OMIC

SUBTRACTIVE

OMP 408

VISION-BASED QUALITY CONTROL FOR DEBURRING & EDGE BREAKING

Edge-breaking or deburring is essential for producing high-quality parts that are safe to handle. Traditionally, this process is done manually, which takes a lot of time and resources.

At OMIC R&D, we've demonstrated a simple and efficient image-based process for quality control that can be integrated into an automated deburring system. Using images from a commercial digital camera and a CAD model of the part, we can quickly analyze edge features down to the millimeter for both accuracy and quality. This analysis takes only a few seconds, making it perfect for automated production lines.

This new method helps manufacturers achieve high part quality, save time on deburring, improve worker ergonomics, and enhance environmental sustainability.

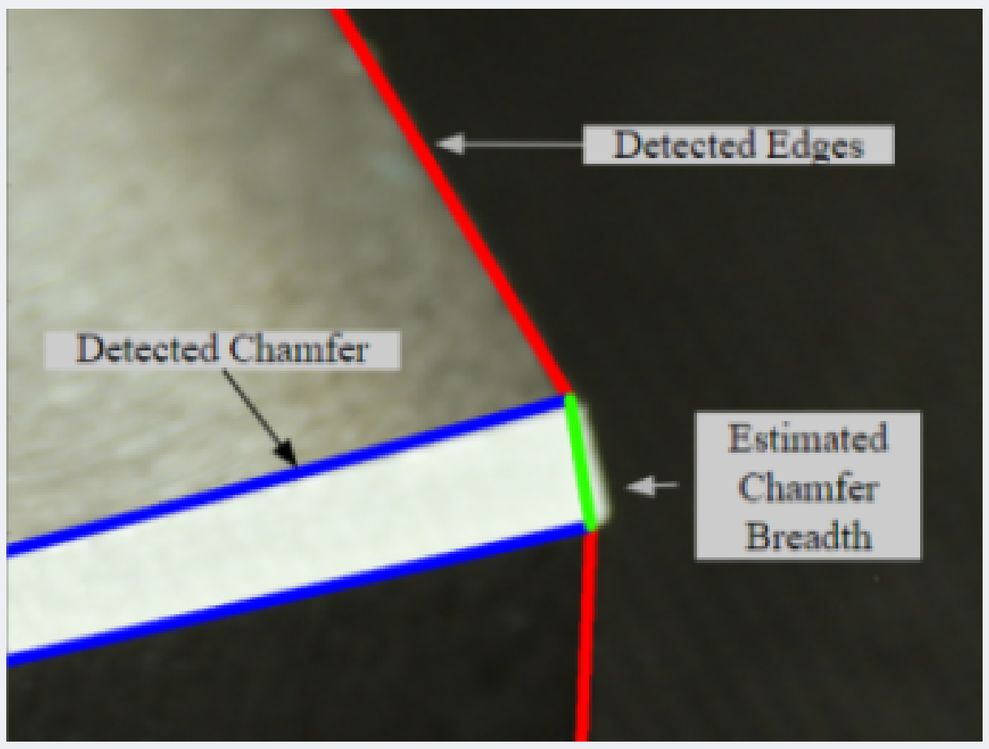

Fig 1 - Using the existing edge geometry to estimate chamfer size

Fig 2 - Close up of unclean burr, detected in red

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Industry participants include:
Boeing
Vigor