Kajian risiko kebakaran dan ledakan skid tank lpg dengan pendekatan kuantitatif : studi kasus distribusi LPG dari PT. X ke Sppbe Y tahun 2017 = Quantitative risk assessment of fire and explosion of LPG SKID tank case study of LPG distribution from PT. X to sppbe Y year 2017

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Abstrak

LPG merupakan salah satu sumber energy alternatif pada saat ini, dengan adanyakonversi, diversifikasi produk domestic gas, dan ekspansi bisnis LPG sebagaienergi masa depan, dapat diestimasikan trend insiden LPG akan meningkat.Analisa risiko dilakukan dengan menggunakan metode QRA; dengan analisakonsekuensi dilakukan dengan menggunakan software Excel dan ALOHA. LPGdiasumsikan campuran tetap antara propana dan butana sebesar 50:50. Modatransportasi terbatas pada Skid Tank LPG Wagon dengan ukuran massa LPGyang diangkut seberat 15.000 kg dengan tekanan di dalam vessel 4 ndash; 6 kg/cm2. Dari hasil penelitian didapatkan baik risiko individu maupun sosial menunjukanbawa risiko masuk ke zona ALARP. Untuk memitigasi risiko tersebut lebih lanjutdiperlukan pengendalian diantaranya beberapa elemen manajemen keselamatan proses seperti Hazard Analysis, Partisipasi Pekerja, Process Safety Information, Operating Procedure, Training, Kontraktor, Mechanical Integrity, Emergency Response, dan Compliance Audit. ..... LPG is one of alternative energy sources at present, with the kerosene conversion,domestic gas product diversification, and LPG business expansion as the energyof the future, it can be estimated that LPG incident trend will increase. Riskanalysis is done by using QRA method meanwhile analysis done using Excel andALOHA software. LPG is assumed to be a fixed mixture of propane and butane at50 50. The mode of transportation is limited to the Skid Tank LPG Wagon witha mass of 15,000 kg of LPG transported with pressure in a 4 6 kg cm2. Results from the study both individual and social risk showed a risk level withninALARP zone. Risk mitigation are further required to control the hazard to bemanifestated this including some elements of process safety management such as Hazard Analysis, Workers Participation, Process Safety Information Operating Procedure, Training, Contractor, Mechanical Integrity, Emergency Response, and Compliance Audit.