

LET'S HAVE A LOOK AT LOADS

Organisation

Alcoa Fujikura Czech s.r.o.

Introduction

Alcoa Fujikura Czech s.r.o. is an international American company belonging to the Alcoa group of companies. Alcoa Fujikura Czech, with headquarters in Stribro, concerns itself with the manufacture of cable harnesses for the auto industry, and has been active in the Czech Republic since August 2001. It currently employs roughly 2000 workers and manufactures products for customers in the Czech Republic as well as abroad.

The company's manufacturing is largely based on manual work (e.g., hand-contacting of conductors, completion of sheaths, and cable harness wrapping). The disproportionate and repetitive stress involved in these tasks was leading to work-related musculoskeletal disorders (MSDs) and diseases.

Aims

The main goal of the ergonomics programme the company set up was to identify, evaluate and decrease ergonomic risks in the workplace, and thus improve workers' working conditions. Other goals of the programme were the prevention of MSDs, optimisation of work procedures and standardisation of work methods.

What was done, and how

Ergonomics Programme

The company assigned an independent worker for the area of ergonomics, who reports to the Environmental Health and Safety Department. This worker is responsible for the coordination of solutions to ergonomics issues, helping in the investigation of work-related illnesses and collaboration with the company doctor and an external expert. He also performs field investigations in manufacturing, arranges collaboration amongst ergonomic teams, and the communication of issues at various levels of management.

The importance of ergonomics is also demonstrated by the fact that ergonomics projects are classed amongst the non-financial indicators whose trends are regularly checked at meetings of the company's upper management, and the company is evaluated according to them along with other European sites.

Categorisation

The company performed a workplace categorisation in accordance with current legislation in 2002, and last updated it in 2005. During this process, workplaces met conditions for classification in Category 2 (physical stress) and Category 3 (mental stress). Alcoa Fujikura Czech is trying to actively address this problem, and has among other things established plant ergonomics teams.

Ergonomics Teams

The company has two ergonomics teams to address ergonomics issues. The strategic ergonomics team is composed of management representatives, the company doctor, members of the Environmental Health and Safety Department (EHS) including the independent ergonomics agent. This team is responsible for decisions regarding strategic goals and procedures to achieve them, makes key decisions regarding investment into preventive and corrective measures, investigates suspected work-related illnesses and monitors the work of the operational ergonomics team.

The operational ergonomics team is composed of representatives of various departments (manufacturing, technology, EHS, maintenance, logistics). This team focuses on searching for and evaluating ergonomic risks in the workplace, looks for proposed solutions for lowering exposure to MSDs, monitors the implementation of administrative and technical measures, and functions as a consulting body for individual workplaces in questions of ergonomics.

Collaboration

The company has a contract with a company doctor. As part of her contractual duties the doctor performs entry, exit, preventive and special checkups. The frequency of checkups for workers working the three-shift system is once per year. Special checkups are performed after illness or work-related health problems, and also whenever a larger number of objective health risks in a specific work location is identified. A subjective questionnaire concerning the workers' health history forms part of the entry and exit health checkups. The data from this questionnaire are only for medical purposes and serve for further evaluation of the state of health.

The company doctor's office keeps records of the occurrence of MSDs in individual work locations, and this information is regularly given to, among others, the ergonomics team for further evaluation of risks in specific work locations. The company doctor's office also provides consultation in finding suitable work positions and activities for workers with temporary or permanent health restrictions.

The company also works on a contractual basis with the National Reference Laboratory for Work Physiology and Psychology at the National Institute of Public Health (NIPH) in Prague, which provides objective evaluations via muscle stress measurements. Measurement focuses on the expenditure of muscle strength of the upper limbs, as it is precisely the upper limbs that are the

most affected during the manufacturing process. The measurement results are evaluated by a team and incorporated into work and technical procedures. Collaboration with the NIPH also covers consulting services and professional training in this area for managers and members of the ergonomics team.

Evaluation

The company systematically evaluates ergonomic risks and the potential for MSD occurring. Both objective and subjective methods are used for evaluation.

Objective Methods

The objective method used for identifying MSD risks is measurement of local muscle stress using integrated electromyography. Since 2003, an accredited laboratory at the NIPH has been on contract to perform these measurements.

Subjective Methods

The company most often uses subjective methods for basic investigation into the occurrence of ergonomic risks.

The primary tool for evaluating ergonomic risks using the subjective method is an AD Little checklist, which contains a combination of movement frequency observations for individual parts of the body during work tasks. The result is a very rough evaluation of the significance of ergonomic risks. The AD Little checklist is also always filled in before a new work location is put into operation. Questionnaires for the subjective assessment of workload and the occurrence of subjective difficulties in the movement apparatus were also filled in by a larger number of employees. The data gained were processed, and the ergonomics agent created a corrective measures plan.

Communication and Information

The company has pledged to improve working conditions for employees constantly and at the same time has invited employees to participate in this. Each employee can submit a suggestion for improvement, which is then passed on to the operational ergonomics team. Many suggestions for the improvement of conditions at work have already been implemented in this fashion, such as suggestions for better organisation of the workplace or better tools and equipment. Employees at all locations are also familiarised with risks, including ergonomic ones, and with preventive measures leading to their minimisation. Also, a part of the entire programme is regular employee training on ergonomics, manipulating loads, and special training for members of the ergonomics teams.

The company has also implemented a health programme that is accessible to all workers. This programme includes discussing MSDs with the company doctor, rehabilitation exercise education to prevent carpal tunnel syndrome and arranging wrist support aids. Upon the recommendation of the company doctor, workers also have at their disposal massages, magnet therapy and orthoses

during working hours. Workers also have the opportunity to avail themselves of various movement and sports activities in several towns and cities free of charge.

There are also educational aids such as bulletin boards, where various themes are presented, such as back pain, exercises for computer users, etc.

What was achieved

- Following the establishment of the ergonomics programme, there was a decrease in the number of reported subjective difficulties due to excessive stress on workers' upper limbs.
- Based on a risk evaluation, technical measures were defined and implemented in individual workplaces.
- The number of work-related illnesses decreased (in comparison with 2003, there were 28 fewer ascertained work-related illnesses).

Further Information

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Transferability

This ergonomics team approach could be implemented in other industrial sectors and other member countries.