

Pressure Test Record

(for implodable items to be carried aboard Alvin)

Certification of implodable volumes to be installed on, or manipulated by, DSV *Alvin* requires a submergence pressure test to **10,037 psi** (1.5 x 4,500m x 1.487 psi) +50/-0 psi for 10 cycles. The first 9 cycles will consist of a hold at pressure for 10 minutes. The 10th cycle will be held for 1 hour. The test shall be conducted in 35°F seawater, if practical. This includes any and all equipment to be installed on the submersible, an elevator to be moved by the submersible, or a free vehicle or instrument that will be manipulated by the submersible. For volumes which are intended for use at depths shallower than 4,500m, an acceptable alternative procedure involves substituting a different maximum test pressure in the same cycling sequence according to the following equation:

$$\text{Test pressure (psi)} = 1.5 \times (\text{maximum pressure (psi) expected during applicable dives}),$$

where maximum pressure = maximum water depth (meters) x 1.487 (psi/meter)

Any volume tested to a depth other than 4,500m must have the maximum allowable depth clearly indicated on the exterior of the pressure vessel.

Damage shall be cause for test failure. The following data shall be recorded, with a separate record for each item tested.

Test Date: _____
Description of Item Tested (Make/Model): _____
Serial Number (or other unique ID): _____
Tested For/Item Owned By: _____
Test Pressure (psi): _____

Test Equipment	Gauge 1	Gauge 2 (if installed)
Gauge Make:	_____	_____
Gauge Model:	_____	_____
Serial Number:	_____	_____
Calibration Date:	_____	_____
Next Cal Due Date:	_____	_____
Gauge Pressure Range:	_____	_____

Note: Test pressure shall be within middle two-thirds of gauge pressure range. Test facility gauges must have been calibrated to NIST standards within 12 months of the test.

Test Medium Temperature: _____

Test Data

Cycle No.	Pressure	Start Time (Full Pressure)	Stop Time (Full Pressure)	Hold Time
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____

Results and Remarks: _____

Test Operator

Name (print): _____
Signature: _____
Date: _____
Facility Used: _____