

Trend and status of SO₂ pollution as a corrosive agent at four different monitoring station in the Klang Valley, Malaysia

ABSTRACT

The Klang Valley is one of the most active and developed areas following rapid urbanisation, population growth and industrial activities. Consequently, this area receives a remarkable amount of air pollutants, particularly during the haze periods. Among the air pollutants, sulphur dioxide has received a considerable amount of attention worldwide, as it does not only affect the human health and the ecosystem, but also has a negative impact on building materials, such as metallic structures, cement and concrete, and limestone. Due to the specific characteristics of this gas, such as its chemical properties, solubility and lifetime, the gas is the most corrosive agent for the atmospheric corrosion of metals and alloys. This paper investigates the trend of SO₂ that is collected from four stations in the Klang Valley, Malaysia, and categorises the concentration of SO₂ in accordance to ISO 9223.

Keyword: Klang Valley; Air pollution; Sulphur dioxide; Atmospheric corrosion; Corrosivity