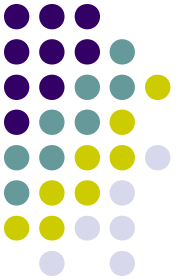
Top Glove , Top Quality , Top Efficient ,
Good Health , Safety First & Be Honest
Production Department (F10)



THIN AREA – ROOT CAUSE

&

CORRECTIVE/PREVENTIVE ACTIONS.

(NATURAL RUBBER PRODUCT)

Present By :

MR. NYANASEKARAM

ASSISTANT MANUFACTURING MANAGER (F10)

INTRODUCTION

- **Thin Area Gloves (TA)**

  It can be defined as severe thin area which can be easily torn ._

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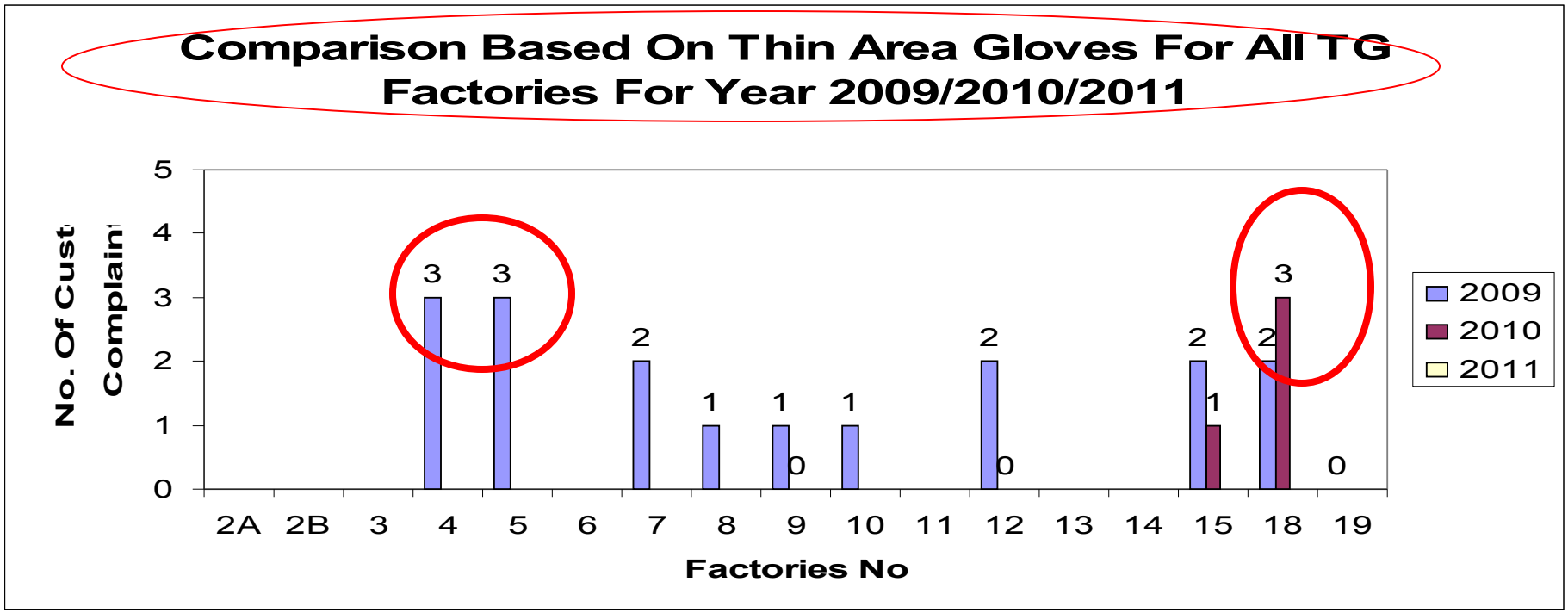
Strictly P&C and for Internal Use only

