

**Proforma under Rule 18**

**CERTIFICATE OF YEARLY TEST OF SAFETY VALVE  
AND EXCESS FLOW VALVE**

(Issued under rule 18 of SMPV(U) Rules, 1981)

I hereby certify that the safety valves and excess flow valves have been tested as per the particulars below and found fit for use.

1. **Safety valves** -

- i) Identification No. and Size :
- ii) Make :
- iii)
- a) Fitted with vessel No. in the :  
installation/mounted on  
vehicle No.
- b) Particulars of licence :
- c) Detailed address of place of :  
evacuation/degassing for  
removal of safety valve for  
testing
- d) Tested on (Date) :  
At (Place) :
- e) Observations on opening and :  
closing of the valve and  
subsequent leakage, if any
- iv) Observation on physical  
examination of the whole assembly  
and especially of gasket, "O" ring  
and spring (Replacement of gasket/"O"  
ring to be mentioned).
- v) Observation on adequacy to the  
valve in relation to the vessel  
and product. (Safety valve test to be  
done pneumatically or hydraulically  
upto the set pressure followed by  
Pneumatic leak test).

2. **Excess flow valves** -

**(Applicable For Mobile Vessel for  
Flammable/Toxic Gas)**

- i) Fitted with vessel described at  
(1) above at (Location) :
- ii) Make & size
- iii) Observation on physical :  
examination, operational fitness  
& adequacy of the size in relation  
to the vessel. The valves has to be  
opened form outside & examined  
for defects in structure, thruals,  
alignment, condition of spring etc.

Contd....2/-

3. **Pipe for housing SRV**

**(Applicable for Static installation wherein vessels are fitted with SRV having its spring on lower side towards vessel)**

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- a) Specification of pipe :  
(whether seamless Schedule 40 or 80), its size and thickness.
- b) Pneumatic testing of the pipe : Tested at \_\_\_\_\_ kg/cm<sup>2</sup>  
(to be tested at set pressure of SRV)
- c) Date of Test :
- d) Observation on physical :  
condition and its fitness.

Place :-  
Date :-

Signature :  
Name & Designation :  
Seal of Competent Authority :  
Ref. of CCE's recognition :

**Proforma under Rule 19 (other than sphere)**

**CERTIFICATE OF PERIODICAL HYDROSTATIC TEST ON  
COMPRESSED GAS VESSELS OTHER THAN SPHERES**

(Issued under Rule 19 of SMPV(U) Rules, 1981)

No. \_\_\_\_\_

Date \_\_\_\_\_

I hereby certify that the compressed gas vessel described was examined and subjected to hydrostatic pressure test by me \_\_\_\_\_ and was found to have passed the examination and test satisfactorily. Particulars are given below :

1. **Name & address of the occupier/owner** :
2. **Particulars of the licence under** :  
**SMPV(U) Rules, 1981**
3. **Vessels Particulars -**
  - i) Identification Number :
  - ii) Fabricator, & Year of fabrication :
  - iii) Third party Inspecting Agency :
  - iv) Design code & Pressure :
  - v) Fabrication Drawing number and Approval reference :
  - vi) Compressed gas to be stored/ transported. :
4. **Detailed address of place of evacuation/degassing, etc. for preparation of vessel** :
5. **Visual Examination -**
  - i) Internal :
  - ii) External :(Observations on defects such as dents, pitting, corrosion etc. to be given clearly)
6. **Ultrasonic thickness measurement -**  
(refer ASTM-E-797/SE 797) Shell Dished end
  - i) Minimum thickness observed :
  - ii) Original Thickness :-
    - a) Nominal plate thickness
    - b) Minimum calculated Thickness (without C.A.)
    - c) Corrosion Allowance (CA) if any
7. **Hydrotest (Pneumatic test for cryogenic/special vessels so permitted by CCE) particulars –**
  - i) Date of Test :
  - ii) test pressure :
  - iii) Duration :
  - iv) Observation :

Contd....2/-

8. **Emergency shut off valves (ROV/EFV) -**

- i) Particulars – Number, Location, Make & Size :
- ii) Observation on operational fitness :

