R-ZERO METHOD

(REJECTION ZERO METHOD)

INTRODUCTION

- This method can find absolute reason to reduce the rejection
- This method is used for reducing the rejection level to the maximum extent
- And also to improve the inspection level of line quality process
- It can develop way of quality work and structure

DEFECTS
FOR IMPLEMENTING THIS METHOD

- Based on blind ild hour test
- Based on skipping hours of important sku like racer and jiffy etc
- Due to some complaints raised by production team on line quality
- COMPLAINTS IDENTIFIED: late information and wrong problem informed on machine
- Rejection due to visual problem eg. Rim burr in racer

QUALITY TOOL USED: SIX SIGMA,ISHIKAWAS BASIC TOOLS.

SIX SIGMA CONCEPT

DEFINE

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MEASURE

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ANALYZE

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IMPROVE

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CONTROL

DEFINE: From period of July 6 to july 10(week production level)production , problem defined for rejection in visual inspection

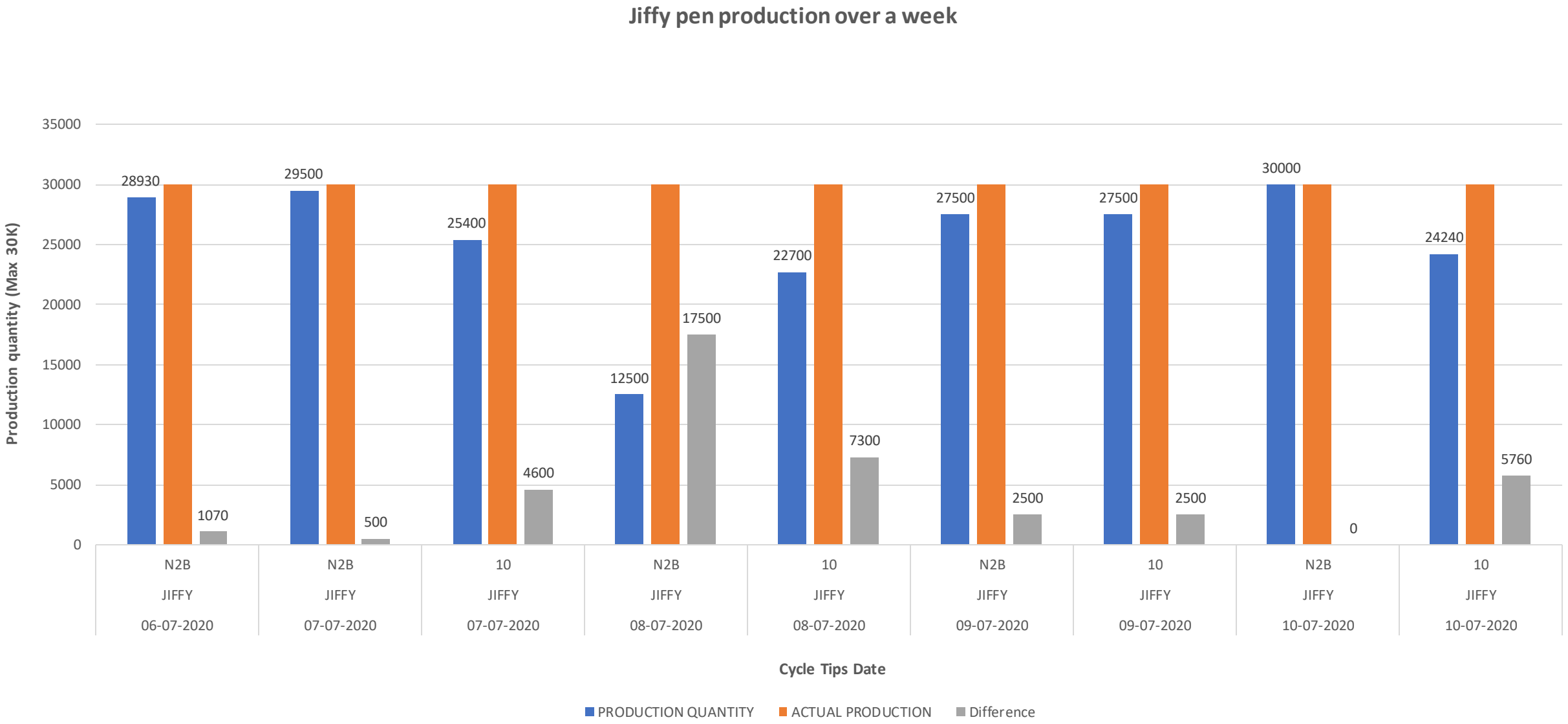
MEASURE:75% of problem on ild and 25% of visual problem

