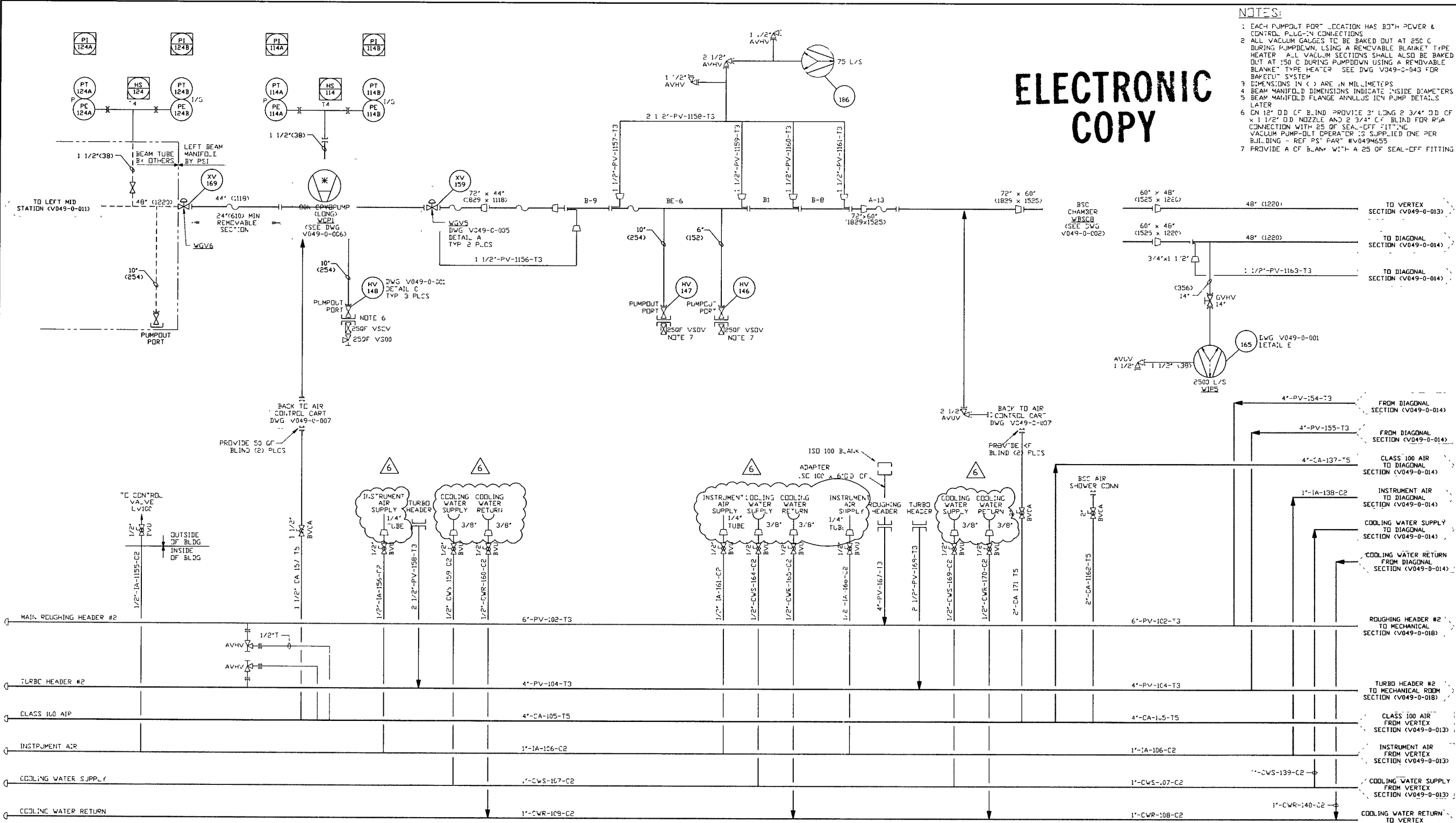


ELECTRONIC COPY

NOTES:

1. EACH PUMPOUT PORT LOCATION HAS BOTH POWER & CONTROL PLUG-IN CONNECTIONS
2. ALL VACUUM GAUGES TO BE BAKED OUT AT 250 C DURING PUMPDOWN, USING A REMOVABLE BLANKET TYPE HEATER. ALL VACUUM SECTIONS SHALL ALSO BE BAKED OUT AT 150 C DURING PUMPDOWN USING A REMOVABLE BLANKET TYPE HEATER. SEE DWG V049-0-043 FOR BLANKET SYSTEM.
3. DIMENSIONS IN () ARE IN MILLIMETERS
4. BEAM MANIFOLD DIMENSIONS INDICATE INSIDE DIAMETERS
5. BEAM MANIFOLD FLANGE ANNUUS IN PUMP DETAILS LATER
6. ON 12" O.D. OF BLIND PROVIDE 2" LONG 2 3/4" O.D. OF x 1 1/2" O.D. NOZZLE AND 2 3/4" C.F. BLIND FOR R/A CONNECTION WITH 25 OF SEAL-OFF FITTING. VACUUM PUMP-OUT OPERATOR IS SUPPLIED ONE PER BUILDING - REF PS PART #V049M55
7. PROVIDE A C.F. BLIND WITH A 25 OF SEAL-OFF FITTING



DWG NO	DESCRIPTION	DWG NO	DESCRIPTION
V049-0-014	P & ID DIAGONAL SECTION		
V049-0-013	P & ID VERTEX SECTION		
V049-0-011	P & ID LEFT MID STATION		
V049-0-006	P & ID BOX CRYOPUMP		
V049-0-002	P & ID BEAM SPLITTER CHAMBER		
V049-0-001	P & ID LEGEND		

REV	DESCRIPTION	CHKD	DRWN	DATE	DESH
6	AS-BUILT			08 25 98	0628
5	REISSUED FOR FDR UPDATE			6/11/97	0499
4	REVISED	SH	DHW	02 14 97	0435
3	REVISED	SH	DHW	10 03 97	0394
2	ISSUE FOR FDR UPDATE	TS	RT	10 25 96	0309
1	ISSUE FOR FDR	REB	TS	04 26 96	0134
0	ISSUE FOR DESIGN	REB	TS	01 03 96	0031

USED ON	ISSUE DESCRIPTION	SCALE	SHEET
		NONE	1 OF 1

PROCESS SYSTEMS INTERNATIONAL, INC.
 20 WALKUP DR. WESTBOROUGH, MASSACHUSETTS 01581 USA

PIPING & INSTRUMENTATION DIAGRAM
 LIGO VACUUM EQUIPMENT
 WASHINGTON SITE
 LEFT BEAM MANIFOLD

CAR FILE: V0490012 SIZE: D DWG NO: V049-0-012 REV: 6

EDUCATIONAL COMMERCIAL USE