

Niratcha Phadejtaku 2006: Analysis of Ergonomics Problem in an Electronic Factory.  
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Working processes in electronic industries usually are routine and repeated works. Many workers have problems with fatigue due to prolong work, resulting in health problem and low productivity. Ergonomics analysis can be used as a tool to deal with this problem. The objectives of this study were 1) to analyze factors that cause the fatigue and injure problem of the workers, 2) to determine the solutions and recommendations to solve these ergonomics problems. The research work begins with data collection from personal health records. A questionnaire designed to extract useful information regarding to the objectives was applied to 442 workers covering in latch, ramp, stopper and top cover working processes. Three fatigue issues were found. They are eyestrain in inspection process, shoulder-pain in stopper trimming process and shoulder-pain/knee-pain from prolong sitting and standing. For the first issue, it was found that the luminance value is higher than the minimum requirement of industrial work Acts. Therefore the 5 min-short break in every 2 hour-working period was proposed to solve this problem. For the second issue, the break-in period was also applied to solve this problem. The grip strength dynamometer was utilized to measure the muscle fatigue for various cases. Statistically, it was found that the measured fatigue is proportional to the working period. However, when the break-in period is provided, there is no significant difference in terms of productivity. For the third issue, the body postures of the workers were investigated and compared to the ergonomic standard. The height of table and chair in some processes were not suitable and must be modified.

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