

To

Owners of all

Coal, Metal and Oil Mines.

Sub : Testing and examination of apparatus under pressure.

The provision of Regulation 183(3) of the Coal Mines Regulations, 1957, Regulation 173(3) of the Metalliferous Mines Regulations, 1961 and Regulation 78(3) of Oil Mines Regulations, 1984, require that when apparatus under pressure is put into commission, the Engineer or other competent person shall subject it to a hydraulic test at a pressure atleast one and half times the maximum permissible working-pressure. It is also required under the same regulation, that a similar test shall be made after every renewal or repair and in any case at intervals of not more than three years. The result of such tests is required to be recorded in a bound-paged book kept for purpose and be signed and dated by the person carrying out the test.

In recent past a few dangerous occurrences due to bursting of compressed air tanks have taken place prior to completion of three years. It seems that at the time of hydraulic test the internal condition of the tank vis-a-vis wall thickness was not inspected/assessed and the permissible safe working pressure in the tank was not calculated keeping all factors in mind.

In view of the above, it is recommended that henceforth whenever hydraulic test is done as required under the law, assessment of the safe working pressure shall also be done based on residual thickness, pitting and corrosions of the wall of such pressure vessels. The present thickness of wall, seam etc. shall be compared with original thickness and a decision to repair/replace the receiver shall be taken. Where it is not possible to Measure the thickness of wall physically, use of ultrasonic thickness gauge is recommended.

The report of the result of every- test/examination made shall be maintained as per proforma given below :

#### REPORT OF EXAMINATION

1. Name of the Mine:
2. Name, description and distinct number of pressure vessel :
3. Name and address of the manufacturer of the air vessel :
4. Particulars of vessel –
  - (a) Date of construction :
  - (b) Thickness of wall:
  - (c) Date on which the vessel was taken first to use :
  - (d) Safe working pressure recommended by manufacturer:
5. Date of last hydraulic test (if any) and pressure applied :
6. The vessel exposed to weather -
7. What examination and test were made -

(a) Hydraulic testing (pressure applied and duration):

(b) NDT testing (minimum thickness in wall, seam):

(c) Condition of vessel for further use (permissible safe, working pressure as calculated)

8. Date of examination -

9. Repair required and period within which should be executed -

10. Other observation :

State the condition of fittings and appliances provided in the vessel.

11. Mention the type of Ultrasonic Thickness gauge used –

12. Remarks -

Signature of the Competent Person carrying out the  
Test & Examination. Name:

Qualification: Date :

The above recommendation shall be followed strictly in the interest of safety.

(R. Sharma )

Director-General of Mines Safety