

REDUCING THE RISK OF SLIPPING IN A FOOD PROCESSING PLANT

1. Case metadata

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2. Organisations involved

TULIP FOODS Ltd

3. Description of the case

3.1. Introduction

Tulip Foods Ltd manufactures, slices and packs cooked meat products for the major UK supermarkets. The site employs 850 people covering, production, administration, sales, purchasing and distribution. The production is organised over two eight hour shifts between 6am and 10pm and the night shift running 10pm - 6am is responsible for cleaning.

The floor in the production hall is anti-slip but it was laid in 1999. High traffic areas were more prone to become slippery as the day progressed. Even though there was a dedicated team that regularly cleared debris from the production area and kept the floors clean, there was a high number of slips – as many as nine per month, with an average of six per month in the last six months. Most of the slip accidents were happening during the afternoon shift.

3.2. Aims

The main aim of the initiative was the prevention of slips, trips and falls at workplace.

3.3. What was done, and how?

Due to the relatively high number of slips at workplace, it was agreed at a Joint Consultative Committee meeting that a team consisting of the Day Hygiene Supervisor and JCC Member, a Day Hygiene worker and the Health and Safety Manager, would investigate the issue and report back with recommendations.

The designated team came up with the following findings:

1. Most of the slip accidents were happening during the afternoon shift though not exclusively.
2. The cleaning method adopted by the Day Hygiene team actually increased the slip risks. The team found that by just scraping up the meat debris the hygiene operatives were merely spreading a film of meat debris, fat and grease over the floor and that eventually this filled in the surface roughness, causing the floor to become slippery (figure 1).

Figure 1. The hygiene team was just scraping up the meat debris, causing the floor to become slippery



Source: Tulip foods Ltd

3. No chemicals were being used to clean the floor between 6am and 10pm.
4. Floors became progressively more slippery as the day progressed. This was perceived by staff and confirmed by measurements. The average reading was 40+ μm at the start of the day and as low as 7 μm by the end.
5. Some areas needed to be designated 'high risk' areas and should be cleaned more regularly. These areas included high traffic areas and certain product lines.
6. The area of the production floor post sealing (the site uses thermo-sealing machines) remained non-slip because it did not become contaminated with meat debris, fat or grease.
7. There was no record of which areas had been cleaned and when.
8. Awareness of the issues needed to be raised. A training programme was needed to inform staff and managers about the severity of slip, trip and fall accidents.

As a result of this investigation, changes were proposed. The method of cleaning the floor was changed to incorporate the use of chemicals to clean up debris, fat and grease. The use of watering cans and small, precise doses of chemicals helped to minimise the risk of food contamination from chemicals. The hygiene operatives used scrapers to remove major debris, as they had done before, then sprinkled chemicals onto the floor, scrubbed and scraped to a drain. This removed the residue of debris, fat and grease and the floor remained non-slip (figures 2, 3, and 4). Known 'high risk' areas

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were cleaned more frequently, and records of all cleaning carried out were kept.

Figure 2. Use of chemicals in small and precise doses



Source: Tulip foods Ltd

Figure 3. Use of scrapers to remove major debris



Source: Tulip foods Ltd

Figure 4. The residue of debris, fat and grease is led to a drain



Source: Tulip foods Ltd

A training course based on the HSE's Slips and Trips guide was organised to inform all staff of the seriousness of slips, trips and falls, and familiarize them with the new cleaning protocol. Joint Consultative Committee representatives on both shifts were monitoring floor conditions and reporting at fortnightly meetings.

In addition to the above, Tulip Foods intended to introduce further improvements regarding the procedure implemented. Some of these are listed above:

1. Floor surfaces with a surface roughness in excess of 70 μm in high slip risk areas were being tested (figure 5).

Figure 5. Testing of various floor surfaces with increased roughness



Source: Tulip foods Ltd

2. Floor treatments that increase the surface roughness of existing floors and extend their useful life were evaluated.
3. Cleaning procedures were evaluated for welfare areas. Changes to effect a safer cleaning were proposed. These areas generally had ceramic tiled floors and it was therefore imperative that the drying time was minimized. For this purpose, they adopted the use of micro fibrous mops to dry the floor after mopping (figure 6).

