

FACT SHEET: Health and safety management in the woodworking industry

Health and safety management in the woodworking industry as a whole is very poor. The fatal and major injuries rate is one of the highest for any industry, despite the fact that the hazards are well known, and so are the prevention measures. Sawmills are by far the most dangerous workplaces in the sector, and are increasingly subcontracted and informal, leading to deteriorating conditions for workers. In general outsourcing, temporary and informal contractual arrangements are making it harder for unions to organise and for workers to get their legal rights.

Dust and noise are all too often accepted as just 'part of the job', as a result, millions of workers across the world suffer from predictable and preventable health problems caused by their work. Typically, skin and respiratory problems, long term aches and pain and deafness. The industry relies on the skills of machine operators, rather than the use of proper physical safeguards to prevent accidents and ill health.

There are countless employers who put profits before people and who routinely abuse workers rights. Check the law in your country and see if it can help you to organise. The International Labour Organisation also has a number of International Standards, such as Conventions, Recommendations, Codes of Practice and Guidelines that may help. Some of these are listed here in resources.

The main hazards

It is important to focus on the following as these risks are involved in about 90% of all fatal and major injuries reported in the woodworking industry:

- machinery safety;
- manual handling;
- falls from a height;
- slips and trips;
- stacking of timber;
- transport.

Machinery

Woodworking machinery causes more major injuries than machinery in any other industry . To prevent machinery accidents, employers must:

- ensure all necessary guards are in position;
- make sure operators are adequately trained and properly supervised;
- check that safe working methods are being followed, eg use of jigs and push sticks.

Flying or falling objects

Due to machinery hazards and bad stacking. Employers must:

- ensure that protective devices are properly used and in working order to prevent ejection or kick back of workpieces from machinery;
- make sure tools and cutters are adequately secured;
- make sure that timber is safely stacked; that lorries are loaded/unloaded in a safe way; and that loads are properly secured;
- provide suitable goggles to prevent injuries from fasteners which ricochet or misfire from pneumatic nailing and stapling tools.

Falls

Employers must

- avoid unnecessary work at heights, eg on stacks and lorries;
- ensure safe access and guarding to prevent falls from heights

Transport

Employers must

- plan traffic routes carefully, separating pedestrians from traffic so far as possible;
- properly train lift truck operators.

Slips and trips

Employers must

- plan and clearly mark workshop layout, positioning of machinery and access routes;
- organise collection and storage of waste material to avoid obstructed or slippery floors - clean up regularly;
- keep floors in good condition;
- provide good lighting.

Manual Handling

Employers must

- avoid the need for manual handling where possible;
- avoid heavy lifting and pulling movements;
- use mechanical lifting aids and automate processes where possible;
- store timber so that it can be easily retrieved.

Fires and explosion

Employers must

- check that dust collection equipment incorporates the necessary precautions
- ensure that wood waste does not accumulate in the workplace;
- provide training for employees in what to do in the event of a fire

In a recent study by the UK enforcement authority of accidents in the Wood Working Industry, the figures and causes were as follows:

Machinery 27% of all reported injuries 21% of fatal injuries 41% of major injuries 35% of machinery accidents occur on circular saws; 20% on planing machines (including thicknessers); and 14% on vertical spindle moulders (including routers).¹³ Ensure that safe working practices are followed; and that machinists are adequately trained and supervised.

Handling 24% of all reported injuries 5% of major injuries 27% of 'over 3-day' injuries Back, hand, arm, shoulder and neck injuries are common. Necessary preventive measures include avoiding manual handling; the use of mechanical lifting aids; training; automation of processes where possible; and correct timber storage to allow easy retrieval.

Being struck by flying and falling objects 19% of all injuries 21% of fatal injuries 13% of major injuries. Timber falling from stacks etc is the main cause of accidents. Ejected workpieces and cutters also cause very serious injuries.

Slips and trips 11% of all reported injuries 14% of all major injuries. Accidents result from poorly laid out workshops and poor control of wood waste.

Falls from a height 8% of all reported injuries 21% of fatal injuries 17% of major injuries
Typically falls occur from loaded lorries; timber stacks; ladders; and buildings during maintenance and cleaning.

Transport 16% of fatal injuries. Lift trucks and lorries manoeuvring in the workplace are a significant hazard; transport routes should be clearly defined; and employees trained.

Occupational ill health

In woodworking there is a wide range of health risks causing a variety of illnesses. In many cases the problems go unnoticed, slowly getting worse until they become permanent, often disabling or even fatal. The list below highlights the main causes of ill health in the woodworking industry.

