Appendix-II

Bulk density measurement (IS 7190-1974)

Apparatus

1. Small container - a cubical container of 0.200 m$^3$ capacity, of internal dimensions 58.5 cm, of rigid construction and smooth inner surface, and fitted with handles.
2. Weighing machine - preferably of the platform type, of maximum capacity 300 kg and such that the weighing error does not exceed 0.1 percent of the maximum load or 250 g, whichever is less.

Procedure

While filling lignite into the container no jigging shall be resorted to.

- Place the container on the weighing machine and note its mass. Charge the lignite slowly into the container; the height of drop shall be as small as possible and in any case shall not exceed 25 cm.
- Having overfilled the container, slide a straight-edge across the top of the container, removing any piece of lignite which obstructs the passage of the straight-edge. Weigh the charged container.
- Carry out a duplicate determination by repeating the procedure, using a second portion of the sample.

Bulk density of lignite, expressed in kg per cubic meter, is calculated from the following formula:

$$D_b = \frac{(m_1 - m)}{V}$$

Where $m_1$ = mass in kg of the container charged with lignite,
$m$ = mass in kg of the empty container,
$V$ = internal volume (capacity) of the container in cubic meters