

ABSTRACT

Awkward posture refers to positions of the body while performing work activities that deviate significantly from the neutral position. Awkward postures may pose risks such as damage traumatic work Musculoskeletal Disorders (MSDs) which is disorders of the muscles, nerves, tendons, ligaments, joints, cartilage and spinal discs.

Incinerator is one of the startup technology developed by Bandung Techno Park. Solair Incinerator controlled by one operator. To operate the incinerator, there are three main job, they are controlling the control panel, entering waste through entry door and controlling the burner. Analyze those three position with Caution Zone Checklist by WISHA, the position of operator enter the waste indicates as awkward position. Because the operator working with the hand(s) above the head, or the elbow(s) above the shoulders more than 2 hours total per day. This study focus on observation to work posture and the facility (waste entry door of incinerator) when operator enter the waste. The existing dimension of the entry door is $H \times L \times W \times D = 169 \text{ cm} \times 100 \text{ cm} \times 70 \text{ cm} \times 83 \text{ cm}$.

The RULA technique (Rapid Upper Limb Assessment) was proposed to provide a quick assessment of the loading on the musculoskeletal system due to postures of the neck, trunk, and upper limbs, muscle function, and the external loads exerted then final score group into right and left parts body. Based on posture assessment result data of the operator, work posture existing operator in RULA assessment score obtain 7. The value indicates that the working posture is necessary investigate and change immediately. The suggestion size is 80-101 cm for height. The waste container load is 1-1.5kg with diameter 27 and height 40. And suggestion standard screw channel is 9 inch. After analysis and get RULA score 2 for the improvement size of incinerator entry door purpose to avoid the awkward position and reduce the risk of MSDs to the operator.

Keywords— Awkward Position, Incinerator Entry Door, Musculoskeletal disorders (MSDs), RULA