9. **Pipe for Housing SRV & distance pipe from vessel -**

**(Applicable for Static installation wherein vessels are fitted with SRVs having spring on lower side towards vessel)**

- |   | <u>SRV Housing Pipe</u> | <u>Distance Pipe</u> |
|---|-------------------------|----------------------|
| a) Specification of pipe :                    |                         |                      |
| (whether seamless Schedule                    |                         |                      |
| 40 or 80), its size and thickness.            |                         |                      |
| b) Hydrotesting of pipe (kg/cm <sup>2</sup> ) |                         |                      |
| (to be tested at 1.5 times the :              |                         |                      |
| design pressure of the vessel).               |                         |                      |
| c) Date of Test :                             |                         |                      |
| d) Observation on Physical Condition          |                         |                      |
| of the pipe and its fitness. :                |                         |                      |
- 

Place :-

Date :-

Signature :

Name & Designation :

Seal of Competent authority :

Ref. of CCE's recognition :

**Proforma No. 11-(L) under Rule, 19 ( sphere)**

**CERTIFICATE OF PERIODICAL INSPECTION (NDT) AND HYDROSTATIC TEST ON HORTON SPHERE FOR HYDROCARBONS (LPG, BUTADIENE, PROPANE) VCM, AMMONIA ETC.**

(Issued under Rule 19 of SMPV(U) Rules, 1981)

No. \_\_\_\_\_

Date \_\_\_\_\_

I hereby certify that the Horton Sphere described below was examined by me and subjected to Non Destructive Tests and hydrostatic test \_\_\_\_\_ and was found to have passed the examination and the tests satisfactorily. Particulars are given below :

1. **Name & address of the occupier** :
2. **Particulars of the licence under SMPV(U) Rules, 1981** :
3. **Vessels Particulars -**
  - i) Identification Number :
  - ii) Fabricator, & Year of fabrication :
  - iii) Third party Inspecting Agency :
  - iv) Design code & Pressure :
  - v) Fabrication Drawing number and Approval reference :
4. **visual Examination -**
  - i) Internal :
  - ii) External :

(Observations on defects such as dents, pitting, corrosion etc. to be given clearly)
5. **Ultrasonic thickness measurement -**

(refer ASTM-e-797/SE 797)  
(Readings are to be taken on each petal and crown plate)

  - i) Minimum thickness observed :
  - ii) Original Thickness :-
    - a) Nominal plate thickness
    - b) Minimum calculated Thickness (without C.A.)
    - c) Corrosion Allowance if any
6. **Wet Flurescent Magnetic Particle Test :**

(Refer ASTM-E-709/ASME Sec.V)

  - i) Internal (100%) :
  - iii) External (100%) :

Contd....2/-

7. Ultrasonic flaw Detection of Welds :  
(Refer ASME.Sec.V, Article 4 except that for thickness 2" or less, calibration blocks described in Fig. T-542.2.1 of Article 5 shall be used) Not less than 25% of weld seams including all T. joints middle circumferential seams, Bottom & Crown weld seams)
8. Liquid Penetrant Test, wherever :  
necessary (Refer ASTM-E-165/IS:3658)
9. Hardness Test  
(Refer ASTM-E-110-Hardness to be measured at random on circumferential/longitudinal welds, nozzle welds, HAS and any left over cleat weld areas)
10. Radiographic Test, wherever :  
necessary (To be carried out as supporting test for WEMPI)
11. Hydrotest particulars -
  - i) Date of Test :
  - ii) Test pressure :
  - iii) Duration :
  - iv) Observation :
12. Emergency shut off valves (**ROV/EFV**) -
  - iv) Particulars – Number, Location, Make & Size :
  - v) Observation on operational fitness :

Place :-

Date :-

Signature :

Name & Designation :

Seal of Competent authority :

Ref. of CCE's recognition :

**NOTE** :-

1. The NDT should be carried out only by persons possessing qualification of level 2 of ASNT/ISMT.
2. Results of NDT and observations may be given in separate annexures.
3. In case any repair to the sphere becomes necessary subsequent to NDT, repair procedure developed by an approved Fabricator and endorsed by a recognized Inspecting Agency should be submitted to Chief Controller of Explosives for prior approval.

