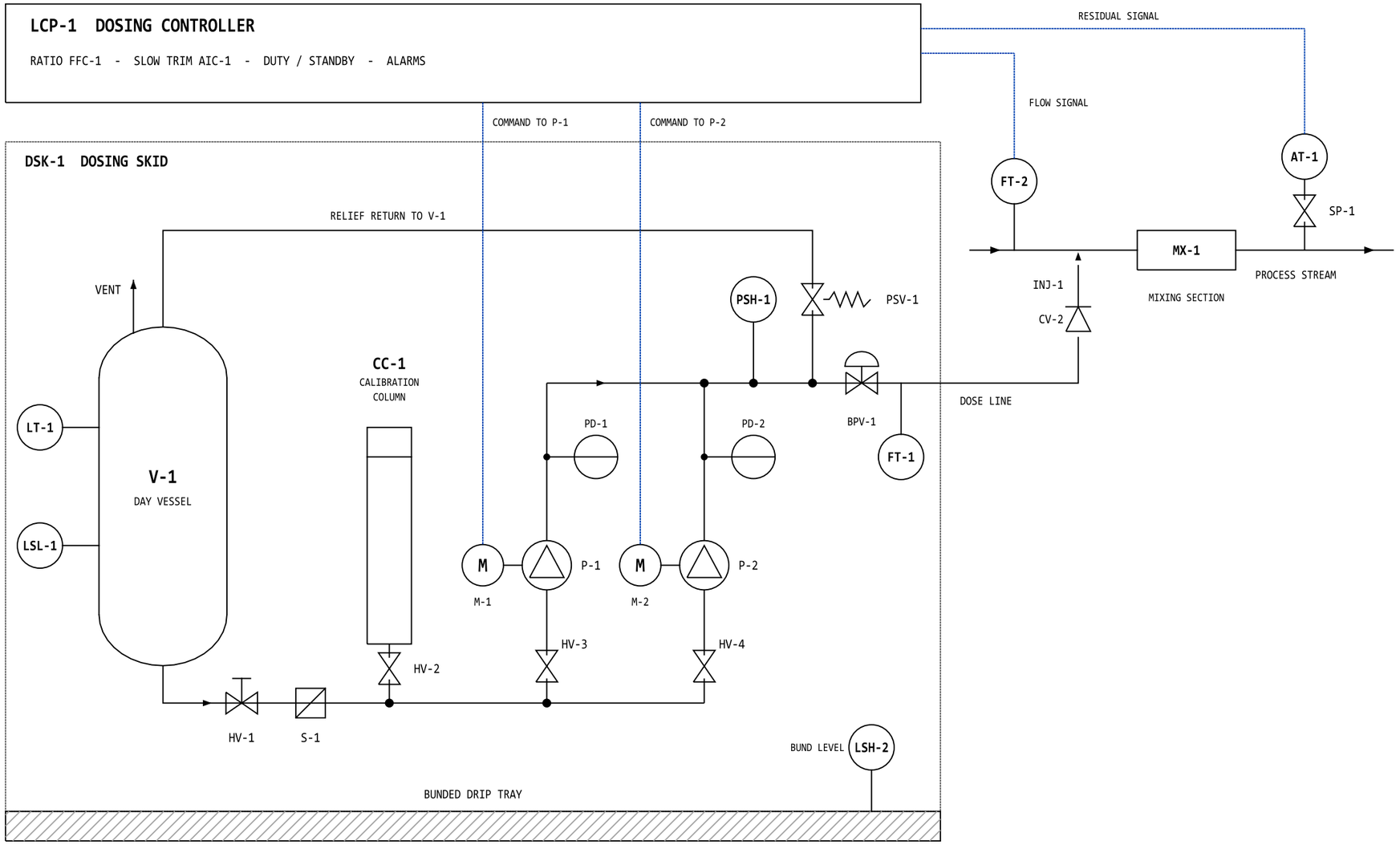


NOTES

1. REFERENCE SCHEMATIC OF A CHEMICAL DOSING SKID FOR ONE CHEMICAL INTO ONE PROCESS STREAM. TAGS ONLY: NO FLOW, PRESSURE, CONCENTRATION OR TIME VALUE IS GIVEN.
2. THE DOSE IS PACED TO THE PROCESS FLOW: FT-2 GIVES A FLOW SIGNAL TO THE RATIO FFC-1, WHICH SETS THE OUTPUT OF THE DUTY PUMP IN PROPORTION. IT ACTS AT ONCE.
3. THE RESIDUAL IS READ BY AT-1 AFTER THE MIXING SECTION. AIC-1 MOVES THE RATIO SLOWLY, INSIDE A LIMITED BAND, WITH NO DERIVATIVE ACTION, BECAUSE THE READING ARRIVES LATE.
4. THE SAMPLE POINT SP-1 SITS FAR ENOUGH DOWNSTREAM OF INJ-1 AND MX-1 FOR THE CHEMICAL TO HAVE MIXED. THE DELAY OF THE SAMPLE LINE IS KNOWN AND ALLOWED FOR.
5. P-1 AND P-2 ARE IDENTICAL CONTROLLED-VOLUME METERING PUMPS: ONE ON DUTY AND ONE STANDING BY, EACH ABLE TO CARRY THE FULL DUTY. LCP-1 CHANGES OVER ON A TRIP OR A FAULT.
6. CC-1 IS FILLED FROM V-1 AND DRAWN BY THE PUMP, TO MEASURE ITS OUTPUT AGAINST A VOLUME OF LIQUID. IT SITS ON THE SUCTION SIDE AND IS USED ON A SCHEDULE.
7. PD-1 AND PD-2 SMOOTH THE PULSES. BPV-1 HOLDS A STEADY PRESSURE AGAINST THE PUMPS. PSV-1 RETURNS TO V-1. FT-1 READS WHAT THE PUMP DELIVERS.
8. CV-2 STOPS THE PROCESS STREAM ENTERING THE DOSE LINE. V-1 CARRIES A LEVEL SIGNAL, A VENT AND A DRAIN.
