

ANALISIS POTENSI BAHAYA SISI UDARA MENGGUNAKAN METODE FAILURE MODE AND EFFECTS ANALYSIS (FMEA) DI BANDAR UDARA ADISUTJIPTO

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ABSTRAK

Kecelakaan di area apron semakin meningkat seiring bertambahnya jumlah pesawat yang beroperasi di bandara di Indonesia salah satunya yaitu Bandar Udara Internasional Adisutjipto Yogyakarta. Banyaknya kecelakaan terjadi di sisi udara (apron) bandara ini disebabkan tiga faktor masing-masing adalah faktor manusia, pesawat, dan media dimana suatu pesawat bergerak di darat ataupun di udara. Aktivitas operasional apron Bandar Udara Internasional Adisutjipto Yogyakarta yaitu cargo loading/unloading, passenger loading/unloading, refueling, ground support equipment, catering, cleaning service yang merupakan faktor penyebab terjadinya hazard di bandara tersebut.

Penelitian ini menggunakan metode FMEA (Failure Mode and Effect Analysis) dilakukan untuk menganalisis penyebab dan potensi bahaya yang terjadi pada wilayah sisi udara Bandar Udara Adisutjipto, dan melakukan perangkikan terhadap potensi bahaya tersebut agar memperoleh nilai ranking RPN tertinggi sampai yang terendah dalam sebuah temuan potensi bahaya yang diperoleh dari data logbook Apron Movement Control.

Berdasarkan hasil penelitian yang telah dilakukan pada wilayah sisi udara Bandara Internasional Adisutjipto didapatkan bahwa potensi bahaya yang memiliki nilai ranking tertinggi yaitu Kerusakan pesawat pada Nose wheel dan Main wheel tergelincir dengan jelas nilai 400, memiliki nilai ranking terendah yaitu Tiang kanopi di breakdown area terminal B bengkok, dan yang paling sering terjadi yaitu Asphalt runway mengelupas sebanyak 4 kali kejadian selama selang waktu 24 bulan atau 730 hari berdasarkan pada rangkuman data dari logbook AMC

Kata Kunci: Failure Mode and Effect Analysis, Risk Priority Number, Potensi Bahaya, Sisi Udara

POTENTIAL ANALYSIS OF HAZARDS AIRSIDE USING THE FAILURE MODE AND EFFECT ANALYSIS (FMEA) METHOD IN ADISUTJIPTO AIRPORT

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ABSTRACT

Accidents in the apron area are increasing along with the increasing number of aircraft operating at airports in Indonesia, one of which is Yogyakarta Adisutjipto International Airport. The number of accidents that occur on the air side (apron) of the airport is due to three factors, each of which is the human factor, the plane, and the media where an aircraft moves on the ground or in the air. The operational activities of the Yogyakarta Adisutjipto International Airport apron are cargo loading / unloading, passenger loading / unloading, refueling, ground support equipment, catering, cleaning service which are the factors causing the hazard at the airport.

In this study using the FMEA (Failure Mode and Effect Analysis) method was carried out to analyze the causes and potential hazards that occur in the Adisutjipto Airport side of the airspace, and to rank these potential hazards in order to obtain the highest to lowest RPN rank value in a potential finding danger obtained from the Apron Movement Control logbook data.

Based on the results of research conducted on the air side of the Adisutjipto International Airport area, it was found that the potential hazards that have the highest ranking value, namely aircraft damage to the Nose wheel and Main wheel, clearly slipped to the value of 400, has the lowest ranking value, namely the canopy pole in the B terminal breakdown area. , and the most frequently occurring is the Asphalt runway peeling 4 times during an interval of 24 months or 730 days based on a summary of data from the AMC logbook

Keywords: Failure Mode and Effect Analysis, Risk Priority Number, Hazard Potential, Air Side