Healthy Workplaces Good Practice Awards 2020-2022

CASE STUDY

Preventing musculoskeletal injuries in a professional fishing equipment company

AWARDED

ORGANISATION/COMPANY	COUNTRY	SECTOR	TASKS
UAB Vonin Lithuania	Lithuania	Manufacture of cordage, rope, twine and netting	Manual sewing of traditional fishing nets

Source: UAB „Vonin Lithuania“

Background

UAB Vonin Lithuania manufactures fishing trawls and fish farming cages. Established in Šiauliai in 2013, the company has since expanded its production capacities and workforce. Currently, it employs 242 workers, of whom 80% are women.

In 2020, an automated sewing machine was purchased that performs loop sewing work four times faster than operators and eliminates the physical workload for employees. However, some customers require the ropes/nets to be sewn by hand in the traditional way.

For five consecutive days or more, operators must sew around loops woven into the 22 mm-thick carcass rope and net using a spool. Stitches must be sewn every 1.52 cm and the thread of the winding around the rope firmly tightened using the physical force of one hand while holding the rope with the other.

The work process was monitored, and the force applied during the clamping-tensioning of the thread by hand using a spool was measured. A resisting load of 10-12 kg is experienced by the hand during the tensioning of the winding thread. When the winding is tensioned, the instantaneous load reaches a resisting force of 20-30 kg in

the final tensile cycle. The operators perform around 1,800 such movements per shift and can experience an even greater resisting force.

In 2019, the company recorded three accidents in which employees suffered shoulder muscle and joint sprains. It also observed significant staff turnover. Therefore, as the fundamental work process cannot be changed, attention was turned to employee training in sewing techniques and more frequent rotation of the staff from one workplace to another to prevent musculoskeletal disorders (MSDs).

Aims

The company intends to increase awareness among operators regarding proper ergonomic working postures and methods that can help to prevent MSDs.

What was done and how?

- A risk assessment of the operators' workplace was performed. Physiotherapists were consulted and a number of preventive measures were implemented. Rotation of employees performing work with increased physical load was introduced. Employees can now rotate tasks in the event of muscle fatigue.
- Consultation with physiotherapists concluded that during their work operators used only the shoulder and arm muscles, but not the muscles of the back, chest, waist and legs. It was also found that the standing and sitting postures needed to be improved, the height of the workplace required attention and there was a lack of awareness about the importance of correctly setting up workstations.
- In a task that must be done manually, ergonomics training for operators emphasises the importance of correct working methods to reduce the load on the body. Other working methods are explained to protect the wrist, hands and elbow joints, in particular working with a neutral wrist position, how to avoid hitting with the hand when working with a spool (to protect the elbow joint) and how to pull the thread using the force of the whole body's muscles.
- Team leaders attended ergonomics training to be able to correct and instruct operators who are performing work in a non-ergonomic manner.
- Short five-minute exercises were introduced at the beginning of work shifts to warm up the muscles and joints of the whole body.
- Employees are able to exercise with a professional trainer, before or after work, to strengthen the muscles of the whole body, using their body weight (at a level depending on individual ability). Training includes exercises for load lifting, pulling and pushing similar to the actions performed during work.
- Special attention is now given to occupational risk factors during induction training, periodic instruction and internal control activities.
- The trainers pay special attention to new recruits and their ergonomics training and task rotation.
- Wrist and elbow splints are available for all operators to alleviate pain, if needed.

What was achieved?

Source: UAB „Vonin Lithuania"

- The company immediately responded to new risk factors when employees reported them, ensuring all incidents were investigated.
- The company saw higher job satisfaction and lower staff turnover.
- The risk of shoulder sprain for operators was minimised.
- In 2020, there were no accidents associated with MSDs or other factors.

Success factors

- There was a swift response to newly emerged risk factors and involvement of employees in finding solutions.
- The company consulted with specialists in their field (ergonomist, physical activity specialist).
- Training for employees and employer's representatives was carried out.
- Occupational safety and health were included in internal control.

Source: UAB „Vonin Lithuania"

Transferability

The approach of providing expert ergonomics training in work methods and physical exercise can easily be adapted by other companies where workers are required to perform repetitive manual tasks causing strain to certain muscles that cannot be eliminated by technical or organisational changes.

Costs and benefits

Costs:

- €120 per month (physical activity specialist)
- €400 (training equipment)
- €200 (ergonomics training (flat-rate fee))
- 10 hours over a period of 3 months (time spent on ergonomics training)

Benefits:

- No lost working days due to work-related MSDs
- Employees motivated to report risks as the employer now responds quickly

Key features of good practice example

- As many tasks must be completed manually, a careful analysis was carried out to find the safest method of working.
- Ergonomics training and physical exercise have provided operators with knowledge on how to perform their work tasks in a safer manner and how to avoid injury by using muscles of the entire body, rather than overexerting specific ones.
- Rotation of tasks also helps to reduce risks.

Further information

Further information can be found at

https://vonin.eu

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