Contd....3/-

4. Acceptance criteria of Test reports should be as per the fabrication code

5. In case of LPG vessel with fire proof coating, the external visual examination as per 4(ii) shall include examination of the coating and the sphere surface as per para A of the Recommended procedure forwarded under CCE's letter No. PV(Testing)Genl dated 10/11.12.92. The ultrasonic measurements and WFMP (internal) test shall be done from inside and the external tests, at selected locations as mentioned at paras A4 & B of the procedure, unless it is necessary to remove the whole coating for comprehensive external testing.

**Proforma under Rule, 33**

**CERTIFICATE OF SAFETY FOR STORAGE OF COMPRESSED GAS**  
(Issued under Rule 33 of SMPV(U) Rules, 1981)

**Certificate No :**

Date :

I, Shri \_\_\_\_\_ hereby certify that the compressed gas installation of \_\_\_\_\_  
(full name & address of the occupier) at \_\_\_\_\_  
(Village, police Station, district, State)

has been constructed in accordance with the specification and plans approved by the Chief Controller of Explosives and the conditions of the licence in Form – III/\_\_\_\_\_ and that in my opinion the installation and foundations of the aboveground/mounded/underground pressure vessels are of such a nature and all vessels have been so installed and secured as to ensure safety.

The particulars of the installation and examinations carried out are noted below :-

1. Vessels and fittings are as \_\_\_\_\_ :  
described in the annexure attached.

2. **FIRE PROTECTION**

I) WATER

No. & Location of hydrant points :  
Pressure in hydrant line :  
Whether hose and water throwing :  
arrangement provided, particulars thereof.  
Particulars of water sprinkler system :  
system provided.  
Capacity of static fire water :  
store or equivalent arrangement.  
Observations on adequacy of :  
the arrangement.

II) FIRE EXTINGUISHERS.

Make :  
Type :  
Capacity :

3. **Decanting Pump** –

Make :  
Specification :  
Electrical Motor: Make :  
HP/RPM :  
Flame proof construction protection :

Contd...2/-

4. **Electrical Fittings** -  
 (Nature, Specification, Location) :  
 Lamps :  
 Switches :  
  
 Switch Gear :  
 Junction Boxes, etc. :  
 Wiring :
5. **Pipelines** -  
 Location & Length  
 (As per approved plans)  
 Make :  
 Specification :  
 Tested at pressure\_\_\_on (date)\_\_\_\_\_ by \_\_\_\_\_  
**Depth at which buried (for ALDS)**  
 Fittings in the pipeline :  
**Whether valves are fire safe (for ALDS)**  
 Type and Make :  
 Suitability of the fitting :
6. **Vapourisers** -  
 Type (Electrical or Direct Fired) :  
 Make :  
 Capacity :  
 Defects, if any :  
 Approval reference :
7. **Hose pipe for decantation**  
 Make :  
 Material of Construction :  
 Test pressure :
- 8.(a) **Painting & External Corrosion prevention on vessel (particulars)** :
- 8.(b) **Cathodic protection (applicable for U/G & mounded vessel installation)**  
**Type of cathodic protection and the Standard to which it conforms** :  
 Agency providing cathodic protection :  
 Design adequacy of cathodic protection :  
 Details of coating and its adequacy :  
 Details of Galvanic isolation and its adequacy:  
**Details of CP monitoring box.**

Contd...3/-

9. **Foundation** :  
 Nature :

Material :  
Packing between tank foundation :  
**Name of the Third party inspection agency  
appraising the design of civil structure and  
fastening arrangement.**  
**Whether the actual construction of foundation  
&fastening arrangement conforms to approved  
design**  
**(applicable for U/G Vessel installations)**

- 10 a) Fabrication Drawing : **Drawing No.Approval No. & Date**  
b) Layout drawing :  
c) **Name of the operator & its approval reference no.:**  
d) **Name of the ALDS Installer & its** :  
**Approval reference No.**
11. Earthing details :
12. Remarks, if any :

Place :-  
Date :-

Signature :  
Name & Designation :  
Seal of Competent Authority  
Ref. of CCE's recognition :