ANALYZE: Line quality people doesn't check any visual problem in line.it is checked finally at final inspection. So it tends to be rejections.(prevention is better than cure)

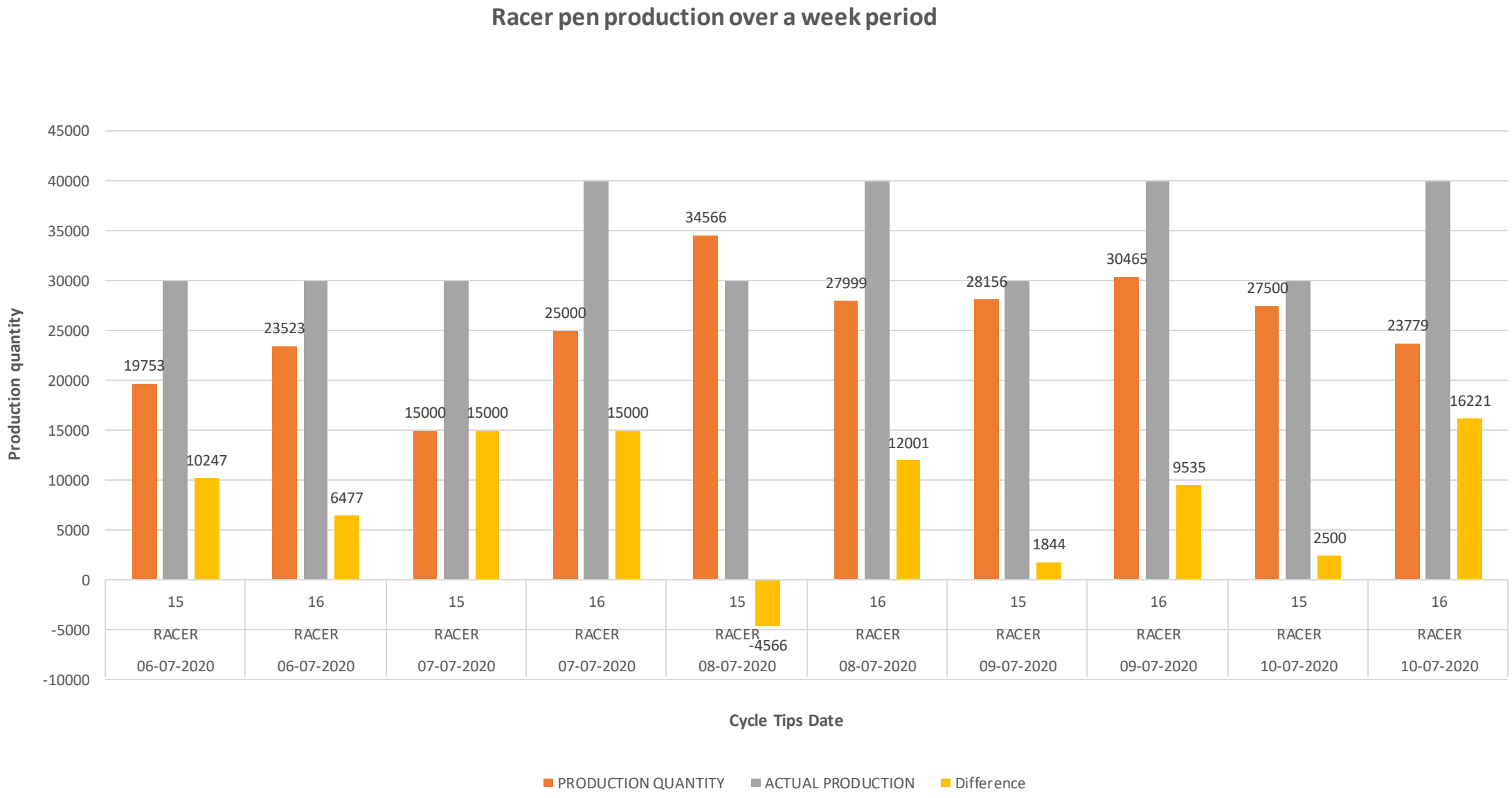
IMPROVE: To resolve this , we can intimate line people to check visuals of major problem leads to rejection

example: one side rim gap, ball protrousion undersize and oversize (not only in Inkjoy even in Rtwc, profile) over all length in racer etc..

