

# LITERATURE STUDY ON THE USE OF *LOCAL EXHAUST VENTILATION (LEV)* FOR DUST MINIMIZING IN FURNITURE INDUSTRY

Laili Kurnia<sup>1</sup>, Sigid Sudaryanto<sup>2</sup>, Sri Muryani<sup>3</sup>

<sup>123</sup>Jurusan Kesehatan Lingkungan Poltekkes Kemenkes Yogyakarta

Email : [lailikurnia3@gmail.com](mailto:lailikurnia3@gmail.com), [agustinus\\_sigid@yahoo.com](mailto:agustinus_sigid@yahoo.com),

[Muryanisri63@gmail.com](mailto:Muryanisri63@gmail.com)

## ABSTRACT

**Background:** Activities carried out in woodworking areas that have the potential to air pollution. Dust particles with high concentrations have a negative impact on human health, especially in the respiratory tract. The International Labor Organization (ILO) states that 21% causes of death due to respiratory diseases. Occupational Health and Safety Assessment Series (OHSAS) 18001: 2007, several ways can be done to reduce dust levels in the furniture industry, namely by means of elimination, substitution, engineering controlling, administration, and the use of APD. The use of Local Exhaust Ventilation (LEV) can reduce 25% of the information industry dust (Rokhim, 2016).

**Objective:** To determine the effect of the use of Local Exhaust Ventilation (LEV) on reducing dust levels in the furniture industry.

**Method:** this research is Literature Review. Literature research or literature study. A study was conducted in 10 journals, 80% international and 20% national journals according to inclusion and exclusion criteria. Then a descriptive analysis and conclusions are drawn.

**Results:** There are similarities and differences from each journal, each journal shows the advantages and disadvantages of each in the research method. The results obtained that LEV is able to reduce pollutants that are in the air, the use of LEV also in several studies is strongly recommended.

**Conclusion:** LEV can reduce dust levels in the furniture industry, with the requirement that calculations be made in accordance with field conditions, room area, working environment temperature, wind direction, worker comfort, and subsequent actions through maintenance and control.

**Keywords:** *Local Exhaust Ventilation (LEV)*, dust, furniture.

**STUDI LITERATUR PENGGUNAAN *LOCAL EXHAUST VENTILATION*  
(LEV) DALAM MEMINIMALISIR DEBU  
PADA INDUSTRI FURNITUR**

Laili Kurnia<sup>1</sup>, Sigid Sudaryanto<sup>2</sup>, Sri Muryani<sup>3</sup>  
<sup>123</sup>Jurusan Kesehatan Lingkungan Poltekkes Kemenkes Yogyakarta  
Email : [lailikurnia3@gmail.com](mailto:lailikurnia3@gmail.com), [agustinus\\_sigid@yahoo.com](mailto:agustinus_sigid@yahoo.com),  
[Muryanisri63@gmail.com](mailto:Muryanisri63@gmail.com)

**ABSTRAK**

**Latar belakang :** Kegiatan-kegiatan yang dilakukan di areal pertukangan kayu yang berpotensi terhadap pencemaran udara. Partikel debu dengan konsentrasi tinggi memiliki dampak negatif bagi kesehatan manusia khususnya pada saluran pernapasan. *International Labour Organization* (ILO) menyatakan bahwa 21% penyebab kematian karena penyakit saluran pernapasan. OSHAS (*Occupational Health and Safety Assessment Series*) 18001:2007, beberapa cara dapat dilakukan untuk menurunkan kadar debu di industri furnitur yaitu dengan cara eliminasi, substitusi, rekayasa *engineering*, administrasi, maupun penggunaan APD. Penggunaan *Local Exhaust Ventilation* (LEV) dapat menurunkan 25% debu industri informasi (Rokhim, 2016).

**Tujuan :** Mengetahui pengaruh pemanfaatan *Local Exhaust Ventilation* (LEV) terhadap penurunan kadar debu di industri furnitur.

**Metode :** penelitian ini adalah *Literature Review* atau tinjauan pustaka. Penelitian kepustakaan atau kajian literatur. Dilakukan kajian pada 10 jurnal, internasional 80% dan jurnal nasional 20% sesuai kriteria inklusi dan eksklusi. Kemudian dilakukan analisis deskriptif dan ditarik kesimpulan.

**Hasil :** Terdapat persamaan dan perbedaan dari masing-masing jurnal, pada setiap jurnal menunjukkan kekurangan dan kelebihan masing-masing dalam metode penelitian. Diperoleh hasil bahwa LEV mampu menurunkan polutan yang ada di udara, penggunaan LEV juga pada beberapa penelitian sangat disarankan.

**Kesimpulan :** LEV dapat menurunkan kadar debu pada industri furnitur, dengan persyaratan dilakukan perhitungan yang sesuai dengan kondisi lapangan, luas ruangan, suhu lingkungan kerja, arah mata angin, kenyamanan pekerja, serta tindakan selanjutnya melalui perawatan dan kontroling.

**Kata kunci :** *Local Exhaust Ventilation* (LEV), debu, furnitur.