

## OCCUPATIONAL NOISE REDUCTION IN CNC STRIPING PROCESS

**Kamarulzaman Mahmad Khairai, Nurul Shamime Salleh and Ahmad Razlan Yusoff**

Faculty of Manufacturing Engineering, Universiti Malaysia Pahang,  
26600 Pekan, Pahang, Malaysia  
E-mail: [razlan@ump.edu.my](mailto:razlan@ump.edu.my)

**Abstract.** Occupational noise hearing loss with high level exposure is common occupational hazards. In CNC striping process, employee that exposed to high noise level for a long time as 8-hour contributes to hearing loss, create physical and psychological stress that reduce productivity. In this paper, CNC striping process with high level noises are measured and reduced to the permissible noise exposure. First condition is all machines shutting down and second condition when all CNC machine under operations. For both conditions, noise exposures were measured to evaluate the noise problems and sources. After improvement made, the noise exposures were measured to evaluate the effectiveness of reduction. The initial average noise level at the first condition is 95.797 dB (A). After the pneumatic system with leakage was solved, the noise reduced to 55.517 dB (A). The average noise level at the second condition is 109.340 dB (A). After six machines were gathered at one area and cover that area with plastic curtain, the noise reduced to 95.209 dB (A). In conclusion, the noise level exposure in CNC striping machine is high and exceed the permissible noise exposure can be reduced to acceptable levels. The reduction of noise level in CNC striping processes enhanced productivity in the industry.