REFERENCES

Adu, I. K., Sugiyama, H., Fischer, U. & Hungerbuhler, K. (2008). Comparison of methods for assessing environmental, health and safety (EHS) hazards in early phases of chemical process design. *Process Safety and Environmental Protection, 86,* 77–93. doi: 10.1016/j.psep.2007.10.005

Ahmad, S. I., Hashim, H., & Hassim, M. H. (2014). Numerical Discriptive Inherent Safety Technique (NuDIST) for inherent safety assessment in petrochemical industry. *Process Safety and Environmental Protection, 92(5),* 379–389. doi:org/10.1016/j.psep.2014.03.009

Ahmad, S.I., Hashim, H., Hassim, M.H., 2016. A graphical method for assessing inherent safety during research and development phase of process design. J. Loss Prev. Process Ind. 42, 59-69.

American institute of chemical engineers. (Ed.). (2009). Inherently safer chemical processes, a life cycle approach (2nd ed.). Retrieved from https://books.google.lk/books

Andraos, J. (2015). Complete green metrics evaluation of various routes to Methyl Methacrylate according to material and energy consumptions and environmental and safety impacts: test case from the chemical industry. *Sustainable chemistry & Engineering.* doi: 10.1021/acssuschemeng.5b01240

Browning, J. B. (1993). Union carbide: disaster at Bhopal. Retrieved from http://www.environmentportal.in/files/report-1.pdf

Cave, S. R., & Edwards, D. W. (1997). Chemical process route selection based on assessment of inherent environmental hazard. *Computers & Chemical Engineering 21*, S965-S970

Christen, P., Bohnenblust, H., & Seitz, S. (1994). A methodology for assessing catastrophic damage to the population and environment: A quantitative multi-attribute approach for risk analysis based on Fuzzy set theory. *Process safety progress, (13),* 4.

Crowl, D. A., & Louvar, J. F. (2001). *Chemical process safety, Fundamental with application* (2nd ed.). Englewood Cliffs, NJ: Prentice Hall.

Dow Chemicals. (1998). *Dow's Chemical Exposure Index Guide.* New York: AIChE.

Edwards, D. W., & Lawrence, D. (1993). Assessing the inherent safety of chemical process routes: Is there a relation between plant costs and inherent safety? *Transactions on IChemE, 71*, 252–258

EPA. (1995). United state environmental protection agency. Protocol for Equipment Leak Emission Estimates. EPA-453/R-95-017

EPA. (2014). United state environmental protection agency. Report on the environment: Acid deposition. Retrieved from https://www.epa.gov/roe

Etowa, C. B., Amyotte, P. R., Pegg, M. J., & Khan, F. I. (2002). Quantification of inherent safety aspects of the Dow indices, *Journal of loss prevention in the Process Industry, 15,* 477–487

Gentile, M. (2004). *Development of a hierarchical fuzzy model for the evaluation of inherent safety*. (Doctoral dissertation).

Gentile, M., Rogers, W. J., & Mannan, M. S. (2003). Development of a fuzzy logic-based inherent safety index. *Institute of Chemical Engineers (81),* 444–456.

Gerlach, T. M., McGee, K. A., Elias, T., Sutton, A. J., & Doukas, M. P. (2002). Carbon dioxide emission rate of Kilauea Volcano: Implications for primary magma and the summit reservoir. *Geophysical research: Solid Earth (107)*

Gunasekera, M. Y., and De Alwis A. A. P., 2008, Process industry accidents in Sri Lanka: Analysis and basic lessons learnt, Process Safety and Environment Protection, Transactions of the Institution of Chemical Engineers, 86(B): 421-426.

Gunasekera, M. Y., & Edwards, D. W. (2003). Estimating the environmental impact of catastrophic chemical releases to the atmosphere, an index method for ranking alternative chemical process routes. *Institute of chemical engineers (81),* 463-474

Gunasekera, M. Y., & Edwards, D. W. (2006). Chemical procss route selection based upon the potential toxic impact on the aquatic, terrestrial and atmosphearic environments. *Journal of Loss Prevention in the Process Industry, 19(1),* 60-69.

Gupta, J.P., Edwards, D.W., 2003. A simple graphical method for measuring inherent safety. J. Hazard. Mater. 104, 15-30.

Hassim, M. H., and Edwards, D. W. (2006). Development of a methodology for assessing Inherent occupational health hazards. *Process Safety &Environment Protection, 84(B5),* 378–390. doi:org/10.1205/psep.04412

Hassim, M.H., Hurme, M., Amyotte, P.R., & Khan, F.I. (2012). Fugitive emissions in the chemical process: The assessment and prevention based on inherent and add-on approaches. *Journal of loss prevention in the process industries, 25,* 820-829. doi: 10.1016/j.jlp.2012.03.004

Hassim, M. H., and Hurme, M. (2010). Inherent occupational health assessment during preliminary design stage. *Journal of loss prevention in the process industries, 23(3),* 476–482. doi:org/10.1016/j.jlp.2009.12.004

Hassim, M. H., & Hurme, M. (2010). Inherent occupational health assessment during

preliminary design stage. *Journal of Loss Prevention in the Process Industry (23),* 476-482.

Heikkilä, A.M., 1999. Inherent Safety in Process Plant Design, D. Tech. Thesis. VTT Publications.