**ANNEXURE**

**TO SAFETY CERTIFICATE UNDER RULE 33 OF STATIC & MOBILE  
PRESSURE VESSELS (UNFIRED) RULES, 1981.**

**A. Vessel Particulars –**

Identification Number :  
Fabricator's Name :  
Particular of Inspection Certificate :  
Design code :  
Design Pressure (kg/cm<sup>2</sup> (g)) :  
Design Temperature (°C) :  
Working Pressure :  
Water Capacity (M<sup>3</sup>) :  
Name of the gas to be stored :  
Initial Hydraulic test done on \_\_\_\_\_ (date) at pressure \_\_\_\_\_  
by \_\_\_\_\_ (Inspecting Agency)

**Note-1(\*)** Subsequent Hydraulic Test (pneumatic test for cryogenic vessels) after installation of the vessels at site on \_\_\_\_\_ (date) at pressure \_\_\_\_\_  
by \_\_\_\_\_ (competent Person)

Remarks on the Test :  
Nature of Installation :  
(whether aboveground/mounded/underground) :

Foundation : Type \_\_\_\_\_  
Remarks about foundation \_\_\_\_\_  
Behaviour during Hydraulic Test \_\_\_\_\_

Whether the vessels is insulated \_\_\_\_\_  
If so, nature of insulation \_\_\_\_\_

**B. Fittings**

1. <u>Safety Valves</u>	<u>No.1</u>	<u>No.2</u>	<u>No.3</u>
Identification No. and :			
Manufacturing Date			
Make :			
Set pressure (kg/cm <sup>2</sup> (g)) :			
Tested by _____ on _____ (date)			
(Competent person)			

**Note-2(\*\*)** Particulars of Original test by \_\_\_\_\_ (Inspecting Agency at Manufacturers premises) on \_\_\_\_\_ (date).

Discharge flow rate :		
Size :		
Are size & flow rate Adequate: for the vessel	Yes/No	Yes/No
(if 'No' reasons may be given)		Contd...2/-

Height of vent from vessel :  
 & ground level.  
 Whether provided with : Yes/No Yes/No  
 shut-off valve

**Pipe for Housing SRV & distance pipe from vessel**  
**(Applicable for Static installation wherein vessels are fitted with SRVs**  
**having spring on lower side towards vessel)**

**SRV Housing Pipe**    **Distance pipe**

- a) Specification of pipe :  
 (whether seamless schedule  
 40 or 80) and its thickness.
- b) Hydrotesting of pipe at :  
 pressure (kg/cm<sup>2</sup>)  
 (to be tested at 1.5 times the  
 design pressure of the vessels).
- c) Date of Test :
- d) Observation on physical :  
 condition of the pipe and  
 its fitness. -----

2. **Level Gauge**

- a) Slip tube Gauge/Magnetic :  
 Level Gauge
- b) Maximum Level Gauge Make:  
 Number, Location and  
 Manufacturing Date.
- c) Rotogauge - :  
 Make, Location,  
 Manufacturing Date
- d) any other device - :  
 its particulars

3. **Pressure gauge -**

Make, Range, Date of :  
 Calibration whether excess Yes/No Yes/No  
 Flow valve provided. If yes,  
 Particulars, Make, Size &  
 Identification Number.

Contd...3/-

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4. **Emergency Shut Off Arrangement-                      No.1                      No.2                      No.3**

Excess flow valve – Location :  
 Make & manufacturing Date :  
 Size & Closing flow rate :

Date of last Test :  
Whether Size & Closing flow : Yes/No Yes/No Yes/No  
Rate, adequate  
(If 'No' reasons may be given):  
Any other type of Emergency :  
Off arrangement –  
Particulars thereof :

5. **Discharge Valve** -

Location :  
Make :  
Size :

**Whether fire safe**  
**Standards to which conforming**  
**(For U/G LPG Storage installations)**

6. **Drainage Pipe** -

Size :  
Mode of closure :

**Note-3 (\*\*\*)** Whether extended beyond: Yes/No

Shadow of vessel  
If 'No', give reasons :

7. **Manhole** -

Location :  
Size :

8. **Details of all other equipment installed in the premises.**

**SEAL**

**SIGNATURE**  
**REFERENCE OF CCE'S RECOGNITION**  
**AS COMPETENT PERSON**

**NOTES** :-

- \* 1) Hydraulic test to be carried out after installation at site at Test Pressure (if not tested at test pressure within preceding 2 or 5 years) or at Design pressure (if already tested at Test pressure during preceding 2 or 5 years). For cryogenic vessels for industrial gases, test pressure should be design pressure (minimum).
- \*\* 2) SRV's must be inspected and certified by 3<sup>rd</sup> Party Inspector a manufacturer's premises-particulars thereof should be furnished.
- \*\*\* 3) Drain pipe for **flammable gases** must be extended beyond the shadow of the vessel and provided with 2 shut-off valves.

