

INHERENTLY SAFER TECHNOLOGY (IST) POLICY

Inherently Safer Technology (IST) is a philosophy that began in the late 1970's. Its goal is to use traditional engineering, chemistry and other scientific concepts to reduce the risks associated with chemical processing. Since its inception, IST has been ingrained as a normal part of the R&D process development and manufacturing discipline in the chemical industry for many years.

Few terms in chemistry are as misunderstood as "inherently safer technology." While ostensibly self-explanatory, the term as used in chemistry and engineering is not as easily understood by non-scientists. IST is a conceptual framework that covers chemical processing procedures, equipment, protection, and, when feasible, the use of safer substances. Many non-scientists have been led to believe that the only road to inherent safety is by way of reducing the amount of hazardous chemicals used in manufacturing and processing. IST, however, is limited by the laws of physics; a simple reduction in the use of hazardous chemicals is often not possible or may only result in the redistribution of risk, without actually reducing it.

In the context of security at chemical facilities, no Federal mandate of IST exists in the U.S. Department of Homeland Security's April 2007 Interim Final Rule for chemical facilities.

While the concepts of IST are not appropriate in a regulatory context, the U.S. Department of Homeland Security should encourage the private sector to incorporate IST as a means to reduce security risks at chemical facilities wherever possible.