

**AMENDMENT NO. 1 AUGUST 2011
TO
IS 9977 : 1988 DESIGN AND CONSTRUCTION OF BOX
TYPE FORGING FURNACES — GUIDELINES**

(First Revision)

(Page 1, Table 1) — Add following Note at the end of the table:

‘NOTE — In case of gaseous fuel the consumption can be worked out on the basis of its calorific value.’

(Page 2, clause 6.1) — Add the following at the end of last sentence:

‘Skin temperature/shell temperature (except roof) shall not exceed 60°C above the ambient temperature. For openings or burner areas, skin temperature/shell temperature is to be measured 1 m away from the respective areas. Roof temperature will be 80°C above ambient temperature. For calculation purpose ambient temperature is to be considered as 40°C.’

(Page 2, clause 6.2.5) — Substitute the following for the existing sentence:

‘Burner quarls are to be constructed from the refractory having an alumina range 50-90% depending on the use of temperature.’

(Page 5, clause 8, line 2) — Substitute ‘80-100 kg/T material depending on the size and capacity and loading pattern of the furnaces for reference charge and reference cycle’ for ‘40 to 50 kg/T of material’.

(Page 6, clause 10.1) — Add the following at the end of the last sentence after the words ‘Low Pressure Burner’.

‘Mass Flow based Temperature Control is to be followed when preheated combustion air is used from the recuperator.’

(Page 6, clause 10.3, Title; and lines 9 and 10) — Substitute the words ‘Furnace Pressure Indicator/Controller’ for ‘Furnace Pressure Indicator;’ and ‘indicator for the furnace pressure’.

(Page 6, clause 10.5) — Add following new clause 11 at the end:

‘11 Gas Firing System — For gas firing system the following are to be included:

- Gas Train Safety Equipment
- Flame Monitoring & Auto Ignition System for safe and reliable operation’

(MTD 26)