Figure 6. Use of micro fibrous mops to dry the floor after mopping



Source: Tulip foods Ltd

4. The company was also testing a new procedure for cleaning corridors to effect separation between pedestrians and the area being cleaned (figure 7).

Figure 7. Use of plastic cones to separate pedestrians from the area being cleaned



Source: Tulip foods Ltd

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3.4. What was achieved?

- The rate of slip accidents was reduced by half – from 5.6 to 2.75 per month.
- In terms of economic benefits, there was less working time lost (in first aid treatment, recovery, investigation time, etc). The company probably also benefited from a lower cost of claims and in turn lower insurance premiums.
- The condition of the floor was not deteriorating throughout the working day.
- The cleaning activities were monitored through written and signed records of cleaning carried out (figure 8).

Figure 8. The form of floor cleaning records applied in Tulip Foods Ltd.

ECOLAB		FLOOR CLEANING RECORD														TULIP		
Area:	Cooked Meats - During Production										Date Issued 07.04.08				Issue 1			
Week Commencing:										Authorised By: Mr L Snook				Page 2 of 2				
	Line number																	
Hour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	NOTES	
Comments																		
Floor Cleaning must be completed using P3 Steril or Topmax 130 these are dispensed from the chemical store ventri @ 1%. Cleaning Must take place every 4 hours minimum per line. On completion of line sign paperwork on completion of hall sign page 1.																		

Source: Tulip foods Ltd

- There were no increases in administration costs as they had adapted existing paperwork to accommodate the new regime. In fact, the total cost of the 10 watering cans, 10 deck scrubber brushes and 10 wipers was less than EUR 110.
- 144 members of the staff, who participated in the training, realized the importance of floor cleaning in reducing slips, trips and falls.
- As the members of staff were involved in all stages of the project, they had a sense of ownership of it – they monitored the progress and observed the new rules, including maintaining records of cleaning.
- The staff were more confident when moving around and also more confident in raising new issues, since they were positive that those issues would be tackled.

3.5. Success factors

The key factors which contributed to the success of the changes introduced were the following:

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- The team that came up with the idea of targeting specific higher slip risk areas was committed to the project and injected an enthusiasm in other members of the Hygiene team.
- The fact that it was their idea gave them ownership and a vested interest in its success.
- It was a very simple, low-cost idea and very easy to introduce.
- It required very small changes to working practices.
- It required very little information, instruction and training to 'go live'.
- By targeting the higher slip risk areas and cleaning them more frequently the effectiveness of the cleaning process increased dramatically. All areas then had a reduced slip risk.
- There was effectively no change to the daily regime except that certain higher slip risk areas were cleaned more often and lower slip risk areas were cleaned less often.
- Communication between production operatives and hygiene staff. Production operatives liaised with hygiene and anticipated any extra cleaning required to further risk reduction.

3.6. Further information

Mr Richard Stevens
Health and Safety manager
TULIP FOODS Ltd
Newtons Margate, Bodmin, Cornwall
PL31 1HF, UK
Tel: +44 (0) 1208 262656
Fax: +44 (0) 1208 262662
E-mail: Richard.stevens@tulipltd.co.uk
Web: <http://www.tulipltd.co.uk>

3.7. Transferability

The cleaning procedure implemented in Tulip Foods was rather simple and could serve as an example for other companies where problems with slippery floors are present, particularly in food industry. In fact, the scheme can be introduced at very little cost to any facility that requires targeted cleaning. In each individual case, however, it may be necessary to make some adaptations and modifications to the cleaning process, depending on the distribution of shifts, the condition of floors and the nature of production. Furthermore, efficient cooperation between the management and workers themselves is required.

4. References, resources:

Information provided by Tulip Foods Ltd in the framework of the Good Practice Award Competition 2008/2009".