

## Analisis Risiko Kebakaran dan Ledakan pada Boiler di Pabrik Makanan PT. X Provinsi Banten = Risk Level Analysis and The Impact of Fire and Explosion on Boiler at Food Factory PT. X Banten Province

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### Abstrak

Tesis ini membahas mengenai faktor risiko serta dampak kebakaran maupun ledakan yang dapat terjadi dari pengoperasian Boiler di Industri Makanan PT.X. Penelitian ini adalah penelitian semi kuantitatif menggunakan metode perhitungan Dow's Fire and Explosion Index serta perangkat lunak ALOHA versi 5.4.7 yang superimposisi dengan MARPLOT. Hasil penelitian mendapatkan nilai 111,62 dengan klasifikasi tingkat risiko bahaya kebakaran ledakan Boiler dalam kategori Intermediate. Populasi terdampak kebakaran dan ledakan Boiler sebanyak 615 orang dengan estimasi nilai kerugian sebesar Rp. 879.872.821.670. PT. X dapat mengurangi nilai kerugian dan mencegah terjadinya kebakaran serta ledakan melalui penyediaan sarana proteksi kebakaran baik aktif maupun pasif yang memadai, updating prosedur tanggap darurat, simulasi, pelatihan personil serta upgrading sistem Boiler menjadi Automatic Boiler.

.....The focus of this thesis discusses about risk factors and the impact of fires and explosions that can occur from the operation of boilers in the PT X Food Industry. This research is a semi quantitative research using Dow's Fire and Explosion Index calculation method and the ALOHA software version 5.4.7 which is superimposed with MARPLOT. The results of the study obtained a value of 111,62 with the classification of the risk level of Boiler fire and explosion hazard in the Intermediate category. The population affected by the fire and explosion was 615 workers with an estimated loss Rp. 879.872.821.672. PT. X can reduce the value of losses and prevent fires and explosions through the provision of adequate active and passive fire protection facilities, updating emergency response procedures, simulatin, personnel training and upgrading the Boiler System to Automatic Boiler.