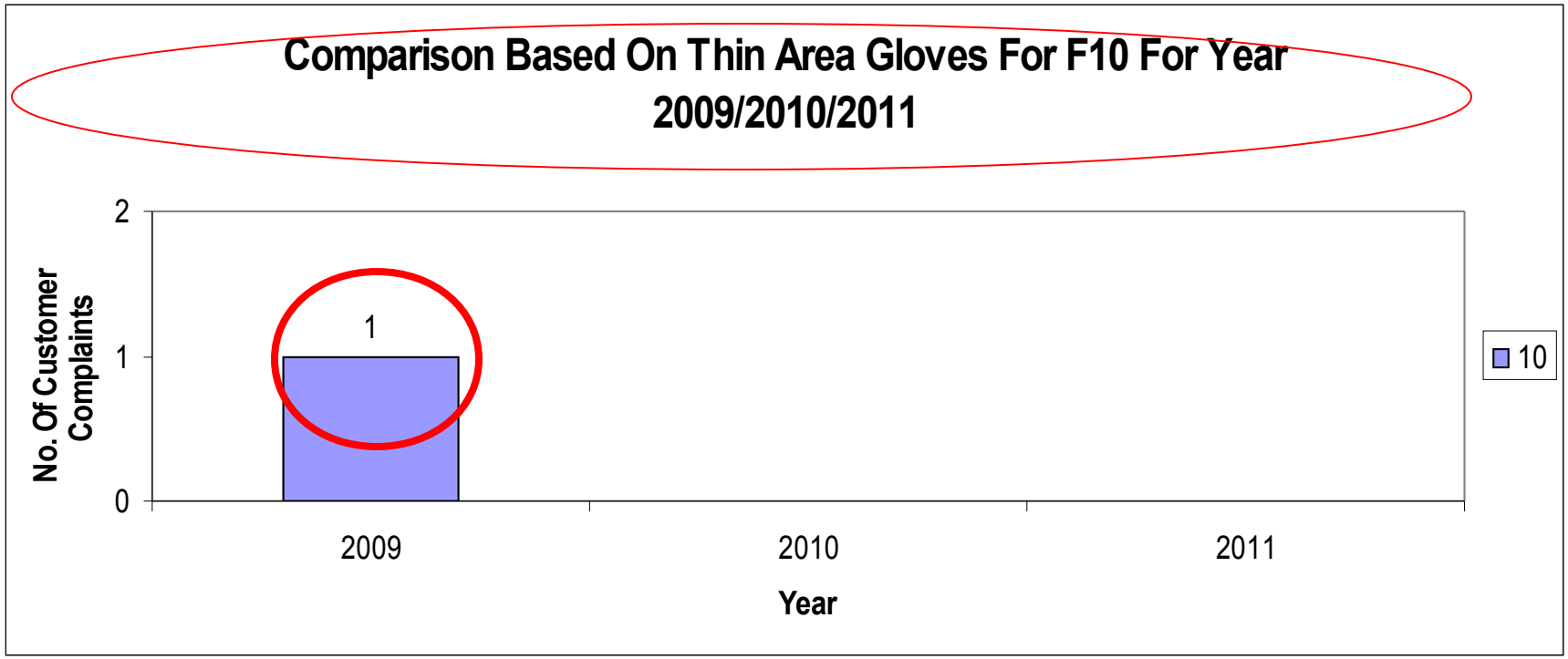
ANALYSIS OF CUSTOMER COMPLAINTS



Discussion:

- **The highest complaint** for 2009 are from **F4 and F5 with 3 complaints.**
- **For 2010 , significance improvement** has been shown from all factories **excepted F15 and F18** with 1 and 3 complaints respectively.
- For 2011 , until current date , no TA complaint has been forwarded by our customer.

