

DISPERSION PATTERN OF VEHICULAR CARBON MONOXIDE NEAR BUSY ROAD JUNCTION IN COIMBATORE CITY USING ARTIFICIAL NEURAL NETWORK

S. MUNESWARAN, M. ISAAC SOLOMON JEBAMANI, S.RAJESWARAN & R.CHANDRASEKARAN

Professor, Department of Civil Engineering, Government College of Technology, Coimbatore, Tamil Nadu, India

ABSTRACT

In urban air quality, Automobile sources are considered to be threatening issue. Profuse expansion of Coimbatore city has resulted in a drastic increase of air pollution. The main objective of this study is to model the dispersion pattern of vehicular carbon monoxide near busy road junction in Coimbatore city using ANN model. Two consecutive days in every month of 2011 have been chosen to calculate 8-hour average CO concentration at six receptor points. ANN modeling Technique has been used to predict air pollution concentrations in the urban environment. The model calculate pollution concentrations due to observed traffic, meteorological and pollution data after an appropriate relationship has been obtained empirically between these parameters. The predicted CO concentration at the receptor points are then compared with the observed concentrations of CO. ANN method is used to evaluate the model performance by comparing the predicted and observed CO concentration.

KEYWORDS: Air Quality Modelling, ANN - Artificial Neural Network, CO Concentration, CO Prediction