

VLAIO TETRA

Machine Vision for Quality Control

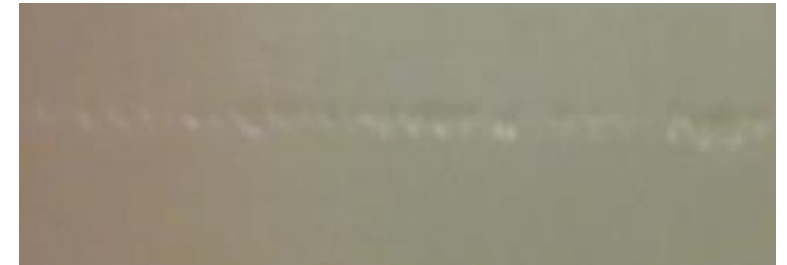
(MV4QC)

Case 1 - Detection of surface damage on flat sheets - MCAM

Case 1 - Detection of surface damage on flat sheets

Several defects occur when extruding polymer sheets

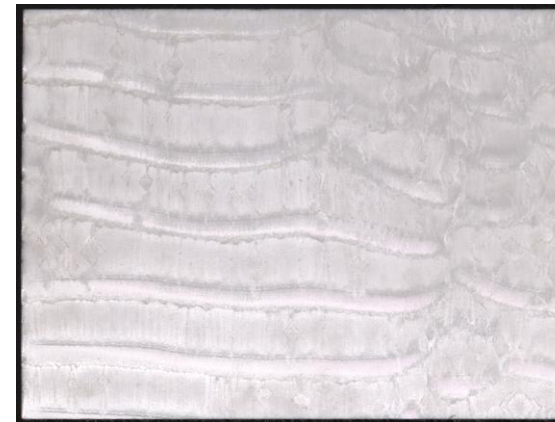
- Stick defects
- Damage on the sides
- Color deviations



Case 1 - Detection of surface damage on flat sheets

Tests were done by Covicon.
Some pictures of sample sheets
were taken and some machine
vision techniques were used.

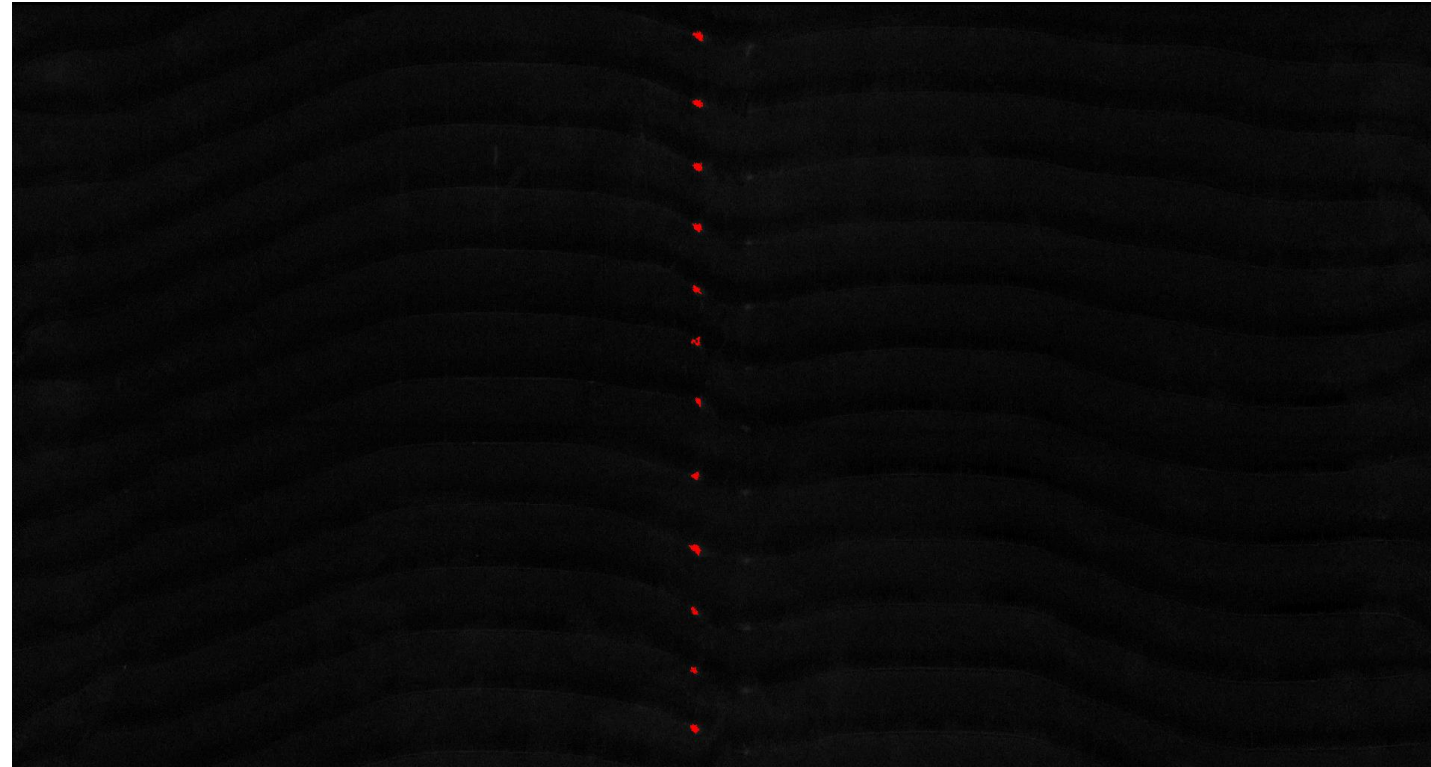
Images were taken with a 4k
line camera (RGB) and a lens of
25mm. Resolution is 0.2mm/px
and a metaphase line light was
used with white collimated
light.



