* Attempt to apply Failure Mode Effects and Criticality Analysis (FMECA) methodology in the oil company.
* The FMECA method is applied to improve the safety of production system, especially on the production process of an oil company in Indonesia.
* Final result that had been measured is Criticality Priority Number (CPN), which refers to severity category and probability of making the same failure mode.
* Recommended actions that proposed on the part of FMECA give less CPN significantly compare with before improvement, with increment by 48.33% and 38.46% on coconut oil and palm oil case studies, respectively.