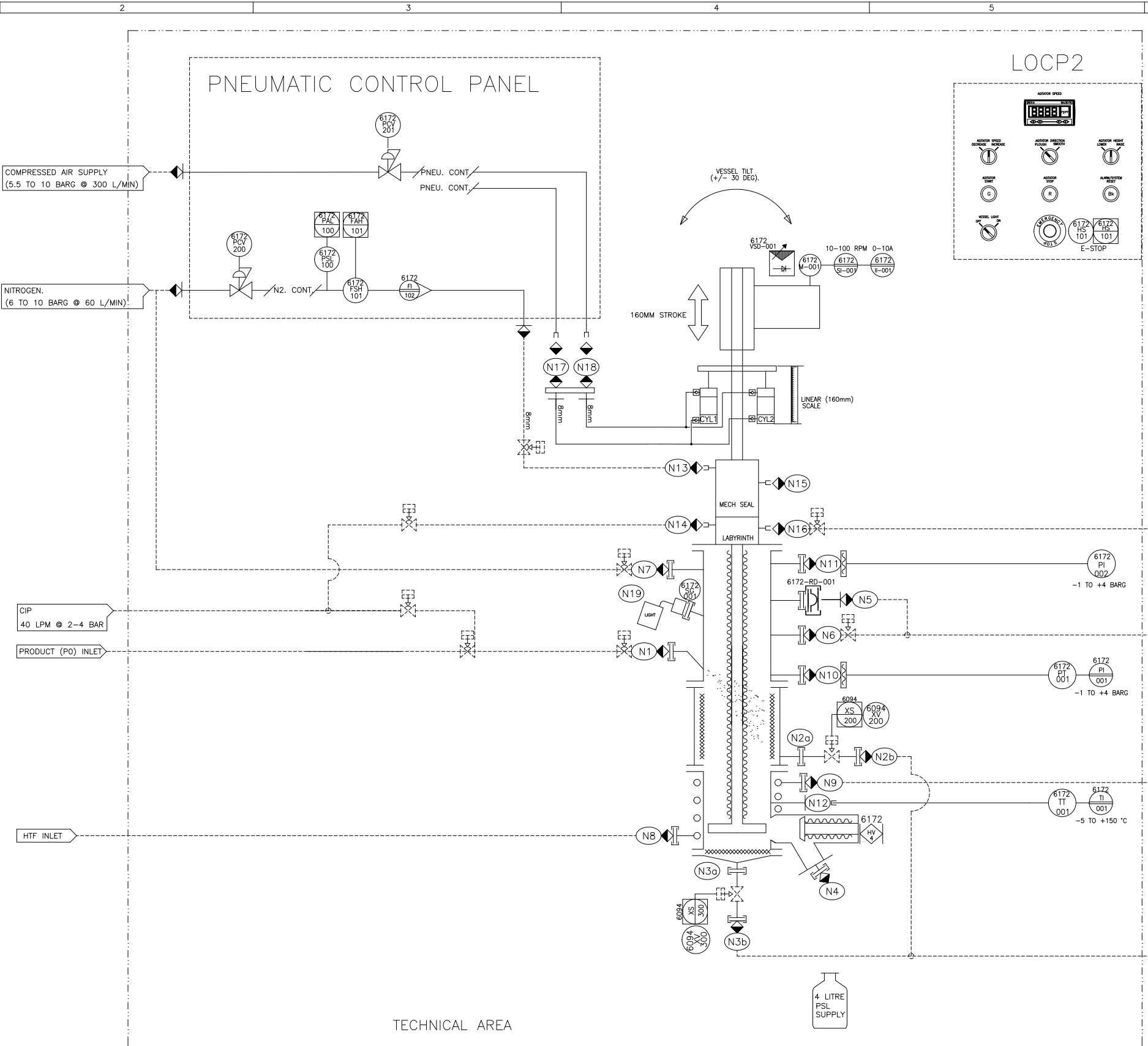


SYMBOL LEGEND

	FIELD MOUNTED INSTRUMENT		BUTTERFLY VALVE MANUAL OPERATION
	OPERATOR PANEL MOUNTED INSTRUMENT		DIAPHRAGM VALVE MANUAL OPERATION
	PANEL MOUNTED INSTRUMENT		BALL VALVE MANUAL OPERATION
	FIELD MOUNTED INSTRUMENT WITH INSTRUMENT FILTER		BUTTERFLY VALVE ACTUATED FAIL CLOSED
	POSITION SWITCH		DIAPHRAGM VALVE ACTUATED FAIL CLOSED
	PRESSURE TRANSMITTER		BALL VALVE ACTUATED FAIL CLOSED
	PRESSURE SWITCH		ACTUATED BALL VALVE FAIL CLOSED WITH CLOSED POSITION SWITCH
	PRESSURE SENSING ELEMENT		ANGLE SEAT VALVE
	PRESSURE SWITCH LOW		PRESSURE REGULATING VALVE
	PRESSURE INDICATION		PRESSURE REGULATING VALVE WITH GAUGE
	PRESSURE DIFFERENTIAL SWITCH		CHECK VALVE
	PRESSURE DIFFERENTIAL INDICATION (AUXILIARY PANEL MOUNTED)		SPLIT BUTTERFLY VALVE MANUAL OPERATION
	PRESSURE SAFETY VALVE		LEVEL CONTROL VALVE
	PRESSURE CONTROLLER		RESTRICTION ORIFICE
	TEMPERATURE SWITCH HIGH		CHEMICAL SEAL
	TEMPERATURE INDICATION		WASH HOSE & TRIGGER VALVE