Wood dust

Wood dust is a very common cause of *occupational asthma*, a serious condition that substantially reduces quality of life and which puts many workers out of a job in the industry forever.

Cancer of the nasal cavity or sinuses in workers in the furniture manufacturing industry. A study of the registration rates in England and Wales from 1981 to 1987 for cancer of the nose and nasal sinuses indicated that:

- cabinet makers are eight times more at risk than the general population;
- woodworking machinists are seven times more at risk;
- other woodworkers are six times more at risk.

Irritant contact dermatitis can be caused by skin contact with wood, its bark, or its sap. Symptoms persist as long as affected skin remains in contact with the source of irritation. Allergic contact dermatitis can be caused by skin exposure to fine wood dust of certain species. Once the body is sensitised, even small amounts can produce an allergic reaction.

For all health risks associated with wood dust, employers must ensure that:

- exposure to wood dust is reduced as far as possible.

A lot of countries have a legal exposure limit of 5 mg/m³, However, it's extremely common to exceed this limit, even though it is not very demanding on industry. Many countries have much stricter limits. If it's a very dusty atmosphere, you can be confident that it's over the limits. It is much better to go straight ahead and apply control measures to reduce the dust as much as possible, and not worry about measure dust levels. Unfortunately, these limits are not based on workers health. Workers get sick at lower levels of exposure too.

- control measures, (local exhaust ventilation) that are properly designed, used and maintained; if, by some miracle, the company is going to install new extract equipment, then it will be necessary for them to have an engineer to take measurements to ensure that the extract equipment will work correctly.
- as a last resort, and in combination with other prevention measures, provide personal protective equipment. Where the use of dust respirators is necessary, that they are suitable, properly worn and replaced at necessary intervals;
- workers and supervisors need to be properly trained and instructed in the likely health risks and how to minimise them;
- health surveillance should be used as a tool to protect the health of employees.
- General cleanliness and good housekeeping to make sure dust is kept to a minimum.. Dust should be damped down with sprinkled water when sweeping. Dust should always be sucked,

not blown off machinery.

Noise

Some of the noisiest working environments are found in the woodworking industries. Exposure to loud noise can permanently damage hearing resulting in deafness or tinnitus (ringing in the ear). Noise levels above 80 decibels causes hearing loss. At exposure to 90 decibels over a working lifetime more than 40% of the workforce will become profoundly deaf.

Employers must

- make a noise assessment to identify workers exposed and actions to be taken;
- reduce noise exposure as far as possible by means other than hearing protectors, eg by using acoustic enclosures;
- set up ear protection zones;
- provide suitable ear protectors and ensure they are worn.
- provide information to workers about the risks to hearing and prevention measures

Hand-arm vibration syndrome (HAVS)

HAVS is likely in any process where workers' hands are exposed to high vibration levels (eg from vibrating tools or workpieces). Effects include impaired blood circulation and damage to the nerves and muscles. The best known example is "vibration white finger" also called Raynaud's syndrome.

The vibration 'dose' received by a worker over a day depends on: vibration frequency (the worst range is from 5 to 20 Hertz); exposure duration; and the grip and push force required to guide the tool or workpiece.

Danger signs you may notice are where:

- any tool or process causes tingling or numbness after 5-10 minutes use; and
- high risk machines are used, such as hand-held sanders; hand-fed or hand-held circular saws; pneumatic nailing and stapling guns; and chainsaws.

Exposure to hazardous chemicals

The use of hazardous chemicals is common in the woodworking industry, typically, timber preservatives; solvents in paints, glues, varnishes and lacquers; and paint stripping chemicals. These chemicals can cause skin problems, brain damage, organ damage (such as liver and kidneys) reproductive problems, such as reduced fertility, damage to the unborn child, and miscarriages. These include well known as cancer causing chemicals, such as formaldehyde, which is commonly used in the manufacture of plywood, Medium Density Fibreboard (MDF) and chipboards.

Employers must:

- Check what chemicals are being used in the workplace and obtain manufacturers safety data sheets and properly labelled containers in the correct language of the country where it is used. This will provide basic information on hazards and protection measures.
- Reduce the exposure to these hazardous substances to the lowest level they can achieve, by reducing the number of chemical products in use; and the amounts of these used; trying to use less hazardous chemicals as substitutes; provide ventilation; as a last resort, and in combination with other prevention measures, provide personal protective equipment
- Inform and train workers on the hazards and on how to avoid health risks