

## ABSTRACT

The textile industry is risky going on fire. It is caused by combustible materials namely polyester fiber and the ignition sources. One way to eliminating of fire impacts is do risk assessment in the workplace. The objectives of this research were to do risk assessment of fire in Spinning II area in PT. Lotus Indah Textile Industries.

This was descriptive observational study with cross-sectional approach. The subjects of this study were Coordinator of HSE and Head Section of Spinning area. The objects of this study were the production machinery, the combustible materials and the ignition sources. Primary data were collected by interviews and observation. The data obtained were analyzed descriptively by narration and tables.

The result of this study showed that the hazard of fire were polyester fiber, and the ignition sources such as friction between engines, overheating machine, electrical short circuit and welding. The risk assessment showed that there were 15(32,61%) hazards has low risk, 24(52,17%) has medium risk and 7(15,22%) has high risk. The hazardous control which have been implemented by management such as provide smoke detector and heat detector, LEV, provide fire extinguisher but some of the instruction of fire extinguisher had been fade and obstructed by the other objects, provide box hydrant but some of box hydrant obstructed by the other objects, fire alarm, chiller, breaker, grounding, maintenance of machinery, fire training was just for male workers, safety work permit and housekeeping even there were not cleaning services in production area.

It is recommended that the company renew of the instruction of fire extinguisher, safety sign about no stuff in a box of fire extinguisher and box hydrant, giving fire training to all workers including female workers and provide cleaning service in production area.

Keywords: risk assessment, fire, textile industry