

Thursday, 2nd March 2023

Session I: Safety

Process safety considerations in colorants manufacturing



Dr M Surianarayanan

Ex-Central Leather Research Institute, Chennai

Dr Surianarayanan recently superannuated after 4 decades of experience as Senior Principal Scientist and Head of the Cell for Industrial Safety and Risk Analysis, CSIR-Central Leather Research Institute. His research areas include chemical process safety, thermo kinetic analysis of chemical process reactions, occupational safety and health, accident database, drug delivery systems, water and wastewater treatment, greener applications of ionic liquids in biological and chemical reaction systems and bioreaction calorimetry.

Dr Surianarayanan is a fellow of the Madras Science Foundation. He is on the Editorial Board of Chemical Engineering Journal as well as the Material Science for Energy Technologies.

Abstract

Dyes, pigments and other colorants have seen increasing use in different manufacturing industries and their inventories vary, at times considerably high. Incidents are recorded due to lacuna in process safety and lack of in-depth understanding therein. Process safety in the manufacturing of these products from the perspective of safe production, storage and transportation is of utmost importance. Process safety and especially the runaway potentials of any chemical reaction in the industry is often neglected, not thought of, overlooked and this has resulted many incidents, even in the recent past. This presentation highlights vulnerable areas in the manufacturing, storage and transportation of these chemicals from process safety perspective suggests ways of addressing these issues and overcome shortfalls thereby minimizing such incidents in future.