



Product Review

SimWelder™ Client:

Volvo Construction Equipment
Canadian Operations

Review Written By:

Al Menheere
Welding Process Specialist
Manufacturing Engineering

When we first tried the SimWelder™ we knew right away this was going to be the perfect tool to compliment our training program here at Volvo Construction Equipment. Some people were skeptical that a virtual reality program on a computer would help teach a person to weld without the heat and the sparks.

Our first class was comprised of 4 students with no welding experience at all. The goal was to have them place fillet welds with actual welding equipment and to have a basic knowledge of the GMAW welding process through an understanding of the equipment, safety, quality, process fundamentals and applications. This all had to be done in 5 days. After 4 days on the simulator it was time to put them to the test. All 4 students were quickly able to lay weld beads that met our quality requirements. The system is not just for people entering the welding profession; it provides valuable feedback for experienced welders also by capturing any bad habits they may have developed over the years.

The Simulator helps develop the hand-eye coordination required to produce quality welds. The program records all movements, stickout, work angles, travel speed and weld bead location in the seam; all the variables required to make a good weld. After the student produces a virtual weld the results are easily reviewed by the instructor for immediate feedback. The view the operator sees during welding can be displayed on the computer monitor for the other students to watch and listen to while the instructor offers advice for improvement. Graph data can also be reviewed during or after the weld for critiquing and offers a good visual display of the parameter settings and limits.

The SimWelder™ has proven to be a cost effective training tool for Volvo. No welding wire, shielding gas or steel is consumed and minimal electricity is required. This all has a positive effect on the environment, a Volvo core value. Multiple students can be trained at one time safely. As one welds the others can easily watch without running the risk of burns and welding flashes. It's a new approach to weld training but a very effective one; I would recommend this to any company or institution that is considering taking their training program to the next level.