Job site: _____ Date: _____
Foreman: _____ G.C. _____

SMOHIT Safety Sense
Toolbox Talks for the Sheet Metal Industry

Helicopters and Static Electricity

- Static electricity occurs when two objects come in contact with each other and are then separated. The separation action causes an electric charge to build between the two objects. This charge remains in a static condition unless and until there is an avenue for discharge. The discharge usually occurs rapidly and is seen as a spark between objects. If the static does not discharge rapidly, it will slowly dissipate over time, but this is dependent on several factors and may not be predictable. When the initial separation occurs, an electric charge can also build up between either of those two objects and others that are in the area.

- When working around helicopters, workers must be aware of the presence and danger of static electricity that is generated by the helicopter. The discharge of static electricity can compromise workers' balance and footing, leading to accidents and injuries.

- When the helicopter lands on the ground, the contact it makes with the ground discharges the static electricity. When the helicopter is in flight, however, this charge remains stored in the helicopter until a path is provided to ground. Static electricity must be discharged in all helicopters prior to connecting a cargo sling or net to the helicopter's hook even when insulated lineman gloves are worn.

- To avoid the possibility of a ground worker being shocked by the static charge, a static discharge wand is used to ground the helicopter. The wand must be grounded to the earth by cable, and have an insulated handle. The cargo hook is grounded with the wand. Contact between the wand and cargo hook must be maintained until hookup is completed.

Instructor Tips

- **Explain to workers that the charge from some helicopters can be worse than others.**

- **Inform workers that weather factors, such as humidity and high temperatures, can increase static electricity.**

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Reference: 29 CFR 1910.183