

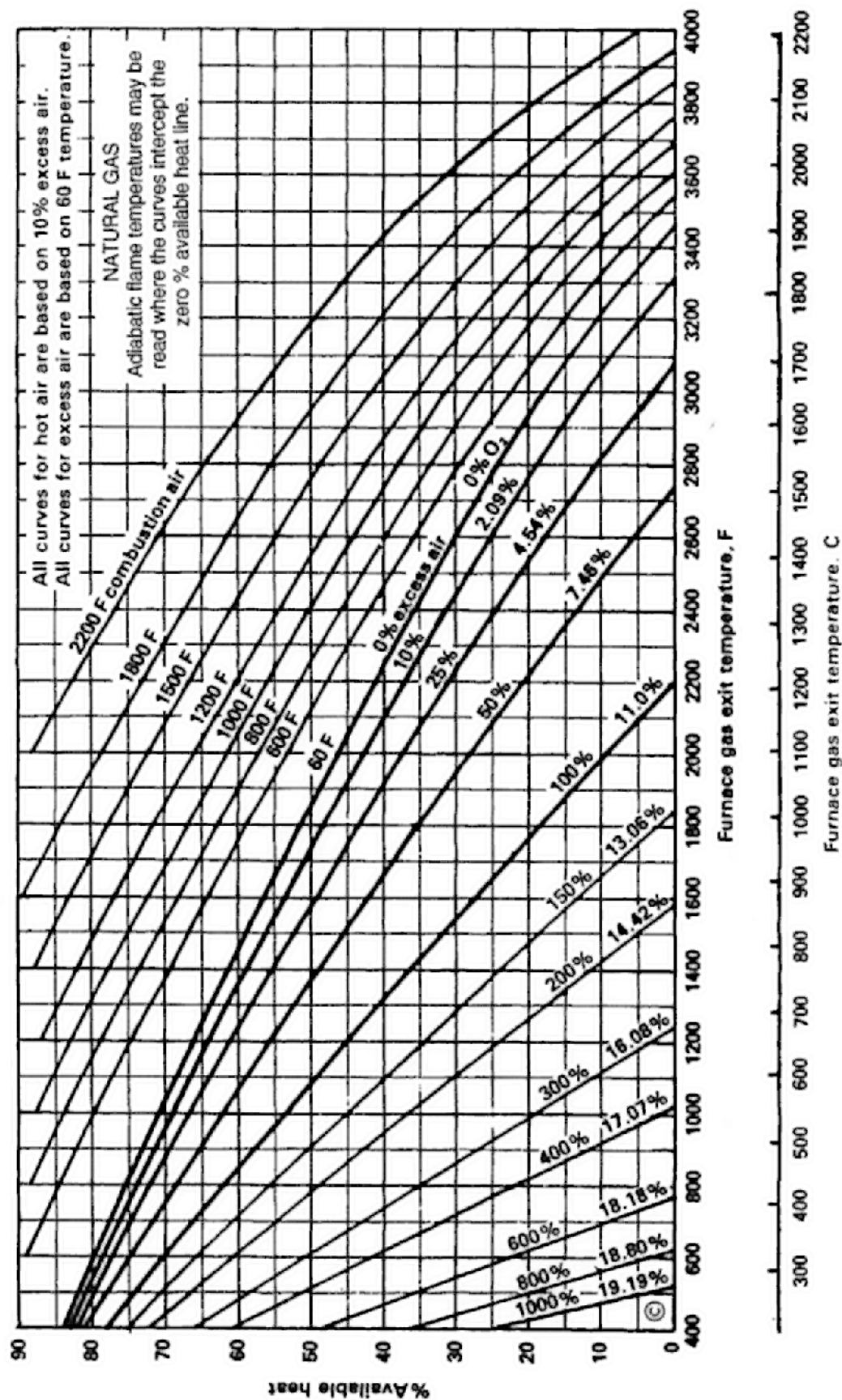


Fig. 44.3 Available heat for 1000 Btu/ft³ natural gas. Examples: In a furnace with 1600°F flue temperature, 60°F air, and 10% excess air, read that 54% of the gross heat input is available for heating the load and balancing the losses other than stack losses; and, at the x-intercept, read that the adiabatic flame temperature will be 3310°F. If the combustion air were 1200°F instead of 60°F, read that the available heat would be 77% and that the adiabatic flame temperature would be 3760°F. It is enlightening to compare this graph with Fig. 44.16 for oxy-fuel firing and oxygen enrichment.