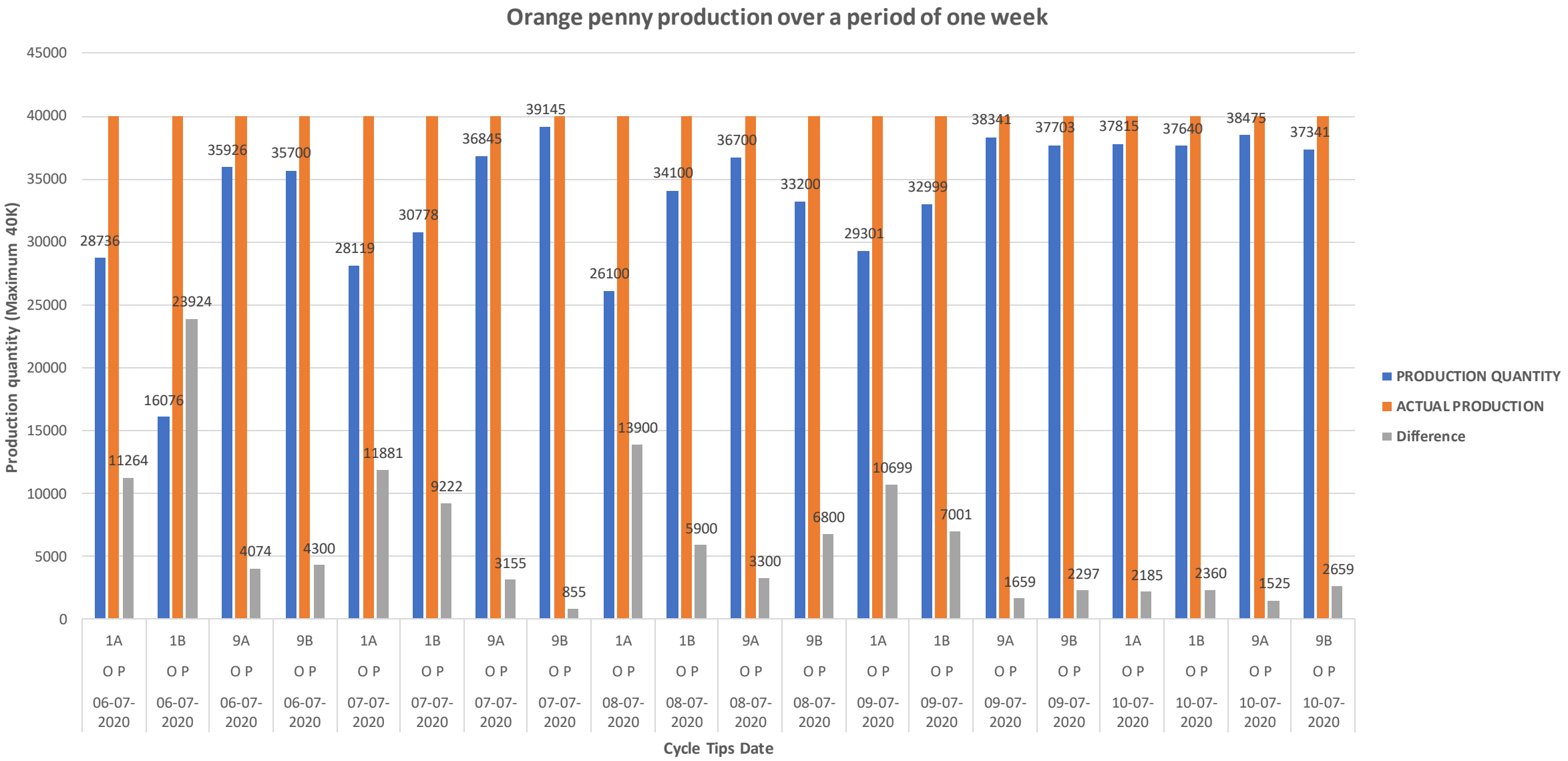
CONTROL: To control this problem , I have analysed the rejection on various tips which show in below graph and it can be checked by line people on schedule hour basis



