



Product inspections for drill presses

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Reason

The SZW Inspectorate inspected drill presses in 2015. The reason for this was the results of occupational health (arbo) inspections in the Metal industry and in Education in 2012. These arbo inspections showed there to be violations in the use of a drill press at 70% of the organisations inspected.

Unsafe (working methods using) drill presses are regularly the cause of accidents. In the 2008 – 2012 period, 23 occupational accidents of a severity requiring reporting, were known to the SZW Inspectorate, which involved a drill press. In these 23 investigated accidents, 19 persons came into contact with the revolving drill or drill head. 5 accidents occurred in 2014, in which an employee suffered (permanent) injury. In 4 of the 5 cases, this was due to unsound guards on the drill. The majority of the accidents resulted in amputation of parts of fingers and/ or hands.

Hazards and statutory requirements

Since 1995, drill presses on the European market are subject to the Machinery directive. Harmonised NEN-EN standards are provided in order to comply with the Machinery directive 2006/42/EC.

The main hazards when working with drill presses are:

- Coming into contact with the revolving drill;
- Being struck by projected particles (swarf) of the product being machined;
- Risk of crushing by belts and gears.

The party introducing the drill press to the European market (often the machine manufacturer) is responsible for conformity of the product with the Machinery directive. In the Netherlands, this European product directive has been implemented in the Commodity Act on Machinery.

This project served to monitor the obligations on the basis of said Commodity Act.

According to the Occupational Health act, any employer who has his/her employees work with a drill press is responsible for the purchase of safe machines, and for

effective information to, instruction of and supervision of the employees using this machine. This project did not conduct any inspections on the basis of the Occupational Health act.

Standardisation

There is a harmonised European standard for drill presses, giving the essential safety requirements:

- NEN-EN 12717:2001 “Machine tools – Safety – Drilling machines”
- NEN-EN 953 “Safety of machinery – Guards – General requirements for the design and construction of fixed and movable guards”

Which drill presses have been inspected?

During the product inspections by the SZW Inspectorate in 2015, the focus lay on larger, professional drill presses, on a pedestal or mounted to the ground. So-called tabletop drill presses and other drilling machines were not included in this project.

The SZW Inspectorate pays attention to:

1. Guarding of the drilling spindle, drill and transmission systems in both the upper idle position (when the spindle is still revolving) and in the lower working position.

When there is no guard or inadequate guarding, there is a risk of entanglement. Clothing, gloves and/or hair can be grasped by the drill or drill head. This is a commonly occurring deficiency.

2. Emergency stop and restart protection

It must be possible to quickly switch off the drill press, to prevent accidents in the case of a hazardous situation or to limit their consequences.

3. Stability provisions

Drill presses are heavy, slender and tall machines. Due to the drilling process generating great forces, the machine must be installed in a stable manner, with stability provisions. The machine user must apply the stability provisions correctly.

4. Administrative obligations

If the machine complies with the essential safety requirements of the Machinery directive, the manufacturer draws up a Declaration of Conformity, provides the machine with a Dutch language user manual and affixes the CE marking to the machine.

Inspection results

In the period from February to August 2015, the SZW Inspectorate inspected 18 different types of drill presses, made by 13 different manufacturers.

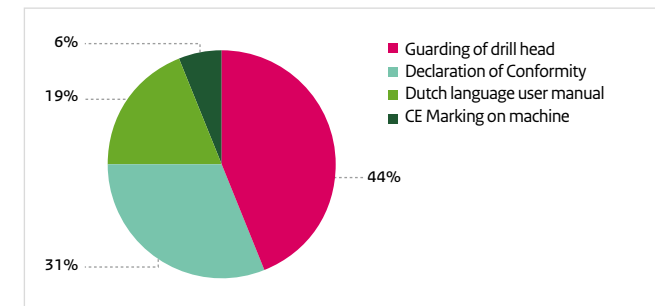
The inspections (21 in total) were conducted at the premises of manufacturers, importers, distributors, and a single user/owner in the Netherlands. The user had compiled a drill press for own use and is therefore also considered to be a manufacturer, in the sense of the Dutch Commodity Act.

The inspections covered a total of 5 drill presses produced by Dutch manufacturers (including the individually compiled drill press for own use), by 6 manufacturers

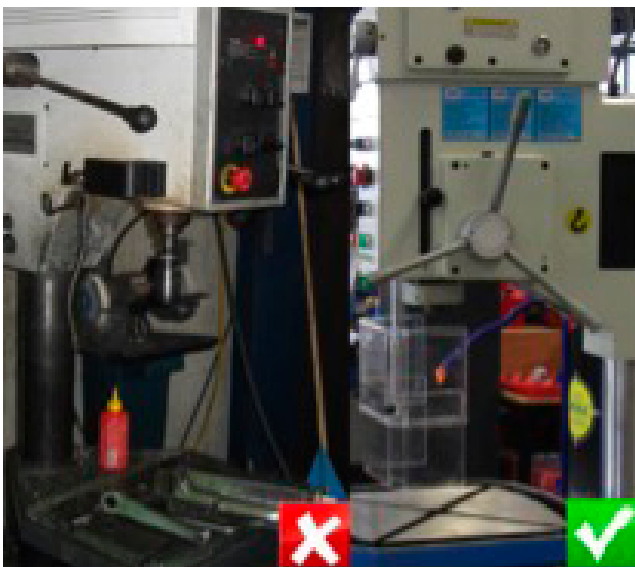
from other EER member states (Austria, Germany, Portugal, Spain) and by 2 manufacturers outside the EER (China and Taiwan).

