

Ergonomic Evaluation for Labors in a Thin Film Transistor-Liquid Crystal Display Plant

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Now, the thin film transistor-liquid crystal display (TFT-LCD) has been used in TV, or terminal display for computer workstation and living room. The manufacture process of TFT-LCD has been extremely automated, but some employees still hired to do manual job in module assembly process. The labor may have high risk of musculoskeletal disorders because of the long work hours and the repetitive activities, handling large-size of glass in an unfitted work station. We has used questionnaire, checklist and to evaluate the work place design. The result shows that the participants reported high musculoskeletal disorder symptoms in shoulder (59.8%), neck (49.5%), wrist (39.5%), and upper back (30.6%). To reduce the musculoskeletal disorder risk factors, we have recommended revising the height of the work benches, chairs and redesigning the truck to decrease the chance of unsuitable positions and to reduce other ergonomics hazards and set a good human machine interface and appropriate job design.

Keywords

Ergonomics, musculoskeletal disorders, TFT-LCD labors

Biography

Chih-Wei Lu is the Associate Professor in the Department of Industrial and Systems Engineering, Chung Yuan Christian University, Taiwan ROC. He hold Doctor of Science at Work Environment Department, Massachusetts State University, USA. He was the Executive Director and Chairman of Organizing Committee of Taiwan Ergonomics Society (EST) and Chairman of the GPDB sub-committee International Ergonomics Association (IEA). Currently, he has been director of Ergonomics and Kansei Laboratory, Industrial and Systems Engineering Department and director of the Center of Productivity, the Chung Yuan Christian University, He has provided many workshops, trainings and consultancies in the area of Ergonomics, Safety and Hazard Control. His specialties include Occupational Safety and Health, Biomechanics, Human Factors Engineering and Ergonomics. He is member of IEA, EST and IEEE.