Increased process safety and efficiency through ADR

Automated Defect Recognition and automation in X-ray inspection
About VisiConsult

- Manufacturer of customized X-ray systems
- Design, manufacturing, software and applications
- 70 employees worldwide
- Located in Northern Germany: Stockelsdorf
- Family owned business (second generation)
- ISO9001 certified processes
- US subsidiary based in Atlanta
Parameterization

Automation

- Cost reduction
- Management
- Lack of personnel
- Industrie 4.0
- Objective classification
- Quality
- Archiving
- Process safety
ADR results
ADR results
ADR configuration – ROIs
Parameterization

- **Metrics:**
  - Defect size
  - Defect size per area
  - Minimum surface distance
  - Minimum defect distance
  - Etc.
Results

- Export:
  - Defect list
  - Decision
  - Defect position
  - Defect shape
  - Report
  - Etc.
ADR configuration – ROIs
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False positive reduction
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Image registration
Image registration
人工缺陷 – 验证
OCR – Text Recognition
- Porosities
- Inclusions
- Geometry
- Serialnumbers

- Approved by BMW
- Fastest ADR system worldwide
- 24/7 operation
- No human operator
- Geometry
- Density
- Thickness
- Missing material and pores

- For airbag igniters
- Automation of DR cabinets
- 24/7 operation
- No human operator
- Foreign Material
- Missing components
- Wrong component
- Destiny
- Geometry
- Foreign Material
- Missing components
- Wrong component
- Geometry

- Fully automatic
- Hundreds of checks
- Rotating device
- High voltage switches
Computes Tomography ADR

- Aluminum Casting

Reconstructed slice  Porosity Analysis
Thanks for your attention

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