(HAE-028457) USE OF EQUIPMENT AND HAND TOOLS

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1. Introduction

Using the right tools also means that there is correct hazard recognition, that a risk analysis has been carried out beforehand, and that the right planning and work preparation has been carried out.

2. Purpose

- Standardisation of tools for use within Yara Sluiskil.
- Focus on using the right tool and using it in the right way.

3. Reference

BPx-204 Use of right Tools.

4. Responsibilities

- The managers are responsible for the availability of the right and safe tools.
- The employees are responsible for the correct use of the tools.

5. Use of tools

5.1 How to handle tools safely

- Select the right tool for the task to be performed.
- Use tools that cannot start unintentionally.
- Use tools with a properly functioning automatic stop (which stalls as soon as the tool is released; a dead man's button).
- Check that the tool is in good condition before you start using it: is the cord insulation intact? Do you still have a good grip? Is the hammer handle still in good condition?
- Make sure you know how to use the tool.
- Set up the tool correctly.
- Make sure that you are in a stable position, so that you cannot get out of balance or fall and injure yourself or someone else with the tools.
- Position yourself in such a way that the cord or hose cannot get caught behind anything.
- Make sure that the object you are working on is solid and stable. Check the condition of the fixing material (workbench, clamps, etc.) before use.
- Use protective equipment, such as gloves, safety goggles, etc.
- Make sure that you hold the tool in the right way and in the right place.
- Make sure that you position your free hand correctly: out of reach of the tool. An example is: cutting away from you, so that you are spared from possible slipping.
- Do not do anything else when holding tools (e.g. lifting a box with a knife in your hand).
- After use, store the tool so that the next time you use it, you do not grab the dangerous part of the tool.

5.2 Knives and cutting tools

Some models of knifes/cutting tools are strictly forbidden to use within Yara (see: '**NO**' indication) and should be replaced by the right tools.

A lot of hand injuries are caused by the use of incorrect knives and cutting tools. For different applications, there are specific knives and cutting tools that must be used:

- An example is the knife for cutting plastic and other materials where the sharp knife cannot be touched. The use of such a knife prevents hand injuries.
- The knife for removing insulation from cables is also a good example; it should be used by maintenance and contractors only.

If you use the right tools, it is impossible to cut your hand and fingers. There are many different models of cutting tools available on the market. We use the type of cutting tool that automatically retracts the knife after use.

Below are several examples of what is/is not allowed. The idea is not to prohibit all knives, but to use the right knife for its specific application.

Removal of insulation materials (electrical cables):

NO

YES

Cutting plastic and other materials:

NO

YES

Cutting tool; knife is completely retracted and not accessible when it is not in use:

NO

YES

5.3 Screwdrivers

Screwdrivers must be used as intended. Each discipline may have its own specific screwdrivers, for

example the type suitable for electricians (insulated parts) or the type for mechanics (with a hexagon to place a wrench on and with a reinforced head to hit with a hammer).

Below are several examples for the different disciplines (best practices).

For electricians (with insulated parts):

For mechanical activities:

5.4 Tools for opening/closing of manual valves (mandatory)

Various tools are available for opening and closing manual valves. The aim is to use the best available tool on the market to prevent the tool from slipping, which could cause an injury. The best tool is the one with three claws, because it has the best grip on the handwheel.

The mandatory tool, based on the experience of many Yara sites, is the type as shown below. This tool gives a good grip and is certified by official bodies (e.g. TUV Germany). In addition to its three claws for optimal grip, this tool also has a ring at the end of the handle. This ring makes it possible to attach the tool to a belt or something else so that both hands are free to climb a (cage) ladder. All other tools intended for this purpose must be removed from the sites.

5.5 Plastic flange/collar for chisels (mandatory)

Chisels are used for many different activities, for civil and mechanical activities, piping, etc. The combination of chisel, hammer and hands has been the reason for a lot of hand injuries so far. This can be prevented by using collar protection. This is the method that will be applied when using a chisel and a hammer.

See below the best practices, as used on many of Yara's sites. This will be applied everywhere.

5.6 Finger saver tools (to be used if applicable)

A slogging wrench is a heavy wrench with a square, heavy stem and reinforced edges. It is used by hitting the handle with a hammer. This causes a greater torque than if the wrench was used by hand. Slogging wrenches are often used to disassemble rusted or worn bolts and nuts or to mount and tighten them if a greater torque is needed. The compact design of the slogging wrench makes it ideal for use in hard-to-reach areas where no other method can be used. Slogging wrenches are often used in manufacturing and maintenance environments such as pipeline construction, heavy industry and machine factories.

Slogging wrenches are being replaced by torque wrenches and other hydraulic wrenches, as these wrenches are often safer to use and can more accurately provide the right torque.