**Proforma under Rule, 43**

**CERTIFICATE OF HALF YEARLY EXAMINATION OF ROAD  
TANKERS FOR COMPRESSED GASES UNDER RULE 44(2)**

No. \_\_\_\_\_

Date \_\_\_\_\_

I hereby certify that I examined the road tanker having the particulars noted below and found it road-worthy and properly maintained.

1. Particulars of licence under SMPV(U) Rules, 1981 : No. Valid upto
  
2. i) Compressed gas transported (name) :  
ii) Licensed quantity of gas :  
iii) Maximum laden weight of vehicle as prescribed in licence. :
  
3. Vehicle Registration No. :  
Engine No. :  
Chassis No. :
  
4. i) Last safety valve test particulars – :  
Certificate issued by :  
Test date & pressure :  
Certificate No. & date :  
  
ii) Hydro-test particulars :  
Certificate issued by :  
Test date & pressure :  
Certificate No. & date :
  
5. Examination of vehicle carried out with reference to the safety certificate (under rule 43) issued by : No. Date

The vehicle was found to conform to all the particulars mentioned in the certificate excepting the followings :

(clear details to be given itemwise)

i)

ii)

Place :-

Date :-

Signature :-

Name & Designation :-

Seal of competent Authority :-

Ref. of CCE's recognition

**NOTE** :- certificate should be issued if the S.V. test and Hydraulic test have not been done in due dates.

**Proforma No. 11-(N) under Rule, 43**

**SAFETY CERTIFICATE UNDER RULE 43**

Certificate No.

Date : \_\_\_\_\_

We hereby certify that the compressed gas transport vehicle of \_\_\_\_\_ having the particulars noted below have been examined by me at \_\_\_\_\_ and found to meet with the requirements of Chapter IV of SMPV(U) Rules, 1981, I also certify that the vessel its all fittings after completion of its mounting, as per approved drawing, has been tested by \_\_\_\_\_ in my presence hydraulically at 12 kg/cm<sup>2</sup> g on \_\_\_\_\_ followed by pneumatic test at 6 kg/cm<sup>2</sup>g on \_\_\_\_\_ and found free from any leakage.

1. No. and date of approval by CCE :-  
i) Fabrication drawing No. :-  
ii) Mounting drawing No. :-

2. **Vehicle Particulars**

- i) Registration No. :  
ii) Make, Model No. & Year of : Running Gear No.  
iii) Engine No. : (Trailer Chassis)  
iv) Chassis No. : Make :-  
v) Unladen weight actual (ULW) : Ch. No. :-  
vi) Maximum laden weight as : RTA Approval No.  
certified by Chassis manufacturer

3. **Vessel and fittings** –

- A. Identification Number :  
Fabricator's Name :  
Particular of Inspection Certificate :  
Design code :  
Design Pressure (kg/cm<sup>2</sup> (g) :  
Design Temperature (°C) :  
Water Capacity in litres :  
Name of the gas to be stored :  
Hydraulic test done on (date) at pressure by

Ultrasonic thickness measurement (Not applicable for new vessels)	<u>Shells</u>	<u>Dish end</u>
i) Minimum thickness observed	_____	_____
ii) Nominal thickness	_____	_____
iii) Minimum Calculated thickness (without Conversion Allowance)	_____	_____