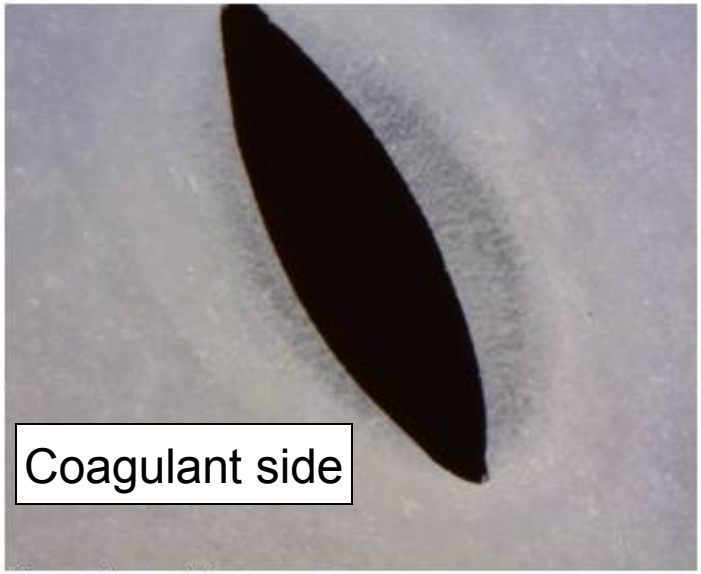
ANALYSIS OF CUSTOMER COMPLAINTS



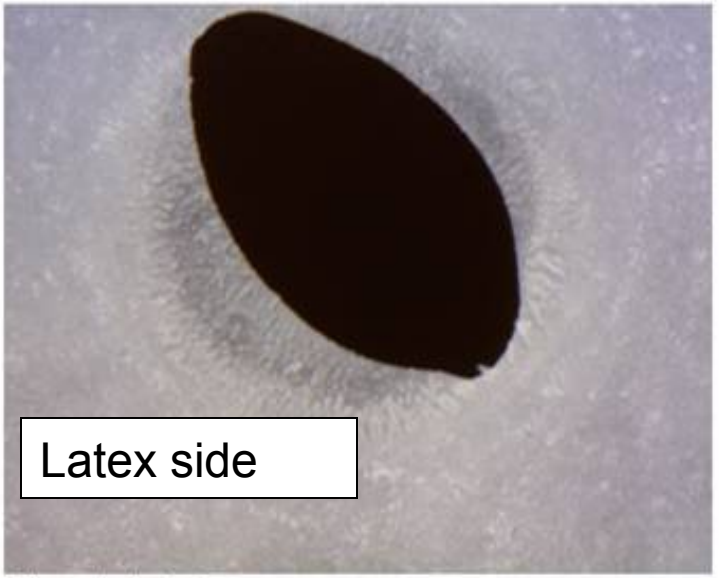
Discussion:

•F10 has only received one complaint for this defect which is in year 2009.

PHOTO OF SCANNING GLOVES ~ THIN AREA GLOVES



Glove 1: outside



Glove 1: inside

Discussion:

Based on scanning gloves by using microscope , production is able to detect either the problem caused by coagulant or latex tank. If the inside glove showed bigger thin area spot , then production need to check the condition and parameters of latex dipping tank.

DISCUSSION ON THIN AREA DEFECT BASED ON 4M'S ANALYSIS

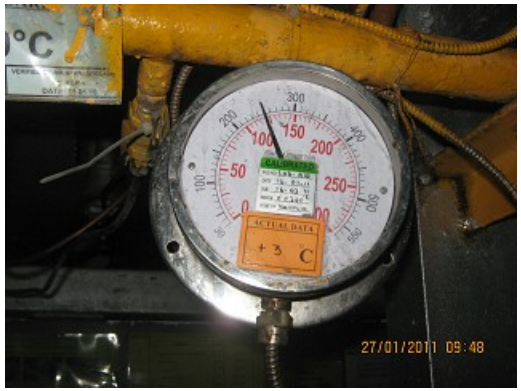
1st M – Man

- Operators did not clean the formers properly.

- Poor follow up from line boys on coagulant parameters especially the calcium carbonate and calcium nitrate .

2nd M – Method

- **Wrong setting (below std.) of latex oven temperature and wrong position of burners arrangement .**



- **Wrong setting (below std.) of pre leaching tank temperature.**

3rd M – Material

- Calcium Nitrate , latex TSC , acid and CFC were controlled at below and above standard.

- Calcium Carbonate % was controlled above standard .

- Using worn out brushes .

