

The Workers and Alcoa

Workers and Alcoa advance solutions to health problems caused by fiberglass

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The workers see their arms "shine in the sunlight"

More than 250 workers reaped the benefits of solutions implemented last January by Alcoa to address health concerns at an operation involving fiberglass. This effort was prompted by a group of workers who raised the issue to Alcoa, educated themselves about the issue and proposed practical solutions.

Alcoa's wholly-owned subsidiary Macoelmex (Maquiladora de Componentes Eléctricos de México) in Piedras Negras, Mexico, makes wire harnesses for several automakers and for Harley-Davidson. A harness for a Harley motorcycle uses a small rubber sleeve to cover the wires (terminals) that is plastic on the outside but has a thin coating of fiberglass inside (see photo).



The workers became seriously concerned in October 2006 after some of them experienced skin irritations on their hands, arms, necks and stomachs which they suspected were caused by exposure to fiberglass. They know that fiberglass dust was sticking to their faces and bodies and the workers were seeing their arms shine in the sunlight. While it is true that fiberglass does not usually pose significant health hazards, the irritation that it produces can lead to serious skin infections.

The manufacturing of harnesses involves several steps. First, the wire sleeves go to the cutting area. Although not all of the harness sleeves contain fiberglass, all of them become contaminated with its dust because the same cutting machine used to cut fiberglass sleeves is also used to cut other sleeves and terminals.

Several conditions existed which contributed to the problem: an extractor that had been located close to the cutting machine had been removed; some fans located nearby spread the fiberglass dust; the trays containing cut sleeves were not cleaned before being carried to the area where the terminals are inserted to the sleeves; and workers received raw materials dirty with dust that included fiberglass residue.

To finish the product, workers put the terminals into the sleeves, sometimes using alcohol to wet the sleeves and ease the inserting of the terminals and connectors. This final part of the process involves a friction of terminals and connectors with the fiberglass wrap, which produces another small amount of fiberglass dust. (See final product in the photo).



"A killer wire. Water-proof, abrasion -proof, Harley-proof wiring. Never a wiring failure since we started doing them in 1989. Automotive grade high temperature wiring with waterproof connectors, gold plated and sealed Deutsch ECU connectors, and fused peripherals, all sheathed in fiberglass wrap. Professional." (RBRacing-rsr.com).

Skin irritations, no safety equipment, no information

A health risk was present to workers throughout the manufacturing process of the Harley-Davidson harness. When workers began showing symptoms and complained to the local management, they were ignored and the situation was allowed to continue.

Up until the end of 2006 the workers on the Harley line had no protection and lacked basic safety information and education about the fiberglass. Common sense and experience told the workers that they couldn't use any type of protective gloves because the wires used in the harnesses are very thin and they slip when gloves are used.

Many workers recalled that Alcoa had provided its workers with denim sleeves that completely covered their arms when they were making similar harnesses for Ford.

Concern increased among workers when a co-worker of the Harley line, who suffered of respiratory problems of uncertain origin, fainted in the workplace.

The workers speak out, get informed and propose solutions

The "help chain" that assisted the Macoelmex workers in raising their voices and achieving change, began with them seeking advice from the Comité Fronterizo de Obreros (CFO - or Border Committee of Workers) in Piedras Negras. The CFO offered support and helped them to document the problems with the fiberglass and to communicate the issue to Alcoa's religious shareholders, who are in contact with the company in the United States. The shareholders facilitated Alcoa's involvement in the issue and encouraged it to take action.

The workers took an important step beyond simply bringing the problems to Alcoa. They thoughtfully reviewed the manufacturing process and came up with ideas to eliminate the risk of worker contamination by the fiberglass.

Part of their preparation consisted of a training workshop to exchange information with a top health and safety specialist of the United Steelworkers (USW) and with two rank-and-file Steelworkers, one from a U.S. Alcoa operation with expertise in fiberglass safety. During the exchange, which was organized through the continuing partnership between CFO and USW, the Macoelmex workers elaborated on what they thought were the most practical solutions to fix the health risks associated with the manufacturing of the Harley-Davidson harness.

The solutions proposed to Alcoa by the workers included: that an extractor/aspirator be placed near the cutting machine to suck in the dust; not using the same cutting machines for sleeves containing fiberglass and for those that do not contain it; that trays where the sleeves are carried from one work area to another should constantly be cleaned for the operators not to get the sleeves dirty; and that protective aprons and arm

Alcoa and its workers in México



Alcoa 2006: more readjustments, more instability



Macoelmex 2005: We rather see Alcoa go!



2003 and the threat to go to Honduras (Spanish)



Macoelmex 2002: nine months of Independent union (Spanish)



Arneses 2000-2001: The workers committee in dialogue with Alcoa



sleeves should be provided.



Harley-Davidson's Touring motorcycle

A quick response from Alcoa

Alcoa responded in a matter of days, starting with managers requesting information from their own safety and health experts. They reviewed the manufacturing process of the Harley harness, and reexamined the medical records of those workers who had reported skin irritations or respiratory problems that might have been caused by exposure to fiberglass.

The company found 10 cases of workers who had symptoms of itching but no visible skin irritation. It also found that the level of exposure to fiberglass is markedly below the minimum levels allowed by Mexican government standards (0.00005393 mg/m³ vx. 10.0 mg/m³) and close to the analytical levels of detection. Alcoa stated that the fiberglass is a non-friable material and even heavy mechanical manipulation of the product generates a minimal amount of visible fiber.

Alcoa implemented short-term measures such as providing special gloves to 77 workers in the Harley line. It also implemented a new process of sharpening the cutting machine knives, and provided a special training on fiberglass to all 272 workers in that line.

In addition, the company began to think about medium and long-term solutions that would involve new engineering solutions.

Advancing solutions

The fiberglass case is an example of how Alcoa agreed to discuss a problem with its workers and advance solutions for the benefit of all of the employees and the company. The workers will continue to monitor the situation and will report of any other problems that may arise. This case provides a model of how Alcoa could continue to implement effective and prompt solutions to those problems.

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