

# ANALYSIS FACTORS THE SYMPTOMS OF PHOTOKERATITIS IN WELDING WORKERS AT PT. PAL INDONESIA IN 2023

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## ABSTRACT

Photokeratitis is a clinical entity marked with a damage epithelium characterized by pain in the eye, also there is a foreign object in the eye, feeling uncomfortable when exposed to light (photophobia) moreover watery eyes and eyes always twitching. One of the causes of photokeratitis in welders is exposure to welding light during the welding process. This study aims to analyse the effect of age, years of service, exposure time and use of personal protective equipment (PPE) on the symptoms of photokeratitis in welding workers.

This research is an analytic observational study with a cross sectional approach. The Samples were taken from some of the welding workers in Harkan Division from 17 workers. The variables in this study included age, years of service, duration of exposure, use of PPE, and symptoms of photokeratitis. The Data were collected through observation and interviews. Those were processed and statistically analyzed using the Fisher test with a P-value of 0,05.

The results showed that there was a significant effect between the length of exposure ( $P = 0.020$ ), the use of PPE ( $P = 0.05$ ) on the symptoms of photokeratitis, we found out there was no effect between age ( $P = 0.201$ ), years of service ( $P = 0.404$ ) on the symptoms of photokeratitis The conclusion of this study is the factors of age and years of service have no effect on photokeratitis symptoms, while the factors of length of exposure and use of PPE had an effect on photokeratitis symptoms in workers at the Harkan Division of PT. PAL Indonesia

It is recommended to monitor and evaluate the PPE used by LAS workers at the Harkan Division of PT. PAL Indonesia. Because it is known the workers felt complaints even though they use PPE during the welding process, it is necessary to evaluate the type of PPE and its effectiveness in protecting workers against UV exposure from the welding process..

**Keywords:** Symptoms of photokeratitis, age, years of service, exposure time, and personal protective equipment (PPE).

# **ANALISIS FAKTOR YANG BERPENGARUH TERHADAP GEJALA FOTOKERATITIS PADA PEKERJA LAS DI PT. PAL INDONESIA TAHUN 2023**

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## **ABSTRAK**

Fotokeratitis merupakan entitas klinis yang ditandai dengan kerusakan pada kornea epitel yang ditandai dengan sakit pada mata, adanya benda asing pada mata, merasa tidak nyaman jika terkena cahaya (fotofobia), mata berair dan mata selalu berkedut. Salah satu penyebab fotokeratitis pada pekerja las ialah terpapar sinar las saat proses pengelasan. Penelitian ini memiliki tujuan yang sangat relevan dan penting untuk menganalisis pengaruh umur, masa kerja, lama paparan, dan penggunaan alat pelindung diri (APO) terhadap gejala fotokeratitis pada pekerja las.

Penelitian ini merupakan penelitian observasional analitik dengan pendekatan cross sectional. Sampel diambil dari sebagian pekerja las di Divisi Harkan sebanyak 17 pekerja. Variabel penelitian ini meliputi umur, masa kerja, lama paparan, penggunaan APD, dan gejala fotokeratitis. Data yang terkumpul melalui observasi dan wawancara, diolah dan dianalisis secara statistik dengan uji fishers exact test dengan nilai P - value 0,05.

Hasil penelitian menunjukkan bahwa ada pengaruh signifikan antara lama paparan ( $P=0,40720$ ), Penggunaan APD ( $P=0,05$ ) terhadap gejala fotokeratitis dan tidak adanya pengaruh antara umur ( $P=0,201$ ), masa kerja ( $P=0,404$ ) terhadap gejala fotokeratitis. Kesimpulan dari penelitian ini adalah faktor umur dan masa kerja tidak berpengaruh terhadap gejala fotokeratitis, sedangkan faktor lama paparan dan penggunaan APO berpengaruh terhadap gejala fotokeratitis pada pekerja di Divisi Harkan PT. PAL Indonesia.

Disarankan melakukan monitoring dan evaluasi terhadap APO yang di gunakan pekerja LAS Divisi Harkan PT. PAL Indonesia. Karena diketahui bahwa para pekerja merasakan keluhan walaupun mereka menggunakan APD saat proses pengelasan, maka perlu dilakukan evaluasi terhadap jenis APD dan keefektifannya dalam melindungi tenaga kerja terhadap paparan sinar UV dari proses las.

Kata kunci : Gejala Fotokeratitis, umur, masa kerja, lama paparan, dan penggunaan APD.