

Computer aided estimation of fugitive emission rates and occupational air concentration in process design

Abstract

Computer aided methods for comparing alternative process concepts based on fugitive emission and occupational air concentration were developed. Three computerized methods are proposed for early design stages based on data available from simple piping flow diagrams (PFDs), detailed PFDs or piping and instrumentation diagrams (PIDs). The method becomes more comprehensive as it progresses from simple PFDs to PIDs since more process data is available latter including plot plan, coordinates of the emission sources and local wind speed data. The user can select the method to be used depending on the extent of process information available.