Analisis Risiko Pajanan Sulfur Dioksida (SO2) Terhadap Gangguan Pernapasan Pada Pekerja Di PLTU Suralaya Banten = Sulfur Dioxide Exposure Risk Analysis (SO2) Against Respiratory Disorders in Workers at PLTU Suralaya Banten

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Abstrak

Pembakaran batu bara di pembangkit listrik menghasilkan polutan yang salah satunya sulfur dioksida. Sulfur dioksida dapat menyebabkan batuk, sakit tenggorokan, mengi, sesak napas, sesak dada hingga menyebabkan edema, bronkopasme, dan pneumonitis. Penelitian ini bertujuan untuk mengestimasi besaran risiko kesehatan pada pekerja akibat pajanan konsentrasi SO2 pada pekerja di PLTU Suralaya. Penelitian ini menggunakan metode Analisis Risiko Kesehatan Lingkungan (ARKL). Sampel dalam penelitian ini sebanyak 75 pekerja yang diambil secara purposive sampling. Hasil pengukuran sulfur dioksida rata-rata di empat titik sebesar 0.0335 mg/m3 dan masih dibawah baku mutu. Hal penelitian ini menunjukkan nilai intake dari pajanan SO2 pada pekerja didapatkan nilai rata-rata sebesar 0.00047 mg/kg/hari sedangkan nilai besaran risiko yang didapatkan sebesar 0.0187 yang artinya tingkat risiko pada pekerja masuk ke dalam kelompok aman. Hasil proyeksi terhadap tingkat risiko pada tahun ke 5 hingga tahun ke 30 mengalami peningkatan. Pekerja juga mengalami gejala gangguan pernapasan diantaranya batuk, dahak, sesak napas, mengi, nyeri dada, dan napas berat. Pentingnya upaya preventif pada pekerja di PLTU agar dapat meminimalisir pajanan SO2 dengan menggunakan APD serta pihak PLTU dapat mengembangkan teknologi modern agar meminimalisir polutan akibat pembaran batu bara.
.....Burning coals in power plants produces pollutants, one of which is sulfur dioxide. Sulfur dioxide can cause coughing, sore throat, wheezing, shortness of breath, chest tightness, edema, bronchospasm, and pneumonitis. This research aims to estimate the amount of health risk in workers due to exposure to SO2 concentrations in workers at the PLTU Suralaya Banten. This research uses the Environmental Health Risk Analysis (ARKL) method. The sample in this research was 7 workers who were taken by purposive sampling. The average sulfur dioxide measurement results at four points are 0.0335 mg/m3 and are still below the quality standard. The results of this research indicate that the intake value of SO2 exposure in workers obtained an average value of 0.00047 mg/kg/day while the value of the magnitude of risk obtained was 0.0187 which means that the risk level for workers is included in the safe group. The results of the projections of the level of risk in the 5th to 30th years have increased. Workers also experience symptoms of respiratory problems including chough, phlegm, shortness of breath, wheezing, chest pain, and heavy breathing. The importance of preventive efforts for workers at PLTU in order to minimize SO2 exposure by using PPE and the PLTU can develop modern technology to minimize pollutants due to coal burning