9. THE SKID STANDS IN A BUNDED DRIP TRAY. WETTED PARTS ARE CHOSEN FOR THE CHEMICAL, AND CHEMICALS THAT MUST NOT MEET ARE KEPT APART.
10. ALL FIELD INSTRUMENTS WIRE TO LCP-1. THE SIGNALS DRAWN ARE THE THREE THAT SET THE DOSE.
11. PUMPS, METERS, ANALYSER, VALVES AND CONTROLLER ARE CATALOGUE ITEMS, BOUGHT IN. FOR CONTROLLED-VOLUME PUMPS SEE API 675.

CHEMICAL DOSING SKID - PROCESS AND INSTRUMENT SCHEMATIC

NOT TO SCALE - TAGS ONLY, NO PROCESS VALUES

LEGEND

- M — MOTOR
- METERING PUMP
- HAND VALVE
- CHECK VALVE
- BACK-PRESSURE VALVE
- RELIEF VALVE
- STRAINER
- PULSATION DAMPENER
- XX-1 — INSTRUMENT (TAG)
- VESSEL
- CHEMICAL LINE
- SIGNAL

TRIPS AND ALARMS

CAUSE	EFFECT
LSL-1 LOW LEVEL IN V-1	STOP PUMPS, ALARM
PSH-1 HIGH DISCHARGE PRESSURE	STOP PUMPS, ALARM
FT-1 NO FLOW, PUMP RUNNING	ALARM, CHANGE OVER
AT-1 RESIDUAL OUT OF BAND	ALARM, HOLD THE TRIM
LSH-2 LIQUID IN THE BUND	ALARM, STOP PUMPS
FT-2 NO PROCESS FLOW	STOP DOSING, ALARM

REFERENCE CONFIGURATION - NOT FOR CONSTRUCTION

NEOMETRIX DEFENCE LIMITED
ENGINEERED IN NOIDA - INDIA

CHEMICAL DOSING SYSTEM - REFERENCE CONFIGURATION

PROCESS AND INSTRUMENT SCHEMATIC

DUPLEX METERING PUMPS, CALIBRATION COLUMN, INJECTION AND TRIM

DWG NO	SCALE @ A3	SHEET	REV
NMX-DSK-85-001	NTS	1 OF 1	A
DATE	UNITS	DRAWN	STATUS
28-10-2026	TAGS ONLY	NMX-DO	REFERENCE