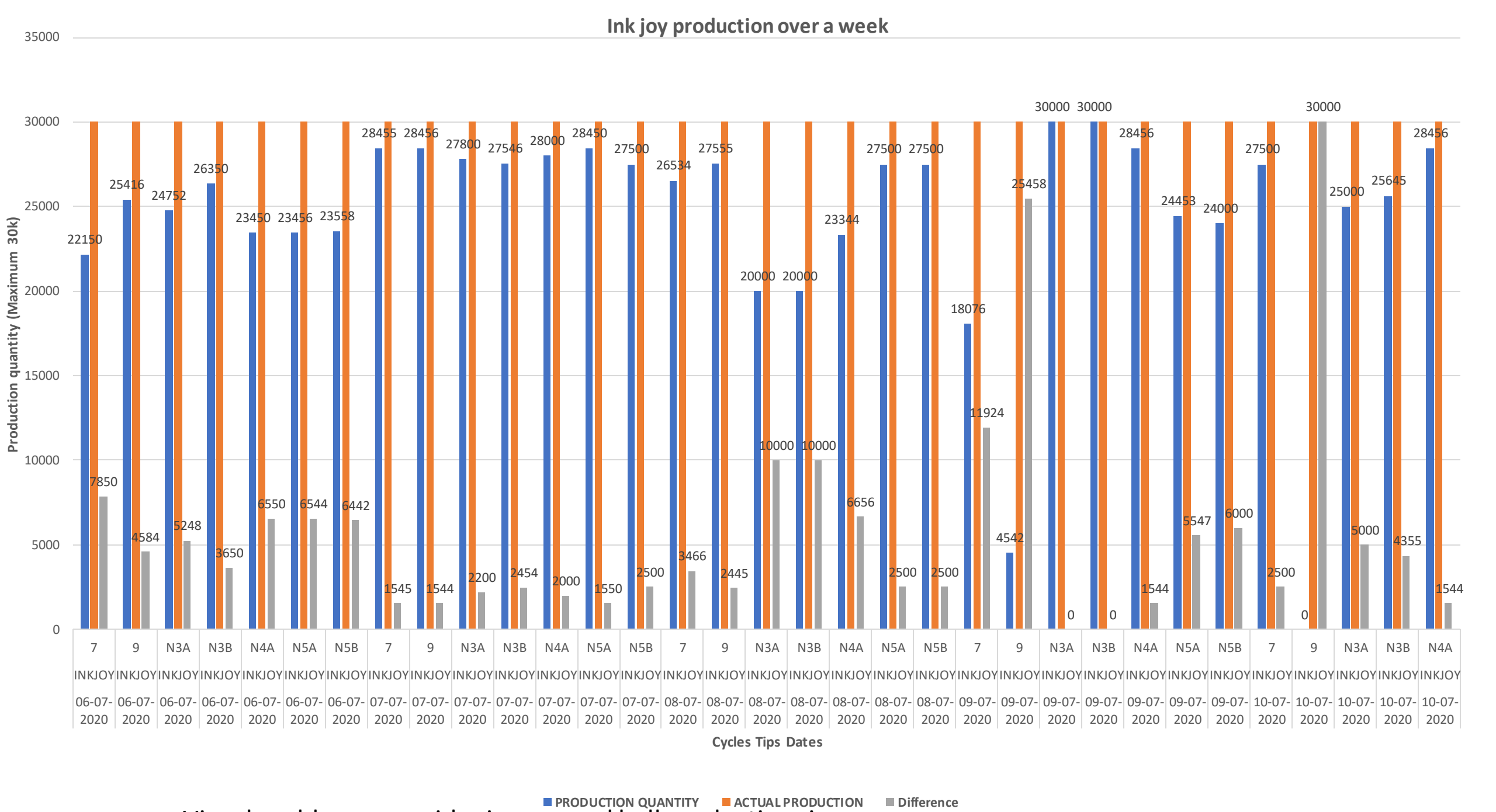
Visual problem : one side rim gap and spinning burr cause dark and white based on occurrence



