

# Slip Hazards in Powder Production

# Introduction

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Ø History of Slip Hazards

Ø Anti Slip Footwear Trials

Ø Outcome of Trials

Ø Recommendations

# History of Slip Hazards in Powder Production

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*‘People slipping whilst in powder Production area, has always been seen as something that happens all the time. We just have to put up with it and be careful whilst walking in that area’*

# Basically we have had to learn to walk like Ducks!

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# Problems associated with Gel Polymer

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# Accidents

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***We have encountered numerous accidents, all associated with a person slipping and injuring themselves i.e.***

- Slipping down steps
- Slipping in cage areas
- Slipping whilst cleaning floors
- Slipping whilst going in & out of buildings
- Slipping after prolonged dry spells
- Slipping when heavy downpour of rain occurs
- Slipping whilst carrying out normal work duties

***‘Basically we have a risk of slipping anywhere in Powder Production, from the start of the shift, to the end’***

# Slip Accident Statistics (UK)

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- 33% of all reported major injuries
- 20% of over-3-day injuries to employees
- 2 fatalities per year
- 50% of all reported accidents to members of the public
- cost to employers £512 million per year
- cost to health service £133 million per year
- one accident every 3 minutes

# Bradford site

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- Last year the site had 130 Near Misses (HITS) all relating to slips/trips occurring, of which 29 happened in Powder Area
- This year we have had 24 potential slip accident concerns raised through the SAFE Observation process in Powder Area alone
- This year we have had 12 site accidents (4 in Powder, of which 1 was an LTA) that happened due to a slip/trip

# Fact!

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*‘Every person who has ever worked in Powder Production, has at one time or another, slipped and fallen’*

# Safety Measures put in place

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- Cleaning regime introduced in all works
- Introduction of Slip Resistant flooring
- Introduction of Slip Resistant steps, (open grilled & solid)
- Plant upgrades

*‘A lot of time and money has been spent on the above measures’*

# Has it eliminated the risk of someone slipping?

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**NO!**

***'We are still having people slipping and sustaining injuries'***

# What else can be done to reduce the risk ?

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*‘Having looked at the overall problems associated in Powder Production, regarding slip hazards. I feel we should look at alternative Anti Slip footwear and also introduce new safety measures to complement them’*

# Anti Slip Boots

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- Visited Birmingham Safety Exhibition in June
- Looked at a wide range of anti slip boots
- Watched demonstration of anti slip boots (Safer Safety)
- Discussed with demonstrator, problems on Bradford site
- Asked if he could visit the site
- Arranged a visit to Bradford site

# Visit to site

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- Mike Craven & Rodney Banks (Boot Distributors) visited Bradford site
- Taken to Powder Production & shown all slip hazards associated with Polymer Production
- Discussed problems associated with Polymer Production
- Agreed to trial 2 types of Anti Slip Boots & give feedback

# Outcome of Trial

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## Agrip Chevron V Sole (Pre Production Model) EN34554

- **A white Wellington (pre production model)**
- **Trialed in wks 12 & line 6 cage areas**
- **Also trialed whilst using Lincoln floor cleaner (wet floor cleaner)**
- **Operators commented that, footing felt a lot more stable & if they did start to slip, the slip was at a slow constant slip & not the usual fast speed slip that usually occurs**

## Agrip Chevron V Sole (Pre Production Model) EN34554

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This Picture shows the Operator cleaning up in Wks 10 (line6) cage area. As you can see there is a lot of water, monomer, gel, oil that creates a high risk slip hazard

## Agrip Chevron V Sole (Pre Production Model) EN34554

This picture shows the sole of the Wellington & the viscous slime that is on the sole itself. Almost all the tread is clear of gel impregnation and Anti Slip sole contact points are still effective



## Agrip Chevron V Sole (Pre Production Model) EN34554

This picture shows an Operator using a Lincoln Scrubber. All the floor is wet & very slippery, but due to the 'Agrip Chevron V Sole', sure footing is still maintained.



# Picture Agrip Chevron V Sole (Pre Production Model) EN34554



## Picture of Agrip Chevron V Sole (Pre Production Model) EN34554



## Agrip Chevron V Sole (Pre Production Model) EN34554

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Picture of Rigger  
Boot working in  
Wks 12



## **Agrip Chevron V Sole (Pre Production Model) EN34554 & Suregrip EN20345-52 Anti Slip Boot**

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Whilst trialing both these types of boots in Wks 8. We encountered the same problems that we had with the (Shoes for Crews Anti Slip Boot), that we trialed several years ago. The soles eventually became impregnated with a mixture of polymer powder & sawdust. We had to abort the trial for safety reasons and believe that the standard boot we have at present is the only alternative for Wks 8 operators whilst carrying out normal work duties.