When using a hammer and a slogging wrench, it is very important to have your hands and fingers as far away from the danger zone as possible; therefore, finger saver tools will be used at all Yara's sites.

5.7 Angle grinders

With the angle grinder, you can cut stones and tiles, and cut steel or remove rust from steel and deburr its edges. The word ‘angle’ refers to the position of the axis on which the grinding disc is screwed, in relation to the axis of the motor in the device. The angle grinder can be used for many jobs, but please note that it is very powerful and can pose a major safety risk if used carelessly.

Accidents involving an angle grinder are often very serious. It often happens that someone grinds himself in the hand or fingers, resulting in serious injury. It also happens that the grinding disc slips off and hits the face or that metal particles get caught in the eye during the grinding of metal. Therefore, please always observe the following safety recommendations.

Before you start grinding:

- Check whether your angle grinder is still in good condition. Take good care of it according to the instructions.
- Replace the disc if it no longer has the correct diameter.
- Make sure you are using the right type of disc for your job. NEVER use a cut-off wheel for deburring! Before placing the grinding disc, make sure that it is not defective.
- Check that the rpm of the machine matches the rpm indicated on the grinding disc. The machine should never have more rpm than the disc indicates.
- Always unplug the machine before changing the disc. Don’t need to change the disc? Before you start, always check that the disc is still securely attached.
- Adjust the angle of the shield so that the sparks will go in the intended direction when grinding and so that you have a clear view of the object. Never operate the angle grinder without a shield!
- Keep your workplace tidy and well-lit, whether you’re working indoors or outdoors. Cover flammable items if you can’t put them away. In addition, always ensure good ventilation.
- If you are using a mains powered angle grinder, make sure that the mains voltage is the same as indicated on the grinder’s type plate.
- When using an extension cord, always unroll it completely and check whether it is suitable for the machine’s wattage. This prevents short circuits and overheating.
- Always tightly secure the object you want to grind, so it will not be able to slip away during the grinding process and the grinding disc will not get stuck in the object.
- Check the expiry date of the grinding disc.

Other types of grinders are forbidden to use.

Within Yara, there have been quite a few injuries as a result of specific types of grinders and the way they were used. As a minimum, we will use the safe type of grinder with a number of specific additional features (such as a side-handle and mechanical overload protection (not the same as a brake to stop the disc) to prevent the angle grinder from slashing if the disc gets stuck, thus creating the risk of an opposing force from the grinder).

Obligatory features:

- Dead man’s button: stops immediately when button is released.
- Shield around the disc must be correctly mounted and in good condition.
- Side handle must be correctly mounted.
- Overload protection.
- Automatic brake.

When using an angle grinder, we must also consider the correct use of the tool, i.e. ‘how’ the grinding tool is used. A start of work analysis must be done before a grinding tool is used.

5.8 Motor-powered grinders

Following the accident with a motor-powered grinder in Finland (Synergi 20834868), the use of this machine was banned worldwide.

A Yara team investigated the accident and made the necessary recommendations. Based on these recommendations, we have come to the following agreements within Yara Sluiskil for the use of motor-powered grinders.

The use of motor-powered grinders, as shown below, is almost never permitted at Yara Sluiskil. Our recommendation is to always have custom-made objects delivered on site.

If that is not possible, the use of motor-powered grinders is permitted, provided that:

- An alternative method is not possible or involves a higher risk.
- The person who operates the motor-powered grinder has received training for this (and can prove this) and is experienced in the use of this type of machine.
- The company has drawn up a safe for work method for this, which has been approved by Yara QHES and FA.
- The company has drawn up a TRA for the job in which the motor-powered grinder is to be used. This is known to the operator and is present at the workplace.
- The object is secured against tipping over/slipping away.
- The machine is approved and equipped with a dead man's button.

5.9 Use of gas cylinders

Gas cylinders with a flammable and/or oxidising content provide an extra risk in case of calamities. For this reason, Yara Sluiskil is not permitted to use gas cylinders with flammable (ADR 2.1) and/or oxidising (ADR 5.1) contents on grating floors.

Highly flammable gas

Oxidising agent

Exception: in certain cases it may be safer to position the gas cylinders close to the work site (on the grating floor). This is subject to the condition that it must always be possible to easily move the

gascylinder at least 12.5 m on the relevant grating floor. This means that the zone to and from the gas cylinder must always remain clear.

Other agreements regarding the use of gas cylinders:

- Gas cylinders in use must at all times be properly secured against falling over, for example in a cylinder trolley.
- In order to prevent the release of gases, gas cylinders must not be put down on their sides. This also applies during movements.
- It is not allowed to bring gas cylinders into confined spaces.
- In the case of gas cylinders that are not in use, the protective cap must be placed over the valve.
- The vertical transport (hoisting) of gas cylinders should be avoided as much as possible and may only be done in an approved hoisting facility.

These rules apply to both full and empty gas cylinders.