

# Nickel Sleeves at Inland

# 4/9/13 Test

## Setup

- 3 sleeves tested
- 3 inks
- No Polish
- Engraved in 2 different SGS plants
- Used Blades common to Inland
- Speeds stepping up to 800 ft/min

## Observations

- Poor Wipe
- Strong Release



# 4/30/13 Test

## Setup

- 2 sleeves tested
- 2 inks
- 2 different Nickel types
- Experimented with hand polish
- Extended blade search
- Speeds stepping up to 800 ft/min

## Observations

- Poor Wipe
- Strong Release



# 7/25/13 Test

## Setup

- 2 sleeves tested
- 2 inks
- 2 different polish levels
- Multiple blades tested
- Speeds stepping up to 800 ft/min

## Observations

- Poor Wipe
- Strong Release



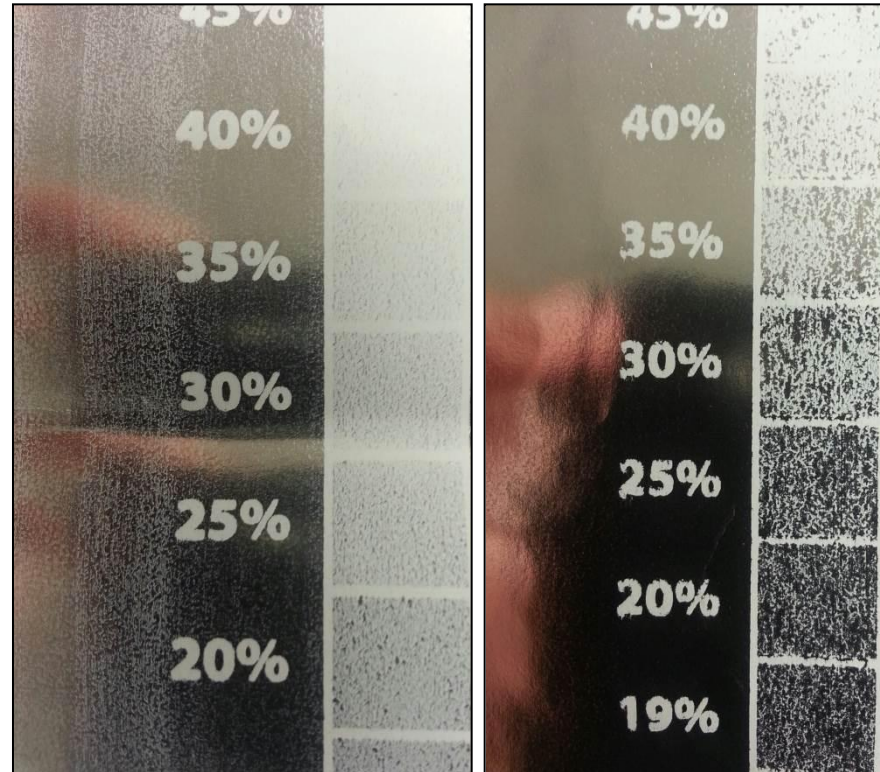
# 9/12/13 Clemson

## Setup

- 5 sleeves tested
- 3 different polish levels
- 3 different engraving specs
- 3 different inks
  - 2 suppliers
- 3 different blade suppliers
  - Multiple blades of each
- Speeds around 200 ft/min

## Observations

- Plastic/polymer blade provided best wipe of all testing.



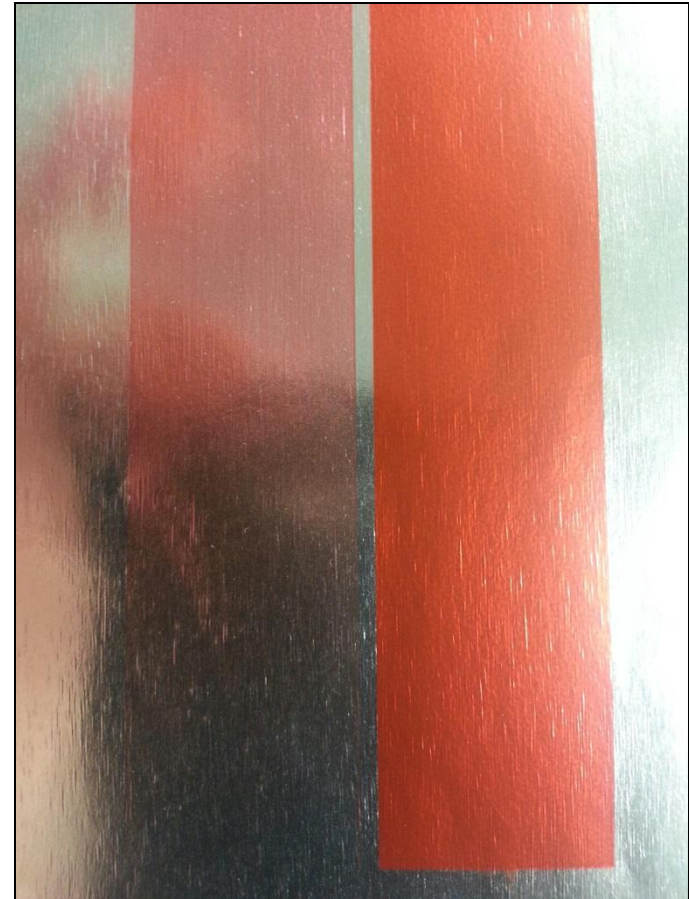
# 9/26/13 Test

## Setup

- 2 sleeve tested
  - 1 new
  - 1 from 7/25 test
- 3 blades tested
  - 1 plastic flexo blade
  - 1 plastic screen blade
  - 1 metal blade
- Speeds stepping up to 1000 ft/min

## Observations

- Both Plastics cleaned well
- Metal reproduced problem
- White ink still problematic



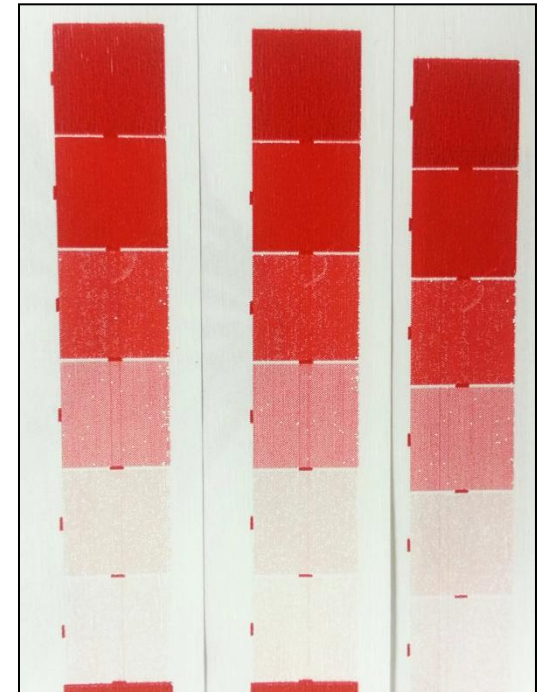
# Future Steps

## Next Steps

- 1<sup>st</sup> Production run to test life

## Beyond

- Understand variation in outcome between Inland and other testers
- Defined measurable specs for good nickel compound.
- Understand challenges of working with sleeves.
- Explore plating nickel to straight to base.



# Questions