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Use of welding camera in education and industry

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Applicability and benefits of welding cameras for welding education, troubleshooting in industrial welding, and development of welding processes were studied. Based on ease of use and image quality, the solution chosen was plug & play CAVITAR Welding Camera which provides clear high-quality view of any welding process. This study was carried out in collaboration with Savo vocational college, an educational entrepreneur, and two industrial companies.

Welding takes place in a small scale which is observed with naked eye through welding mask and this view is highly limited. High-quality videos recorded with the welding camera, were first watched, and learned. During welding, a detailed view was displayed on a large screen for the entire class, and immediate feedback was provided to student. After welding, videos recorded were analyzed together in more detail. The welding camera revolutionized the quality and efficiency of welding education.

The industrial cases were automated TIG welding and seam tracking in semi-automated MAG welding. Camera enabled fixing of defects by control parameters optimization and manual remote seam tracking with good precision and ergonomics.

The welding camera was found to be highly effective, resulting in significant improvements in productivity and quality in all studied applications.