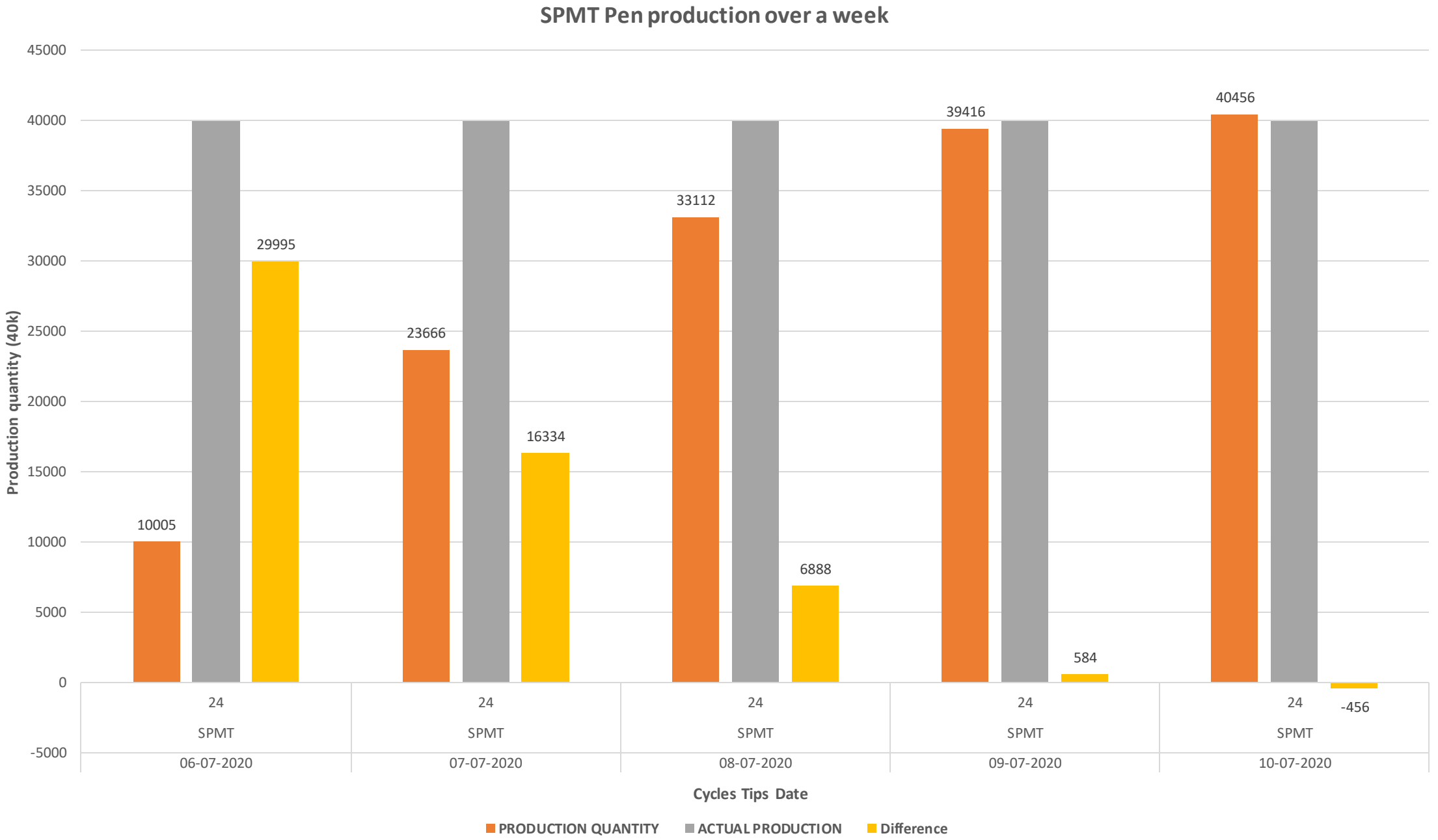
Visual problem : overall all length and rim variation



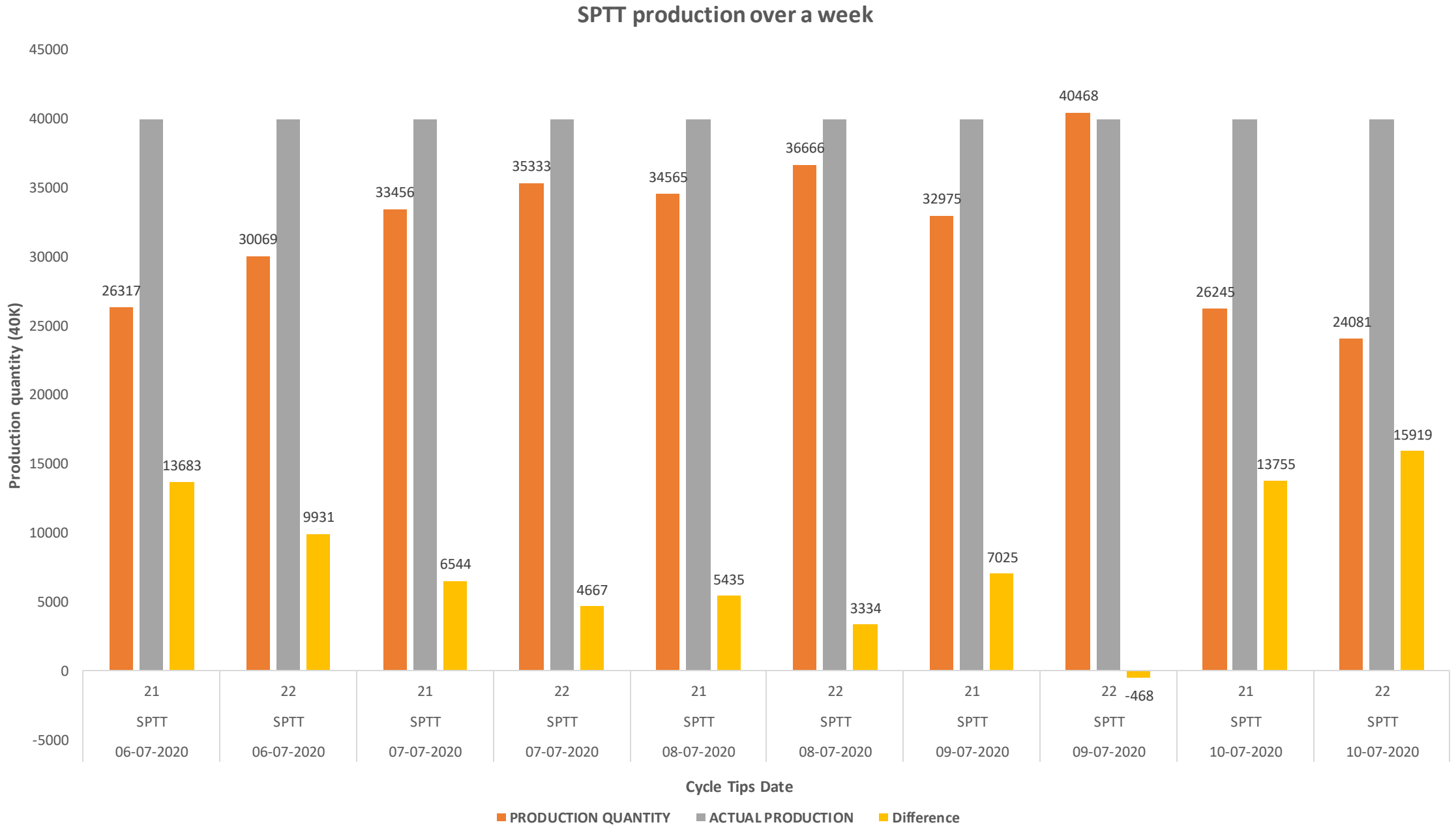
Visual problem : spin damage and broach damage