Contd...2/-

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B. **Fittings Particulars**

- i) **Safety Valves** No.1 No.2 No.3  
 Identification No. and :  
 Manufacturing Date  
 Make :  
 Set pressure in kg/cm<sup>2</sup> :  
 Tested on (date)  
 At (pressure in kg/cm<sup>2</sup> ):  
 By (Competent authority):  
 Discharge flow rate :  
 Size :  
 Whether housed in weld caps :  
 If not, detail of the protection :  
 provided  
 Are size & flow rate adequate: Yes/No  
 (if 'Not' reasons may be given)  
 Whether safety valve is  
 located inside vessel.
- ii) **Level Gauge :**  
 a) Magnetic Level Gauge Make, :  
 Number & Location,  
 Manufacturing date  
 b) Maximum Level Gauge Make :  
 Location & depth of gauge,  
 Manufacturing Date.  
 c) Rotogauge - :  
 Make, Number & Location,  
 Manufacturing Date
- iii) **Pressure gauge -**  
 Make, Range, Date of :  
 Calibration whether excess  
 Flow valve provided. If yes,  
 Particulars, Make  
 Identification Number and  
 Manufacturing date.
- iv) **Excess Flow Valves** No.1 No.2 No.3  
 Location & Type :  
 Make :  
 Size :  
 Manufacturing Date :  
 Closing Flow rate :  
 Date of Last Test :  
 Whether size and closing :  
 Flow rate is adequate for (name  
 of the product) Service  
 (If 'No' reasons may be given) Yes/No Yes/No Yes/No  
 Contd...3/-
- :: 3 ::
- v) **Discharge Valve -**  
 Location & Type :  
 Make & size and whether :  
 discharge pipe provided :

with closing device.

- vi) **Drainage Pipe** -  
Size & :  
Mode of closure :
- vii) Temperature gauge :  
Make & range.

3. **Vehicle Design Particulars** :

- i) Fire resisting shield :  
(nature of construction)  
Whether extended upto the : Yes/No  
top to chassis.  
Gap between driver's cabin :  
and vessel (Min. 15 cms.)
- ii) Fuel tank :  
(Capacity, construction &  
protection against damage)  
(If the cap. Has been increased  
from the original fuel tank cap,  
particulars thereof)
- iii) Whether transfer pump driven: Yes/No  
by engine of vehicle provided  
If yes, whether provision for  
stopping engine from outside  
made.
- iv) Battery and cut-off switch : Yes/No  
(Nature, capacity & location)  
whether the switch is readily  
accessible –
- v) Particulars of wiring - :  
Whether properly fixed and  
Protected.
- vi) Earthing points : Yes/No  
(Construction & Location)  
Whether strong flexible table  
for electrical bonding, atleast  
5m. long and with suitable  
clamp/clip at each end, provided-

Contd...4/-

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- vii) Electrical wiring particulars :
  - a) How fixed with chassis & :  
protected against damage
  - b) Whether insulated and :  
fixed with the chassis

- c) Whether conducted or protected suitably from physical & chemical damage :
- d) Whether all junction boxes sealed :
- e) Whether industrial type sockets are provided in case of trailer :-
- viii) Clearance between and of vessel and end of rear bumper (Min. 7.5 cms.) :
- ix) Guard railing around vessel Particulars of construction whether Railing is considered adequately strong. : Yes/No
- x) Fastening of vessel with Chassis Particulars of fastening : Yes/No
- i) No. of U bolts provided :
- ii) Material specification :
- iii) Lock Nut provided or not :
- iv) Padding particulars :
- v) Whether secured well to the Chassis : Yes/No
- xi) Whether chassis is extended : Yes/No
- a) If yes, the length extended :
- b) Nature of welding :
- c) Condition of chassis and its fittings – whether satisfactory in relation to safety of the vehicle. :
- xii) Bottom pipeline :
- a) Whether pipeline between excess flow valve and discharge valve is a single piece and not pieces welded together. :

Contd...5/-

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- b) Whether pipelines and valves including drainage connection adequately secured with chassis (give particulars) & sufficiently away from moving parts of the vehicle :
- c) Mode of protection from pilferage:
- xiii). **Manhole** -

- a) Diameter :
- b) Nature of protection cover over manhole thickness and height :
- xiv) Particulars of fire extinguishers provided :
- xv) Whether height barrier provided on the top of driver's :
- xvi) Whether the exhaust of the engine has been provided with spark arrestor If yes, Make & (CCE's approval No.): Yes/No :
5. Remarks, if any :

Place :-

Date :-

Signature

Full Name :-

Designation :-

Seal of Competent authority:-

**Note :-** Any shortcomings/deviations from the specified requirements under Static & Mobile Pressure Vessels (Unfired) Rules, 1981 shall be high lighted under the remarks column.