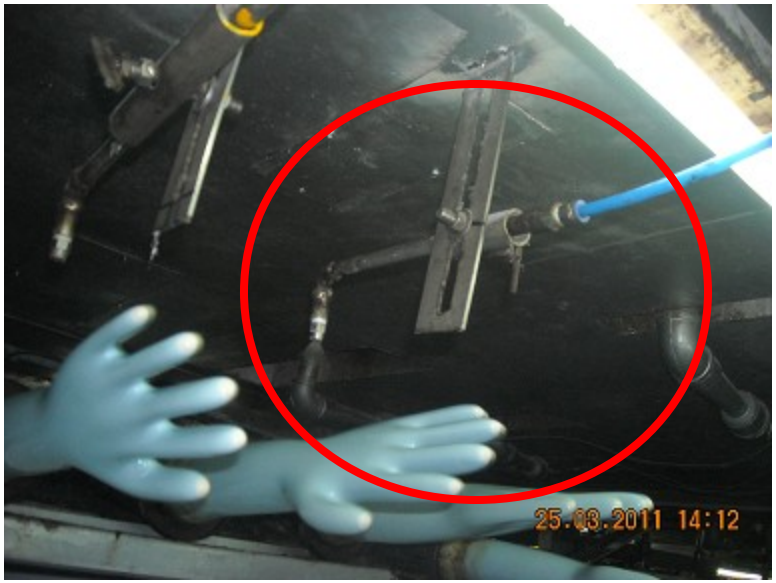
4th M – Machine

- Line speed too high .
- Poor setting of white brush at SWB tank.
- Ineffective SWB .

Corrective & Prevention Action (CAPAR)

- **Calcium Nitrate Spraying System.**

  Installed calcium nitrate spraying system (portable – able to move to improve thickness at either BF, palm or cuff from 0.08mm to 0.10mm) .



Corrective & Prevention Action (CAPAR)

2. Former

1. Each line need to screen former by daily basis. The defective formers such as crack former, former with pimples , worn out former need to be replaced.

2. The formers need to be washed every 25 days to 30 days in order to prevent from yellow stain which will effect the efficiency of coagulant and latex pick up.

Corrective & Prevention Action (CAPAR)

3. Acid and alkaline dipping tank

1. To use filter for individual piping in order to prevent dirt from entering the acid and CFC solution .

2. Using s/s float ball valve to auto control the level and concentration of acid and alkaline.

3. To ensure the effective former cleaning process , the acid and CFC % mu

Corrective & Prevention Action (CAPAR)

4. Small Washing Brush and Circular Brush

1. **Modified the small washing brush by lifted up the brushes until it is able to wash the between fingers area effectively.**
2. **Installed a "bumper" on former track in SWB so that the former can be cleaned effectively at both side .**

Corrective & Prevention Action (CAPAR)

5. Small Washing Brush and Circular Brush

3. To service the water spray shower cap by daily basis in order to remove the hardened sludge and to prevent from spray blockages.

4. Studied the best position of water spray so that it is able to spray on the former effectively.

Corrective & Prevention Action (CAPAR)

6. Water Rinsing Tank

1. Use heated JBA water as to avoid excessive burner usage in coagulant tank which might cause bubbles and lead to thin area.

2. The water flow rate must be control within the standard as to ensure the rinsing process able to carry out effectively.

Corrective & Prevention Action (CAPAR)

7. Coagulant Tank

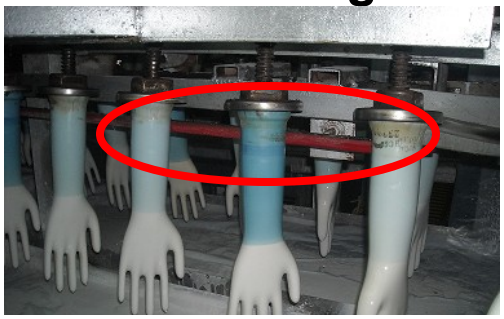
1. Magnetic rod to be placed as to collect all the foreign materials . To prevent from coagulant contamination issue._

2. To use multilayer filter as to filter the impurities before supplying to coagulant dipping tank .

Corrective & Prevention Action (CAPAR)

8. Coagulant Tank

3. Installed former guide with red belt after coagulant tank to drip off excessive coagulant and less dirt drop from former holders.



4. The calcium nitrate must be control within the std . To follow based on type of glove weight.

5. Strictly cannot use excessive calcium carbonate . This will lead to poor latex pick up.

Corrective & Prevention Action (CAPAR)

9. Latex Tank & Latex Oven

1. To ensure the correct setting of burners position. This is able to ensure sufficient gelling of latex to prevent “wash off” .

2. The latex TSC and SI need to be controlled well based on type of glove weight .

3. The latex tank temperature cannot be too low must be within standard .

CONCLUSION & RECOMMENDATION

Our next planning to further improve the thin area defect are by :

a) Upgrading the cuff spraying system .

b) Improve further the filtration system for coagulant dipping tanks .

c) Convert from conventional system to fully auto for the chemical preparation section.