



CRUSHED FINGERS – MODIFICATION OF A PROTECTIVE PLATE IN ORDER TO ELIMINATE THE RISK OF CRUSHED FINGERS

1. Organisations involved

Avery Dennison

2. Description of the case

2.1. Introduction

At Avery Dennison, the protective plate from one of the machines used for cutting paper rolls was displaced. The displacement of the protective plate created a dangerous situation for all workers using this machine. As required by Avery procedures, one of the operators reported the dangerous situation by means of the online reporting system.

Avery Dennison has a procedure in place for the management of occupational accidents, first aid, incidents and dangerous situations. According to this procedure, workers are obliged to report all accidents, incidents, first aid, near misses and dangerous situations that arise in the factory to the responsible person in the section concerned (team leader, lead operator, or senior operator). All reported cases have to be documented in the EHS (environment, health and safety) system by the responsible person of the team from the department concerned. Under this system, the worker who first observed the situation has to identify the facts and explain the situation to the responsible person.

Within the framework of this policy, a worker at Avery followed the procedure by reporting the dangerous situation caused by the displacement of the protective plate from slit 13. Because of this displacement, the protective plate of the slit was too short which created a gap in which fingers of employees might get crushed while working with the machine.

2.2. Aims

By adjusting the protective plate, the EHS department and the employees wanted to contribute to a safer work environment. The employee who detected the dangerous situation carried out his responsibility within the framework of Avery Dennison's system for investigating dangerous situations.

2.3. What was done, and how?

General approach and strategy

In 2000 Avery Luxembourg set up a registration system for the management of occupational accidents, first aid, incidents and dangerous situations. The idea is that when an accident or incident occurs or when a dangerous situation is noticed, the team leaders have to carry out an initial investigation (*première enquête*). The purpose of this investigation is to assess the gravity and extent of the risk and to come up with immediate and adequate preventive or corrective measures. The team leader from the department concerned has to contact the other team leaders (coating, finishing, maintenance, flow-cell) in order to carry out the initial investigation. The presence of the other team leaders is obligatory. Apart from taking immediate action, they can propose short- and medium-term actions in the EHS declaration. The team carrying out the inquiry has to decide whether operators can continue working or whether they have to be removed from the post.

After the initial investigation, the team leader from the department concerned has to register the matter using the EHS database in Lotus Notes. They have to fill in a declaration form which requires the following information:

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1. Background information such as where and when the accident or incident happened: in which zone of which department? What day and time? Who was involved? Who witnessed the situation?

2. Information gathered at initial inquiry: who were the participants in this investigation? The facts and if possible pictures. Which types of risks are present and what are the probable causes? Which actions were taken immediately and which further actions do you propose? If the EHS team is not satisfied with the initial investigation they might perform a second investigation, for which the same information will be put in the template.

3. Actions resulting from the EHS investigation: who is responsible for which action? What is the deadline and what was the actual date on which the matter was resolved?

Once the form is filled in, it is sent to the staff and the responsible persons (manager, coordinator, team leaders) of the department concerned. Communication is very important throughout the whole procedure. The team leader has to post a notice about the dangerous situation on the board reserved for the workstation concerned. The EHS department has to e-mail this notice to the departments which they believe to be involved. The team leaders of each department have to communicate the dangerous situations during the 'safety huddle' at the beginning of each shift.

Finally, the person responsible for safety analyses the EHS declaration no later than 24 hours after the declaration was registered in the EHS system. He can decide either:

- to archive the declaration if the measures taken have resolved the problem; or
- to put the declaration on hold if the proposed actions are satisfactory but aren't yet realised.

This instrument is very dynamic, meaning that each registration goes through different stages, namely 'new', 'running' and 'filed'. A new registration means that someone reported a recent case. A running registration means that additional actions have to be taken, proposed actions aren't taken yet, the EHS team hasn't approved the first investigation yet, etc. A filed registration means that the EHS team is satisfied with the first or second investigation and that the proposed actions have been taken. However, it is possible to undo the 'filed' status when, for example, the measures that were taken don't solve the problem.