### **FORMAT OF CERTIFICATE OF CONTROL**

“Letter-Head of the Recognized Agency”

[should indicate complete postal address of the Head office as per Approval/Recognition letter and address of issuing branch, if inspection conducted by its branch office, having approved Inspector(s)]

## CERTIFICATE OF CONTROL

[Rule 12(2) of SMPV(U) Rules, 1981]

Certificate No :

Date :

- 1.0 Manufacturer -  
\_\_\_\_\_
- 1.1 Fabrication shop CCE approval No. -  
\_\_\_\_\_
- 1.2 Validity of shop approval -  
\_\_\_\_\_
- 1.3 Manufactured at -  
\_\_\_\_\_  
\*Address of manufacturing unit indicating  
\_\_\_\_\_  
place/site, Plot No./Survey No.  
\_\_\_\_\_  
Village/ Ind. Estate, District & State  
\_\_\_\_\_  
\*In case of site fabrication or assembly  
details thereof to be given. -
- 1.4 Purchaser/for whom intended -  
\_\_\_\_\_
- 1.5 Site of installation -  
\_\_\_\_\_
- 1.6 Purchase order No. & Date -  
\_\_\_\_\_
- 1.7 Manufacturer's drawing No. -  
1. \_\_\_\_\_  
2. \_\_\_\_\_  
3. \_\_\_\_\_  
4. \_\_\_\_\_
- 1.8 Chief Controller of Explosives -  
\_\_\_\_\_  
Approval Reference of design drawing \_\_\_\_\_ dated  
\_\_\_\_\_
- 1.9 Inspection Date (First) -  
\_\_\_\_\_
- 1.10 Inspection Date (Final) -  
\_\_\_\_\_
- 1.11 Type of construction - a)  
Horizontal/vertical/underground/aboveground/

Mounded vessel of \_\_\_\_\_ mm dia  
X \_\_\_\_\_ mm length (TL to TL or WL  
to WL) with

\_\_\_\_\_dish ends

b) \_\_\_\_\_ mm dia

Horton Sphere

1.12 Job or Vessel Identification No. -  
\_\_\_\_\_

**2.0 Design Data**

2.1 Design and construction code -  
\_\_\_\_\_

2.2 Name of compressed gas -  
\_\_\_\_\_

2.3 Water capacity (Gross/net in case of - \_\_\_\_\_ Ltrs.  
cryogenic vessel)

2.4 Maximum allowable working pressure -  
\_\_\_\_\_ Kg/cm<sup>2</sup>

2.5 Design Pressure - \_\_\_\_\_  
kg/cm<sup>2</sup>

(including \_\_\_\_\_ kg/cm<sup>2</sup> static head  
+ \_\_\_\_\_ kg/cm<sup>2</sup>  
External Load)

2.6 Operating Temperature - \_\_\_\_\_ °C to \_\_\_\_\_ °C

2.7 Design Temperature - \_\_\_\_\_ °C to \_\_\_\_\_ °C

2.8 Corrosion allowance - \_\_\_\_\_ mm

2.9 Joint efficiency - \_\_\_\_\_

2.10 Radiography -  
Longitudinal \_\_\_\_\_ %  
Circumferential \_\_\_\_\_ %  
T-joints \_\_\_\_\_ %  
Spot \_\_\_\_\_ %

2.11 Post weld heat treatment - \_\_\_\_\_

2.12 Hydrotest pressure - \_\_\_\_\_ Kg/cm<sup>2</sup>

2.13 Thickness - \_\_\_\_\_

	Shell	Dish end
a) Min. calculate d	mm	mm
b) Corrosion Allowance	mm	mm
c) Nominal	mm	mm

Note : In case of cryogenic vessel, please indicate design data of inner as well as outer vessels

**3.0 Material Specification -**

Item	Specification	Origin and T.C. No.
------	---------------	---------------------

Main Shell		
Dish ends		
Flanges		
Cover Flanges		
Coupling		
Nozzle pipe		
Pad plate		
Fasteners		
Gaskets		
Internals		
Ladder support		
Vessel support		

\*Test certificates for materials are verified and found in order.

**4.0 Welding Details**

4.1 WPS/PQR/WPQ - Procedure & performance test as per  
and found satisfactory

4.2 Names of qualified welders -  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

4.3 Name of CCE approved third party -  
\_\_\_\_\_  
inspecting agency who qualified the  
welders and validity of their  
performance qualification.