	TEMPERATURE TRANSMITTER		CIP SPRAY BALL
	SPEED DRIVE CONTROLLER (VARIABLE SPEED DRIVE)		PARTICLE FILTER
	SPEED INDICATION		HEPA FILTER
	CURRENT INDICATION		FLOW METER
	LIGHT GLASS		PNEUMATIC ROTARY ACTUATOR
	MOTOR		STEAM TRAP
	WEIGH INDICATION		PUMP
	WEIGH PLATFORM		DUCT FLEXIBLE
	PRESSURE ALARM LOW		
	PRESSURE INDICATING ALARM		
	BATTERY LIMITS SOLID SHADING POINTS TO CLIENT SUPPLY		
	NOZZLE REF No		
	MANUAL VALVE REF No		
	AUTOMATED VALVE REF No		
	PNEUMATIC OR HYDRAULIC CYLINDER		
	CENTRIFUGAL EXTRACTION FAN		
	RAPID TRANSFER PORT		
	CONTINUOUS LINER BAG OUT PORT		
	WEIGH SCALE		
	AUDIBLE ALARM		
	NOISE REDUCER		
	VACUUM PUMP		
	FLUORESCENT LIGHTING		
	VESSEL STYLE LAMP		

NOTE:  
CLIENT PIPEWORK, VALVE AND ACCESSORIES ARE FOR ILLUSTRATIVE PURPOSES ONLY. A DESIGN AND SAFETY REVIEW MUST BE UNDERTAKEN TO ENSURE CORRECT PIPING INSTALLATION. STEAM TRAPS, DRAINAGE ANGLE AND OTHER ITEMS HAVE BEEN OMITTED FOR CLARITY, THE CORRECT DESIGN OF THESE SYSTEM ARE THE SOLE RESPONSIBILITY OF THE CLIENT.