The 'slitter 13' project

The worker in the finishing department in the zone of slitter 13 reported the dangerous situation to his team leader. The protective plate from slitter 13 was displaced. Because of this displacement, the protective plate of the slitter was too short when the intermediary wagon from the machine is turning over towards the trolley which transfers the slitted rolls to the bins. Because of this, a gap was created in which the fingers of employees might get crushed while working with the machine.

Figure 1. Slitter 13 before modification — risk of crushing fingers



The initial enquiry was carried out in collaboration with the team leaders from the other departments, in accordance with company policy. They decided to take immediate action by putting a poster on the intermediary wagon in order to notify the workers about the situation.

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The team leaders also suggested asking the maintenance team to modify the plate. After the first inquiry was finished, the team leader from the Finishing Department registered the facts in the EHS system. Figure 2 shows a screen shot from the online declaration.

Figure 2. Screen shot from the online reporting system

The screenshot shows a web form titled 'DECLARATION SITUATION DANGEREUSE' from 'AVERY DENNISON LUXEMBOURG'. The form includes fields for 'Date et heure de l'incident', 'Lieu de l'incident', 'Type de situation', and 'Description des faits'. A table at the bottom is used for recording actions taken to resolve the situation.

N°	Description des actions	Date de réalisation	Responsable	Statut	Remarque
1	Modification de la plaque de protection	13/03/2007	[Nom]	Realisé	
2					
3					

On the declaration form there is a table in which the team leader can fill in future actions. In this case the action is 'modifying the protection plate'. The responsible person for this action is the coordinator of the maintenance department. The action was realised on 13 March 2007 (the dangerous situation was reported on 8 March). As one can see in the right top corner, the declaration is in 'filed' status.

2.4. What was achieved?

The intention was to eliminate the risk of crushing fingers beneath the protective plate, which was achieved by the modification of the plate. In this case only a small modification was needed, which might seem unimportant and not urgent to employees but, in Avery, employees are involved and have a responsibility in the detection and follow-up of dangerous situations. Because of that, employees will take each dangerous situation seriously and try to find a solution as soon as possible.

This action doesn't need a complicated and extensive assessment to discover whether it improved the working situation. The gap beneath the plate was removed by adjusting the plate. The risk of crushing fingers is eliminated.

Problems faced

There were no problems during the action. The fact that the investigation system encourages employees to report dangerous situations themselves contributes to the safety awareness in the organisation. Employees who report an accident, incident or dangerous situation themselves are more motivated to support the actions because they are involved. A problem that occurs every so often is the insufficient completion of the forms but this is already happening less often than when the system was newly introduced.

Figure 3. Slitter 13 after modification — risk of crushing fingers has been eliminated





2.5. Success factors

An operator spotted the dangerous situation. He took his responsibility and reported it immediately to his team leader. The safety awareness of this operator has led to the elimination of the risk of an occupational accident. Thanks to the well-defined company policy concerning the management of dangerous situations and the structured procedure for the declaration of dangerous situations, this situation was quickly observed, reported, dealt with and filed. The procedure involves workers, which has a positive impact on their safety awareness. All internal stakeholders are involved in the system: operators, team leaders, coordinators, managers, which makes communication much easier.

2.6. Further information

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2.7. Transferability

The investigation system used at Avery to report and follow-up accidents, first-aid, incidents and dangerous situations could be very useful for other organisations too. This kind of investigation system enables all employees to be involved in creating a safer work environment. It is a dynamic instrument that can easily be included in existing health policy systems at other organisations.

This system can even be extended to ergonomic issues, hygienic issues, facility problems and all kinds of other problems. So it is not restricted to industries but can also be used in service organisations. The case itself, the problem and the solution are very organisation-related.

3. References, resources:

- <http://osha.europa.eu/en/publications/reports/TEWE09001ENC>