4.4 Welding process -  
\_\_\_\_\_

4.5 Welding consumables -  
\_\_\_\_\_

4.6 Calibration Certificate, validity - -  
\_\_\_\_\_  
& make of welding machine(s).

**5.0 Inspection & Tests at Shop**

5.1 Raw Materials - MTCs reviewed for  
\_\_\_\_\_  
\_\_\_\_\_

5.2 Set ups - Witnessed, checked and released prior  
to commencement of welding

5.3 Magnetic particle test -  
\_\_\_\_\_

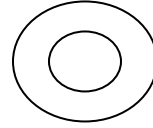
5.4	Dye Penetrant Test	-	
5.5	Ultrasonic Flaw detection	-	
5.6	Radiography	-	
5.7	Production Control Test Results (weld test coupons)	-	
5.8	Post weld heat treatment	-	Done/Not done Full/Local stress relieving Witnessed on _____ at _____ Hrs. _____ at _____ Hrs. (Please indicate SR witness dates & time)
5.9	Post weld heat treatment method	-	
5.10	Review of heat treatment log sheets and chart	-	
5.11	Internal and External Visual Inspection	-	
5.12	Pneumatic test of RF Pads	-	At _____ Kg/cm <sup>2</sup> (g)
5.13	Dimensional Checks	-	
5.14	Dish end thickness measurement dish forming	-	Minimum observed _____ mm after against _____ mm minimum calculated
5.15	Workmanship	-	
5.16	Hydrostatic Test	-	Witnessed at _____ kg/cm <sup>2</sup> (g) for minutes on _____ and found satisfactory.
5.17	As built drawing No. _____	-	Drawing  Rev. _____ "As Built" prepared by manufacturer reviewed and endorsed
<b>6.0</b>	<b>Method of support</b>	-	
<b>7.0</b>	<b>Internal equipment(s), if any</b>	-	

<b>8.0</b>	<b>Stamping on vessel</b>	-		
<hr/>				
8.1	Hard punch location			
8.2	Manufacturer's Name & identification mark-			
<hr/>				
8.3	Client/Purchaser	-		
<hr/>				
8.4	Purchase order No.	-		
<hr/>				
8.5	Job No./Item No./Equipment No.	-		
<hr/>				
8.6	Year of manufacturing	-		
<hr/>				
8.7	Design Code	-		
<hr/>				
8.8	Max. Allowable Pressure	-	_____ kg/cm <sup>2</sup>	
8.9	Design Pressure (In case of cryogenic Vessel, furnish both for inner and outer vessels)	-	_____ kg/cm <sup>2</sup>	
8.10	Design Temperature	-	_____ °C	to _____ °C
8.11	Water capacity (gross)	-	_____ Litres	
8.12	Intended for	-	_____ gas service	
8.13	Gas capacity (if liquefiable gas)	-	_____ Kgs.	
8.14	Radiography	-		
<hr/>				
8.15	Post weld Heat treatment	-	Done / Not done	
8.16	Hydrotest date	-	_____	
8.17	Hydrotest pressure	-	_____ kg/cm <sup>2</sup> (g)	
8.18	Inspection by	-		
<hr/>				
8.19	Inspecting Agency's stamp	-		
<hr/>				
8.20	Certificate No.	-	_____	Dated _____
<hr/>				
8.21	As built drawing No.	-		
<hr/>				
<hr/>				
Rev. _____				

**9.0 Conclusion :** The undersigned inspectors hereby certify that the above pressure vessel is designed, fabricated, tested and inspected during various stages of manufacture in accordance with above said code and found fit for use for the designed service.

Issued at \_\_\_\_\_ on \_\_\_\_\_

Signature of Inspector : \_\_\_\_\_



Monogram of

Name of inspector : \_\_\_\_\_

Inspecting Agency : \_\_\_\_\_

Designation : \_\_\_\_\_

CCE recognition : \_\_\_\_\_

reference No. & Date : \_\_\_\_\_

Signature of countersigning authority : \_\_\_\_\_

Name of countersigning authority : \_\_\_\_\_

Designation : \_\_\_\_\_

CCE recognition : \_\_\_\_\_

reference No. & Date : \_\_\_\_\_