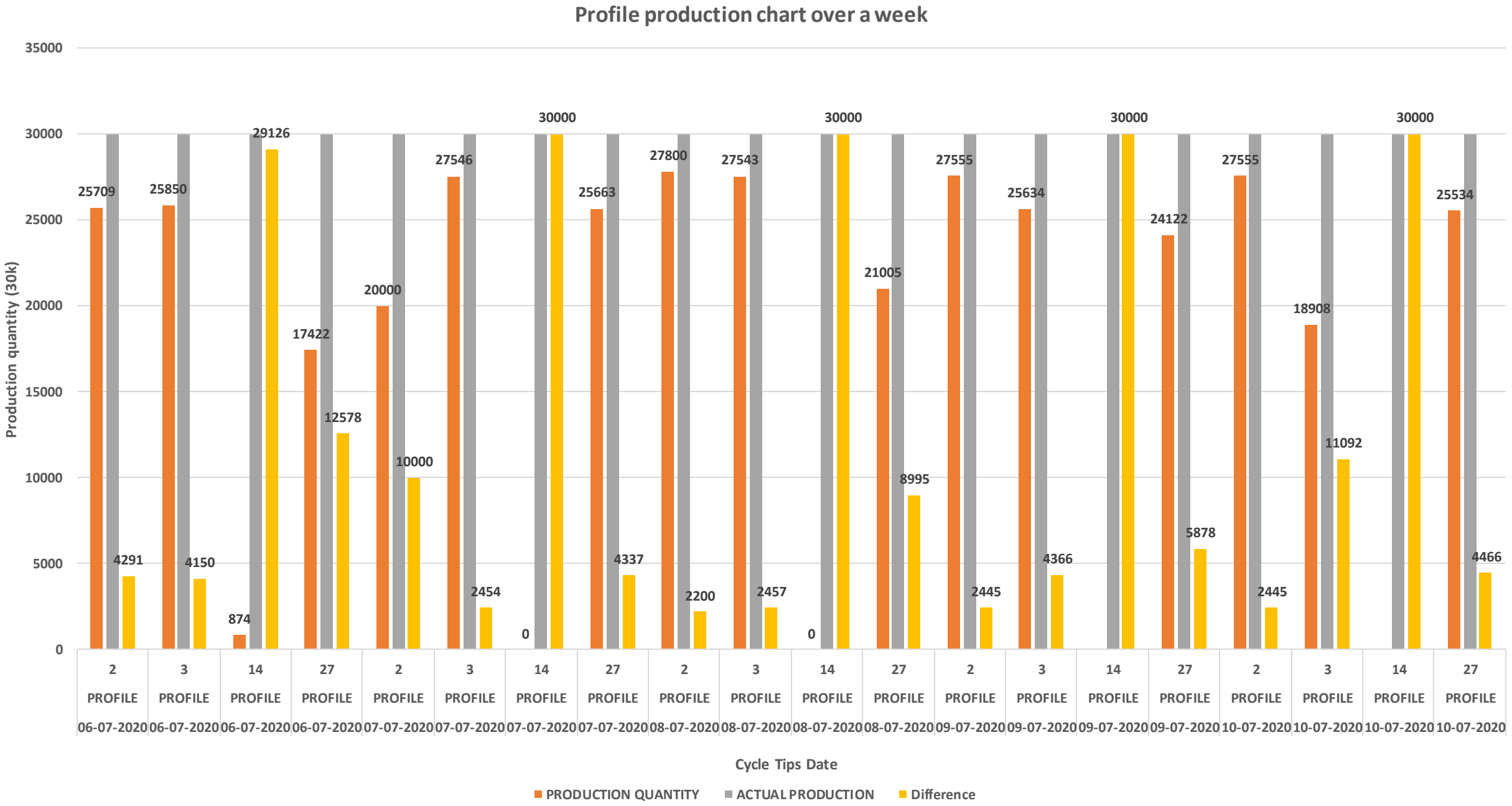
Visual problem : one side rim gap and ball production size