NOZZLE SCHEDULE - REFINER			
ID	DESCRIPTION	SIZE	TYPE
N1	SLURRY INLET	1-1/2"	FERRULE - BS4825-3
N2a	VALVE CONNECTION 1	1"	FERRULE - BS4825-3
N2b	FILTRATE OUTLET 1	1"	FERRULE - BS4825-3
N3a	VALVE CONNECTION 2	1"	FERRULE - BS4825-3
N3b	FILTRATE OUTLET 2	1"	FERRULE - BS4825-3
N4	HATCH OUTLET/CIP DRAIN	2"	FERRULE - BS4825-3
N5	SAFETY VENT/BURST DISC	1-1/2"	FERRULE - BS4825-3
N6	PROCESS VENT	1-1/2"	FERRULE - BS4825-3
N7	VESSEL N2 INLET	1-1/2"	FERRULE - BS4825-3
N8	HTF INLET	1"	FERRULE - BS4825-3
N9	HTF OUTLET	1"	FERRULE - BS4825-3
N10	PRESSURE TRANSMITTER	1-1/2"	FERRULE - BS4825-3
N11	PRESSURE INDICATOR	1-1/2"	FERRULE - BS4825-3
N12	RTD THERMOMETER	G 1/2"	BSP (F)
N13	MECH. SEAL N2	G 1/4"	BSP (F)
N14	LABYRINTH CIP	G 1/4"	BSP (F)
N15	BLANKED	G 1/4"	BSP (F)
N16	LABYRINTH DRAIN	G 1/4"	BSP (F)
N17	AGL. RAISE	8mm	COMPRESSION
N18	AGL. LOWER	8mm	COMPRESSION
N19	SIGHT/LIGHT GLASS	4"	FERRULE - BS4825-3

VALVE SCHEDULE - REFINER			
ID	SIZE	TYPE	CONNECTION ACTUATION SEAL DUTY
XV200	25 (1")	DIAPHRAGM	BS4825-3 PNEU EPDM/FILTRATE OUTLET N2b
XV300	25 (1")	DIAPHRAGM	BS4825-3 PNEU EPDM/FILTRATE OUTLET N3b
HV4	40 (1.5")	TAPER PLUG	BS4825-3 MANUAL EPDM/PRODUCT OUTLET N4

DESIGN PARAMETERS - REFINER			
VESSEL		HEATING COILS	
DESIGN PRESSURE:	FV TO 6 Bar G	FV TO 6 Bar G	FV TO 6 Bar G
OPERATING PRESSURE:	FV TO 3 Bar G	FV TO 6 Bar G	FV TO 6 Bar G
DESIGN TEMPERATURE:	-5° TO +150°C	-5° TO +150°C	-5° TO +150°C
CORROSION ALLOWANCE:	NIL	NIL	NIL
STRESS RELIEF:	NONE	NONE	NONE
RADIOGRAPHY (BUTT WELDS):	100%	100%	100%

MATERIALS OF CONSTRUCTION	
CONTACT PARTS:	316L SS
NON - CONTACT PARTS:	304L SS

REVISION F			REVISION E			REVISION D			REVISION C			REVISION B			REVISION A			ORIGINAL ISSUE & CE REVIEW					
-			-NOZZLE SCHEDULE CORRECTED			-AS BUILT			- VESSEL LIGHT ADDED			- LABYRINTH/MECH SEAL DIVISION HIGHLIGHTED			FIRST ISSUE			DEPT					
-			-			-			-			-			-			APPROVED			DATE		
MOD BY	APPROVED	DATE	MOD BY	APPROVED	DATE	MOD BY	APPROVED	DATE	MOD BY	APPROVED	DATE	MOD BY	APPROVED	DATE	MOD BY	APPROVED	DATE	40	.	.	40	.	.
CUSTOMER APPROVAL		DATE	CUSTOMER APPROVAL		DATE	CUSTOMER APPROVAL		DATE	CUSTOMER APPROVAL		DATE	CUSTOMER APPROVAL		DATE	CUSTOMER APPROVAL		DATE	60	.	.	60	.	.
																		70	.	.	70	.	.

POWDER SYSTEMS LTD  
ESTUARY BUSINESS PARK  
LIVERPOOL L24 8RG  
UNITED KINGDOM  
Website: www.powdersystems.com

DRN BY: CMP  
DATE: 16-OCT-13  
SCALE: N/A  
CHK BY: CMP  
APPD BY: KJK

6172  
PROCESS FLOW DIAGRAM  
74515A01  
REV E

THIS DRAWING IS THE PROPERTY OF POWDER SYSTEMS LIMITED AND MAY NOT, WITHOUT THE CONSENT OF PSL, BE COPIED IN PART OR IN WHOLE OR BE USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT IS SUPPLIED

FRAME A1