Non-conformity was identified in 11 of the 18 drill presses (61%). The detected violations concerned guarding of the drill head and/or administrative violations. Figure 1 shows the violations.

Figure 1: Violations detected in 11 of the 18 types of drill presses



Guard around drill spindle and guarding of drill head and drill
The drill press must have a guard around the drill spindle and the drill (secured cover or protected with a cutout switch). The inspections showed 44% of the tested drill presses to have insufficient guarding of the drill head and drill, or no guarding at all. In many cases, the protective cover was too short and therefore failed to completely cover the drill head and drill. There are but few manufacturers who more or less completely guard the drill, in combination with a cutout switch (safety cutout) upon opening the cover.



Emergency stop and restart protection

All inspected drill presses had an emergency stop button, and the restart protection provision worked satisfactorily. The stability provisions are described in the user manual in all cases, so that the user can ensure sufficient stability. Some drill presses already have pre-drilled holes on leaving the factory. This offers the user the opportunity to securely bolt the machine in place.

In practice however, some users do not bolt the machine in place in order to avoid damaging the floor. Other violations concerned the Declaration of Conformity, the Dutch language user manual and/or the CE marking.

Measures

Based on the detected violations, the manufacturers and/or importers in question were given the opportunity to take the necessary measures. An inspection letter was sent, based on the Commodity Act. The manufacturers in the other EER member states were contacted in writing, on the basis of the European Machinery directive. In the case of the non-conforming drill presses produced by a manufacturer registered outside the EER, the representing party (importer) for the EER was contacted in writing.

One manufacturer has already agreed to withdraw the non-conforming drill press from the market.

Inspection in Finland and in the Netherlands

In 2012, a study of the conformity of drill presses was conducted in Finland. During the study, 41 different types of (tabletop) drill presses were inspected. Only one machine was lacking a protective guard for the drill spindle and drill. Most of the machines had an emergency stop button. The declaration of conformity was missing in approximately 27% of the cases. A Finnish language user manual was generally supplied with the machine. All inspected machines had correct CE marking.

The main difference between the Dutch and Finnish inspections concerned the findings concerning guarding of the drill, drill spindle and drive unit.

Conclusion, reach and follow-up

The inspection project identified non-conformity in more than half (61%) of the inspected drill presses. The companies which sell non-conforming drill presses were issued a warning, with the comment that the sale of non-conforming drill presses is forbidden (on the basis of the Commodity Act).

They were given the opportunity to:

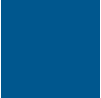
- a. Make the drill presses in question conform to the obligations of the product directive in question, or to
- b. Cease trade in these products.

The drill presses of the market participants in the Netherlands who received a warning and those manufacturers abroad who were contacted in writing regarding non-conformity, will be re-inspected in 2017.

In this inspection project, part of the Netherlands market for professional, upright drill presses has been inspected. During the re-inspections in 2017, the other types and brands of upright drill presses

will also be assessed. In doing so, we contribute to an equal playing field for the suppliers of drill presses in Europe.

Product inspections have a wide reach. By achieving conformity via 20 product inspections at the premises of manufacturers, importers or distributors, safe products for many users (companies and consumers) can be traded.



In the Metal sector for example, virtually every company owns one or more drill presses. More than 350,000 people are employed in metal processing (basic metal, metal products industry, electronics industry, machines and devices industry, transport equipment industry and shipbuilding and repairs).

Via the EER consultation on implementation of the Machinery directive – the Administrative Cooperation in Market Surveillance of the Machinery directive (ADCO-MD) – the results of the inspections are made available to the European Commission and the product supervisory boards in the other EER countries.

About the Market surveillance programme for product safety, by the SZW Inspectorate

The SZW Inspectorate is one of the five inspection departments in the Netherlands responsible for surveillance of product safety. Market surveillance of product safety is the surveillance of compliance with European product legislation.

Purpose: to monitor free movement of products on the European market, while at the same time ensuring that these products offer a high degree of protection for general interest, such as health and safety in general and at work, consumer protection, environmental protection and security.

The surveillance field of the SZW Inspectorate comprises 6 European product directives:

- Machinery (2006/42/EC, with the exception of consumer products);
- Personal Protective Equipment (89/686/EC, with the exception of consumer products, and Regulation 2016/425);
- Lifts (95/16/EC and 2014/33/EU);
- Pressure Equipment (97/23/EC, and 2014/68/EU);
- Simple pressure vessels (2009/105/EC and 2014/29/EU);
- Equipment for potentially explosive atmospheres (94/9/EC and 2014/34/EU).

In the Market surveillance programme for product safety, the SZW Inspectorate prioritises product groups on the basis of:

- Risk/hazard;
- Reports to the SZW Inspectorate;
- Joint actions (EU collaboration projects);
- The European obligation for surveillance of each product directive (Regulation 765/2008/EC and Decree 768/2008/EC).

More information

Website

The SZW Inspectorate website provides additional information with regard to products safety: <https://www.inspectieszw.nl/onderwerpen/algemeen-productveiligheid-en-certificatie>

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