Visual problem: Rim variation and ball production undersize



Visual problem: Rim variation and ball production undersize



Visual problem : rim thickness , ball production over size and rim variation

SUGGESTED SCHEDULE FOR LINE TEST

JIFFY: 8 hours – 6 hours ild test – 2 hours visual check

3rd hour and 6th hour can used for visual check

ORANGE PENNY: 3 hours – 2 hours ild test—1 hours visual check

1 fixture of previous hour tray and current tray

PROFILE:4 hours– 3 hours ild test—1 hours visual check

30 nos in stick of previous tray and current tray

RACER:4 hours – 3 hours ild test—1 hours visual check

30 nos in stick of previous tray and current tray

SPTT : 8 hours – 6 hours ild test – 2 hours visual check

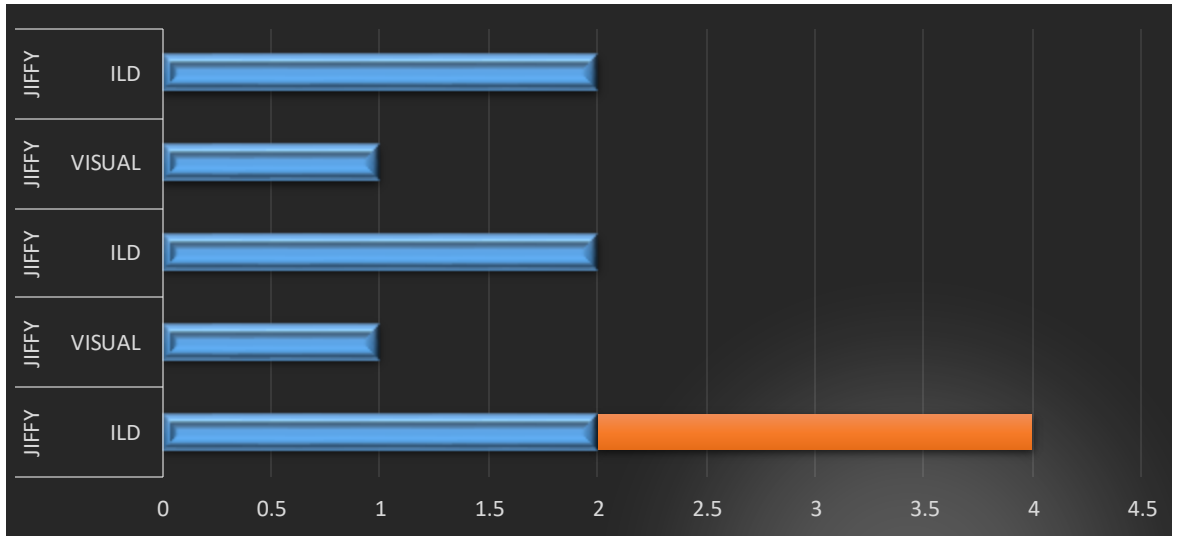
30 nos in stick of previous tray and current tray

