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## Recent Work

### Title

PRESSURE TEST OF TPC TEST PRESSURE VESSEL

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LAWRENCE BERKELEY LABORATORY - UNIVERSITY OF CALIFORNIA		CODE	SERIAL	PAGE
<b>ENGINEERING NOTE</b>		P40409	M5666	1 of 4
AUTHOR G. Behrsing R. Warren	DEPARTMENT Mechanical	LOCATION Berkeley	DATE January 22, 1981	
PROGRAM - PROJECT - JOB PEP-4 TPC				
TEST PRESSURE VESSEL				
TITLE PRESSURE TEST OF TPC TEST PRESSURE VESSEL				
CASE NO. 81-004				
<u>TEST SUMMARY</u>				
<p>The TPC Test Pressure Vessel was pressure tested in Bldg 6 on December 17, 1980. The test fluid was nitrogen gas. The test set up was inspected prior to the test by G. Behrsing and R. Warren. The maximum pressure reached was 178 PSIA and was witnessed by Alan Bross.</p>				
<u>FLOW SCHEMATIC AND OPERATING PROCEDURE</u>				
<p>A flow schematic and operating procedure provided by Garth Smith is attached.</p>				
DISTRIBUTION:				
G. Behrsing				
A. Bross				
L. Brown				
P. Hernandez				
E. McLaughlin				
K. Mirk				
G. Smith				
Safety File				
/nh				

## TPC TEST PRESSURE VESSEL

I. Person in Charge Alan Bross

II. Personnel List

The following personnel are cleared to operate the gas system

Operating Personnel	Ext.	Home Phone
Owen Chamberlain	5075	653-2740
Ron Madaras	4410	276-8079
Alan Bross	6808	644-2430
Gerald Przybylski	6521	569-6836
Dave Nygren	6521	527-8666
Bob Kenney	5047	254-0938
Garth Smith	6521	483-8913

III. History of Pressure Vessel

The pressure vessel was designed and built for testing the complete TPC at 10 atm. of Ar CH<sub>3</sub> mixture and 200 kv. The vessel was tested to 285 psi at Bldg. 77. All piping, fittings, and modified flanges have been vacuum and pressure tested to 285 psi. For more detail see drawing 19C3616.

IV. Operating Procedure (see Figure 1)

LIST OF VALVE NUMBERING

Valve #1	Inlet Valve
Valve #2	Bypass Valve
Valve #3	Outlet Valve
Valve #4	Protection Valve

TO FILL WITH 80% Ar 20% CH<sub>3</sub> MIXTURE

- (a) Purge lines past inlet valve
- (b) Close bypass (#2), outlet (#3), inlet (#1) and protection valves (#4).
- (c) Open 1" ball valve
- (d) Start up vac pump
  - (1) be sure that cooling water and lube system are on.
- (e) At ~500 micron fill LN trap
- (f) At ~100 micron close 1" ball valve
- (g) Open inlet valve (#1) and fill to ~30 psia
- (h) Open solenoid valve by manual switch, then open protection valve (#4) and purge line (Note. Do not close protection valve after purging line.)
- (i) Close solenoid valve using manual switch
- (j) Set Reg. A to 137 psi and Reg. B to ~175 psi
- (k) When pressure reaches 137 psi close inlet valve (#1), system is now at operation pressure.

## TO EMPTY PRESSURE VESSEL AND FILL WITH AIR

- (a) Open outlet valve (#3)
- (b) At ~15 psia close outlet valve (#3) and protection valve (#4)
- (c) Open ball valve
- (d) Start vac pump - be sure to turn on cooling water and lube system
- (e) At ~200 micron close 1" ball valve
- (f) Open outlet valve
- (g) When pressure reaches 15 psia system is at air

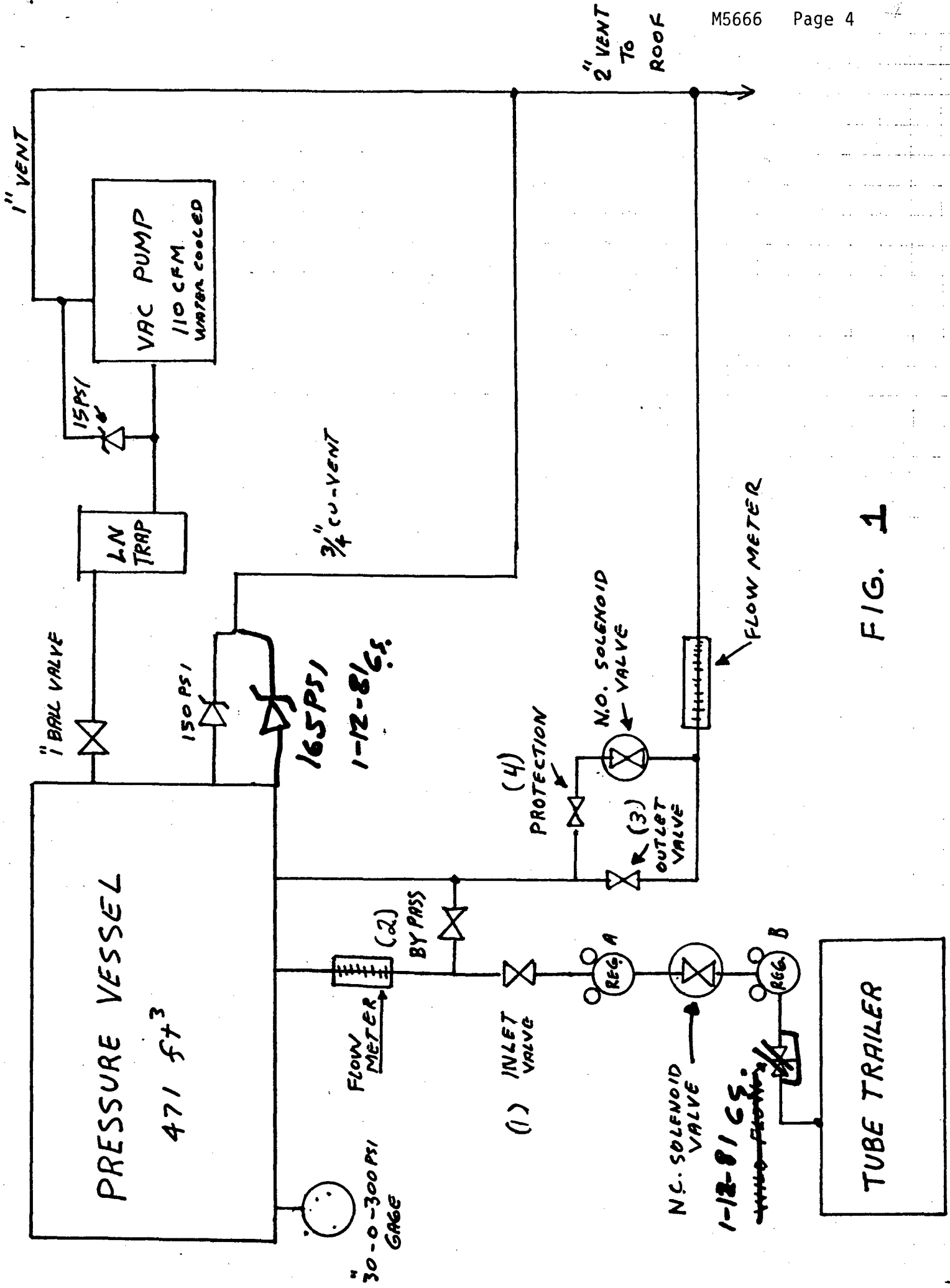


FIG. 1

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