

or charts which have been compiled for a typical fuel composition. Figure 2.15 shows the combustion temperature rise ($T_{03} - T_{02}$) plotted against fuel/air ratio for various values of inlet temperature (T_{02}), and these curves will be used for all numerical examples in this book. It is a small-scale version of larger and more accurate graphs given in Ref. (4). The reference fuel for which the data have been calculated is a hypothetical liquid hydrocarbon containing 13.92 per cent H and 86.08 per cent C, for which the stoichiometric fuel/air ratio is 0.068 and ΔH_{25} is $-43\,100$ kJ/kg. The curves are certainly adequate for any kerosene burnt in dry

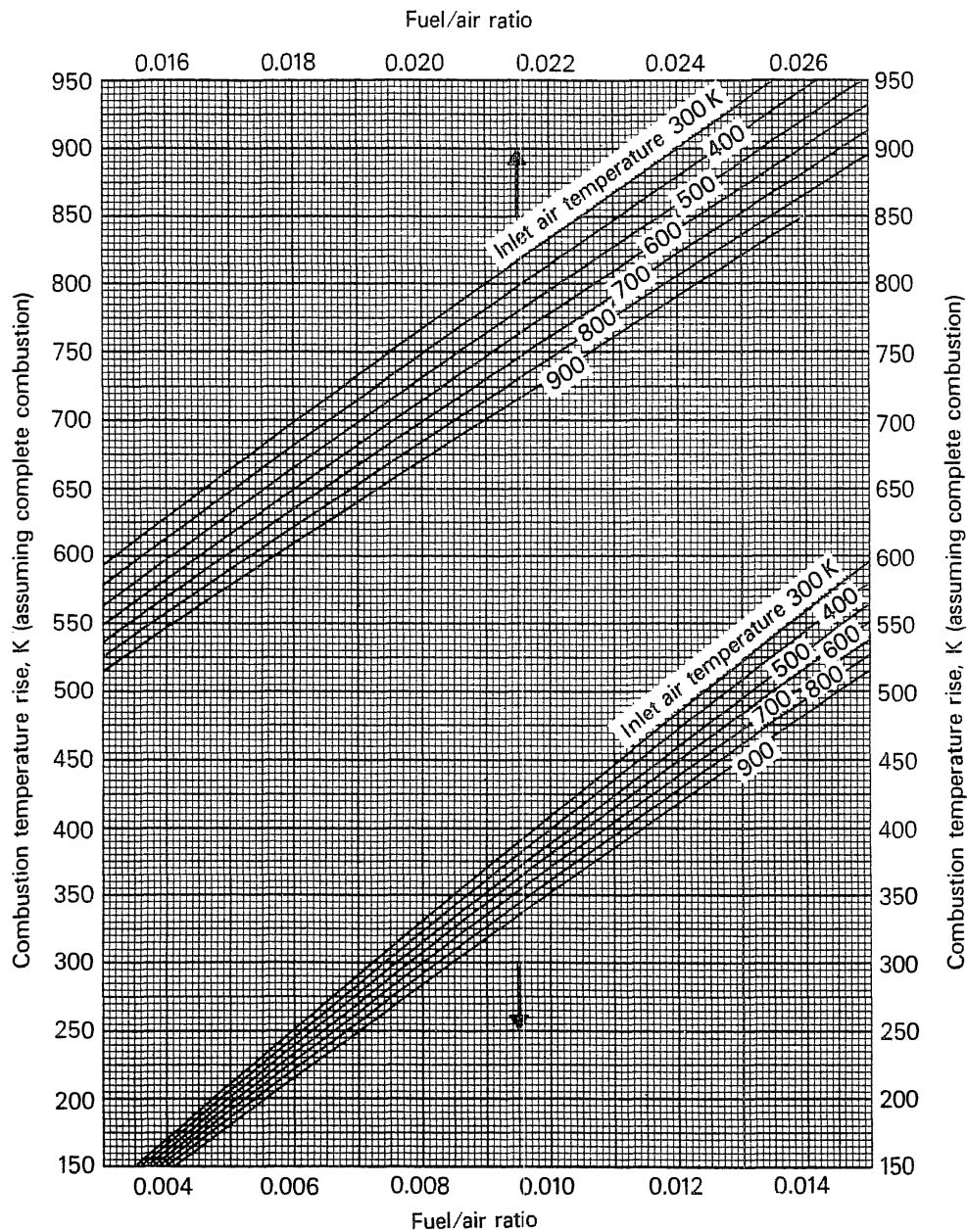


FIG. 2.15 Combustion temperature rise v. fuel/air ratio