SPMT : 8 hours – 6 hours ild test – 2 hours visual check

30 nos in stick of previous tray and current tray

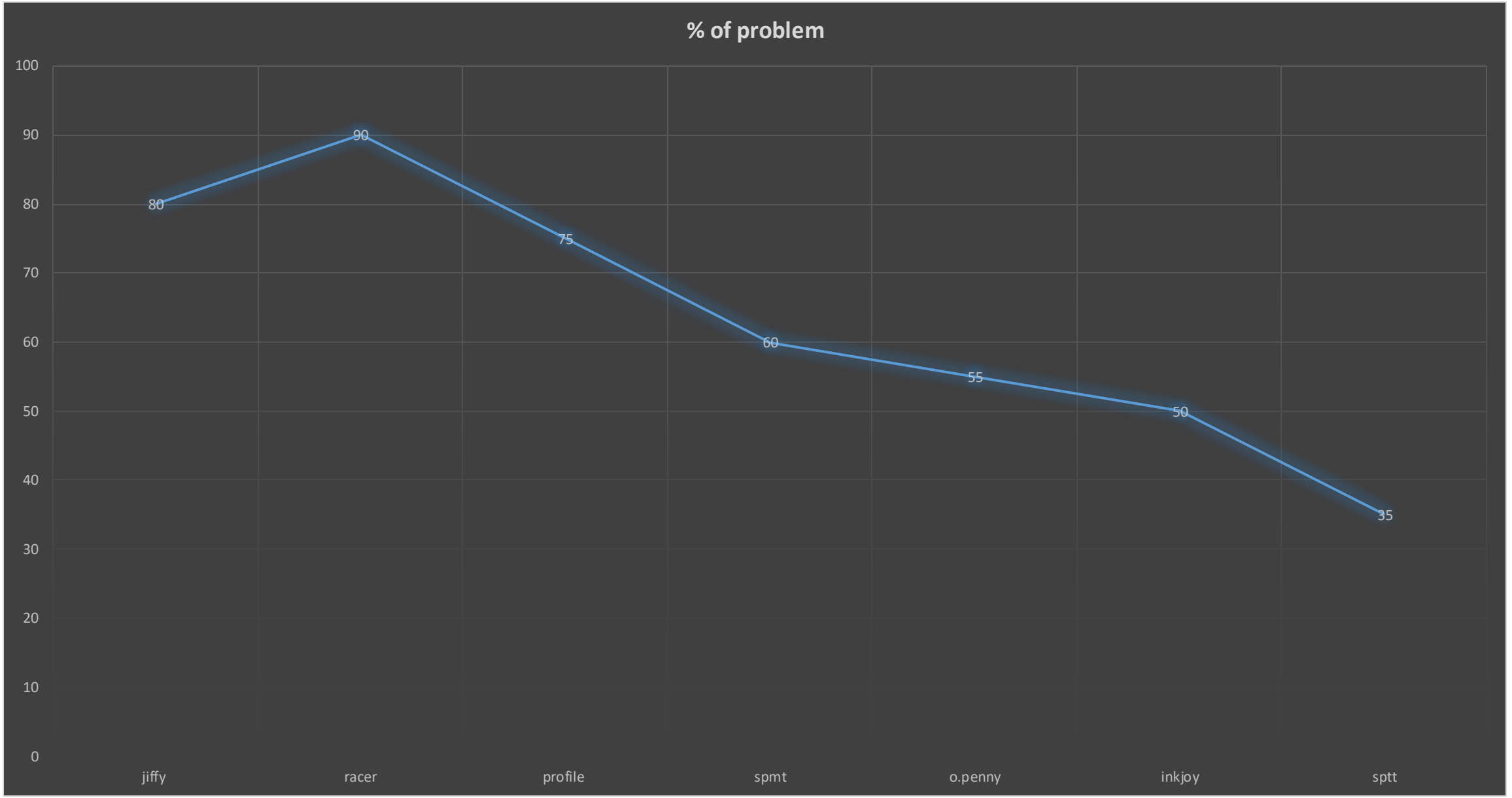
INKJOY:4 hours– 3 hours ild test—1 hours visual check

30 nos in stick of previous tray and current tray



BENEFITS

According to this RZERO method , we can develop the production quantity and reduce the level of rejection. And also it develop the working structure of line people.


% of problem
100
90
80
70
60
50
40
30
20
10
0
80
90
75
60
55
50
35
jiffy
racer
profile
spmt
o.penny
inkjoy
sptt

NOTE:RACER has high percentage of issue than jiffy but jiffy production is greater than racer and also more cycles are used than racer

Jiffy

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Racer

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Profile

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Spmt

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Orange penny

|

Inkjoy

|

sptt

SOURCE

This method which I develop by completing my implant training on LEAN MANUFACTURING process from Roots India pvt lmt (horn company).But our company production team are more forward than this as they follow lean production system.

REFERRED AUTHOR: DR.PHILIPS CROSBY

ARTICLE COMPARED: ABSOLUTES OF QUALITY MANAGEMENT