# Suregrip EN20345-52 Anti Slip Boot

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These Pictures show the sole becoming impregnated with Powder, Gel, Sawdust, that makes the boot unsuitable for plant duties



## Suregrip EN20345-52 Anti Slip Boot (slip on sole)

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We received excellent reports from cleaning staff that wash & clean the showers, lockers, toilets & mess room areas in Powder Production, who trialed the 'Suregrip slip on sole'. They informed me that they had to be very careful whilst washing floor areas, as they became VERY SLIPPERY, due to polymer residue that gets left on the floor from people who come off the plant. Also the actual floor is made of smooth lino that is also very slippery when wet. This has resulted in the floors becoming a high risk slip area, but when they wore the Sure Grip sole, their footing felt a lot safer and the risk of slipping was virtually eliminated.

*'We have encountered 2 Loss Time Accidents in Wks 6 Lab tea room & Wks 8 Showers, in recent years. I feel both these LTA would not have occurred if they had worn footwear with the 'Sure Grip sole'*

## Suregrip EN20345-52 Anti Slip Boot (slip on sole)

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This picture shows the cleaner working in a wet shower area using the 'Suregrip slip on sole' attached to his boots. The usual slipping associated with this task is virtually eliminated.



## Suregrip EN20345-52 Anti Slip Boot (slip on sole)

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Another picture showing the cleaning of a smooth lino floor surface in Wks 8 toilets. Again the usual slipping associated with this task in virtually eliminated.



## Suregrip EN20345-52 Anti Slip Boot (slip on sole)

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This picture shows the 'Suregrip slip on sole' fitted on to his standard work boot. After cleaning duties have been done in that area. He can remove the sole and keep it in his locker for the next time he cleans.



# Recommendations to Manage Slip Hazards

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- Introduce a Slip / Trip Policy for the site
- Ensure cleaning regime is maintained & managed to a high standard
- Any product leaks that occur on plant should be reported (HITS) & repaired ASAP
- Any roof leaks should be reported & repaired ASAP. Also if works areas become flooded. Priority should be to cordon off area, clean water up & apply multi-sorb
- Agrip Chevron V Sole (Pre Production Model) EN34554 Wellingtons should be used for all Cage Area Duties, all Lincoln Scrubber Cleaning Duties & all Jet Washing of contaminated plant equipment
- Suregrip EN20345-52 Anti Slip Boot (slip on sole) should be used when cleaning Lockers, Showers, Mess Rooms & Corridors and removed when completed

# Recommendations to Manage Slip Hazards

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- Introduction of foot lockers, so all 'dirty job specific' footwear can be kept at the plant area and the risk of transferring contaminants from one area to another is significantly reduced
- All 'dirty job specific' footwear should only be used in the location specified. This also reduces the risk of transferring slip contaminated
- A footwear cleaning system to be located between Wks 12 & Wks 13. This should have a hot water supply fitted and also nylon brushes fitted in the bottom and sides of the cleaning tray. This will then enable Operators for the first time to clean any slip contaminants from their footwear, that will eliminate slip contaminated getting transferred from one area to another & also reduce the risk of chemical contact
- All Powder Personnel to be educated in the Safe Managing of Slip Hazards

# Recommendations to Manage Slip Hazards

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- All Steps/Stairs in Powder Production Area should have an Identification Location Number and condition checks should be carried out at set intervals
- Look into what best type matting would be most suitable for building entry/exit points
- The cleaning of Ant-Slip fitments on Stairs/Steps should be cleaned at set intervals
- Any report from either a HITS, SAFE Observation or Union inspections, relating to a slip hazard should be dealt with ASAP
- All new people/contractors should be made aware of the potential slip hazards associated with Powder Production before allowed to enter that area
- All PTW or Procedures should incorporate any slip risk hazard associated with that specific task

# Reply from Anti Slip Footwear Manufacturer

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Dear Ian,

First of all, congratulations on a very thorough & comprehensive report.

Naturally I am thrilled that our new products have been found to work & to be perfectly honest with you, the results were virtually as I had expected. I knew Suregrip would be limited in the really messy areas due to clogging, (which is precisely why I wanted a second more open tread design) but I am pleased they worked in other areas & that they were comfortable. Since we met we have had nothing but positive reports & have converted a lot of users onto them.

The results for the Agrip sole Wellington boot are very pleasing. I have been waiting for your report before moving to full production stage but we have just finalised the moulds & will be able to deliver finished product very soon. My thoughts were that if they work for you they will work virtually anywhere. We have changed a few things to make them even more effective such as taken off the border to allow the grooves to self clean easier & improved the adhesion between the upper & the bottom sole. We will also add a cushioned insole to make them more comfortable & warmer.

I wish you good luck when presenting this report & sincerely hope we can provide product in the future, through our distributor partners Progressive Safety, that will reduce your slip fall accident rate.

Regards,

Mike Craven

# Conclusion

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*‘If all the recommendations are put place, I believe we can turn a high risk slip area, into a Risk Managed Department that controls possibly their biggest cause of workplace accidents’*