Kdam, K., Sahak, H.A., Hassim, M.H., Shahlan, S.S., and Hurme, M., 2016, inherently safer design review and their timing during chemical process development and design, Journal of Loss prevention in the Process Industries 42, 47-58.

Khan, F. I., & Amyotte, P. R. (2004). Intergrated inherent safety index (I2SI): A tool for Inherent safety evaluation. *Process Safety Progress 23(2),* 136-148.

Khan, F.I., Amyotte, P.R., 2005. I2SI: a comprehensive quantitative tool for inherent safety and cost evaluation. J. Loss Prev. Process Ind. 18 (4-6), 310-326.

Khan, F.I., Abbasi, S.A., 1998. Multivariate hazard identification and ranking system. Process Saf. Prog. 17 (3), 157-170.

Kletz, T. (1998). Process Plants: A Handbook for Inherently Safer Design

Lawrence, D. (1996). *Quantifying Inherent Safety of Chemical Process Routes* (Ph. D. thesis). Retrieved from https://dspace.lboro..ac.uk/2134/7427

Lootsma, F.A. (1997). *Fuzzy Logic for Planning and Decision-making* (1st ed.). Kluwer Academic, Boston, MA, USA.

Leong, C.T., Shariff, A. Mohd, 2009. Process Route Index (PRI) to assess level of explosiveness for inherent safety quantification. J. Loss Prev. Process Ind. 22, 216-221.

Mackay, D. (2001). *Multimedia environmental models, the fugacity approach* (2nd ed.). New York: Lewis Publishers.

Mackay, D., & Paterson, S. (1981). Calculation fugacity. *American chemical society (15)*, 1006-1014

Mannan, S., 2012. Lee's Loss Prevention in the Process Industries, 4th edition Butterworth-Heinemann.

Norris, G. (2003). Impact characterization in the tool for the reduction and assessment of chemical and other environmental impacts-methods for acidification, eutrophication, and ozone formation. *Journal of Industrial Ecology (6),* 49-78.

OHSA (1986). Occupational safety and health guidance manual for hazardous waste site activities. Retrieved from https://www.osha.gov/Publications/complinks/OSHG-HazWaste/all-in-one.pdf

Patel, A. D., Meesters, K., Uil, H. D., Jong, E. D., & Patel, M. K. (2012). Environmental science sustainability assessment of novel chemical processes at early stage: application to

biobased processes. *Energy & Environmental Science (5),* 8430–8444. doi:org/10.1039/c2ee21581k

Palaniappan, C., Srinivasan, R., Tan, R., 2002. Expert system for the design of inherently safer processes-1. Route selection stage. Ind. Eng. Chem. Res. 41 (26), 6698-6710.

Palaniappan, C., Srinivasan, R., Tan, R., 2004. Selection of inherently safer process routes: a case study. Chem. Eng. Process. 43 (5), 641-647.

Rathnayaka, S., Khan, F., & Amyotte, P. (2014). Risk-based process plant design considering inherent safety. *Safety Science, (70),* 438–464. doi:org/10.1016/j.ssci.2014.06.004

Scheutz C., Kjeldsen, P., & Gentil, E. (2009). Greenhouse gases, radiative forcing, global warming potential and waste management – an introduction. *Waste Management & Research.* doi: 10.1177/0734242X09345599

Shah, S., Fischer, U., & Hungerbühler, K. (2005). Assessment of chemical process hazards in early design stages. *Journal of Loss Prevention in the Process Industries, (18),* 335–352. doi:org/10.1016/j.jlp.2005.06.016

Srinivasan, R., & Hhan, T. N. (2008). A statistical approach for evaluating inherent benignness of chemical process routes in early design stages. *Process safety and environmental protection, (86),* 163–174. doi:org/10.1016/j.psep.2007.10.011

Tilling, R. I., Heliker, C., & Swanson, D. A. (2010). Eruptions of Hawaiian Volcanoes- Past, Present & Future. U.S. Geological Survey, Reston, Viginia.

Topuz, E., Talinli, I. & Aydin, E. (2011). Integration of environmental and human health risk assessment for industries using hazardous material: A quantitative multi criteria approach foe environmental decision makers. *Environment Internatinal, (37),* 393-403.

Triantaphyllou, E. (2000). *Multi-criteria decision making methods: A comparative study* (1st ed.). Kluwer Academic, USA.

Tugnoli, A., Landucci, G., Salzano, E., Cozzani, V., 2012. Supporting the selection of process and plant design options by Inherent Safety KPIs. J. Loss Prev. Process Ind. 25, 830-842.

Ullmann's Encyclopedia of industrial chemistry, (1996). (5th ed.). Vol. B7. Weinheim: VCH.

U.S. Department of Labor (1989). Retrieved from http://www.osha-slc.gov/dts/chemicalsampling/field.html.

Warnasooriya, S. & Gunasekera, M. Y. (2017). Assessing inherent environmental, health and safety hazards in chemical process route section. *Process safety and environmental protection, (105),* 224-236.

Warnasooriya, S. (2013). *Chemical process route selection based on assessment of inherent environmental hazard, occupational health and safety (IEHS)* (M.Sc. thesis).

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Yang, M., Khan, F. and Amyotte, P., 2015, Operational risk assessment: A case of the Bhopal disaster, Process Safety and Environmental Protection, 97, 70-79.