Case 1 - Detection of surface damage on flat sheets

Detection of burned spots

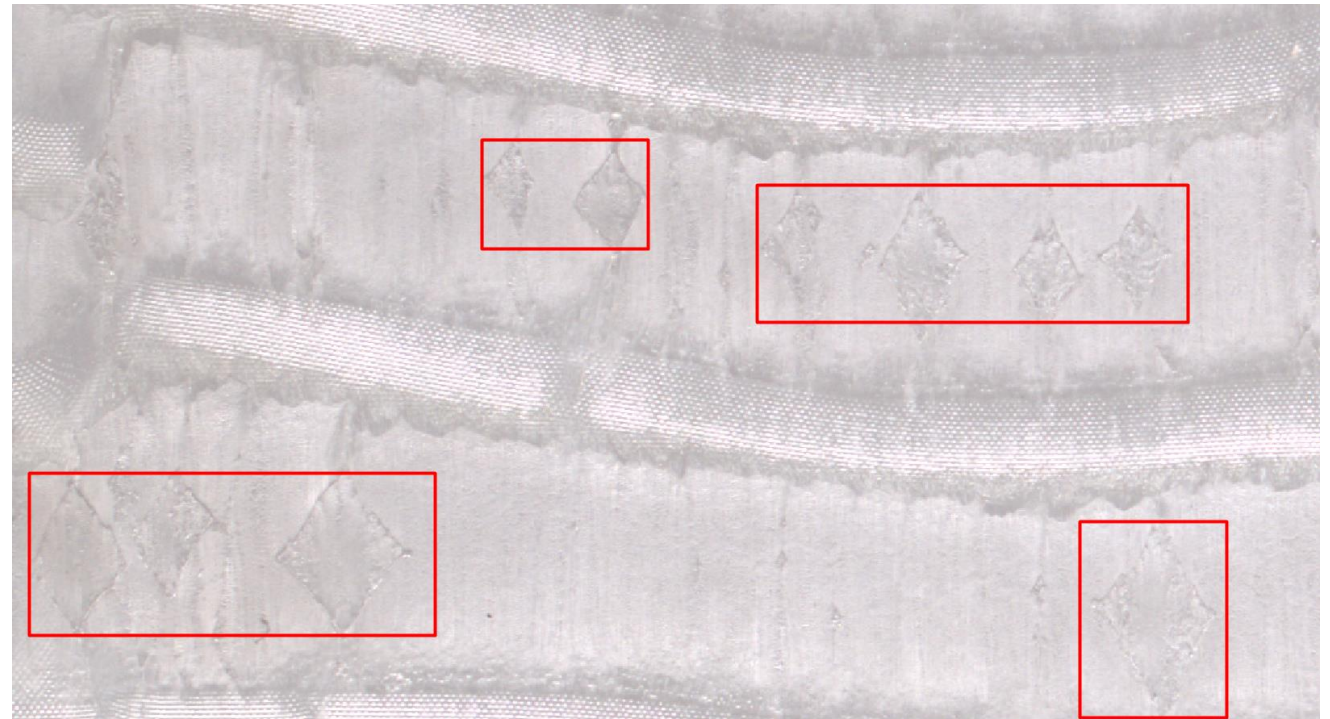
- Possible without AI
- Thresholding



Case 1 - Detection of surface damage on flat sheets

Stick defects:

- Challenging problem



Case 1 - Detection of surface damage on flat sheets

Defects on the side

- Detection using AI
- Resnet18 was used

