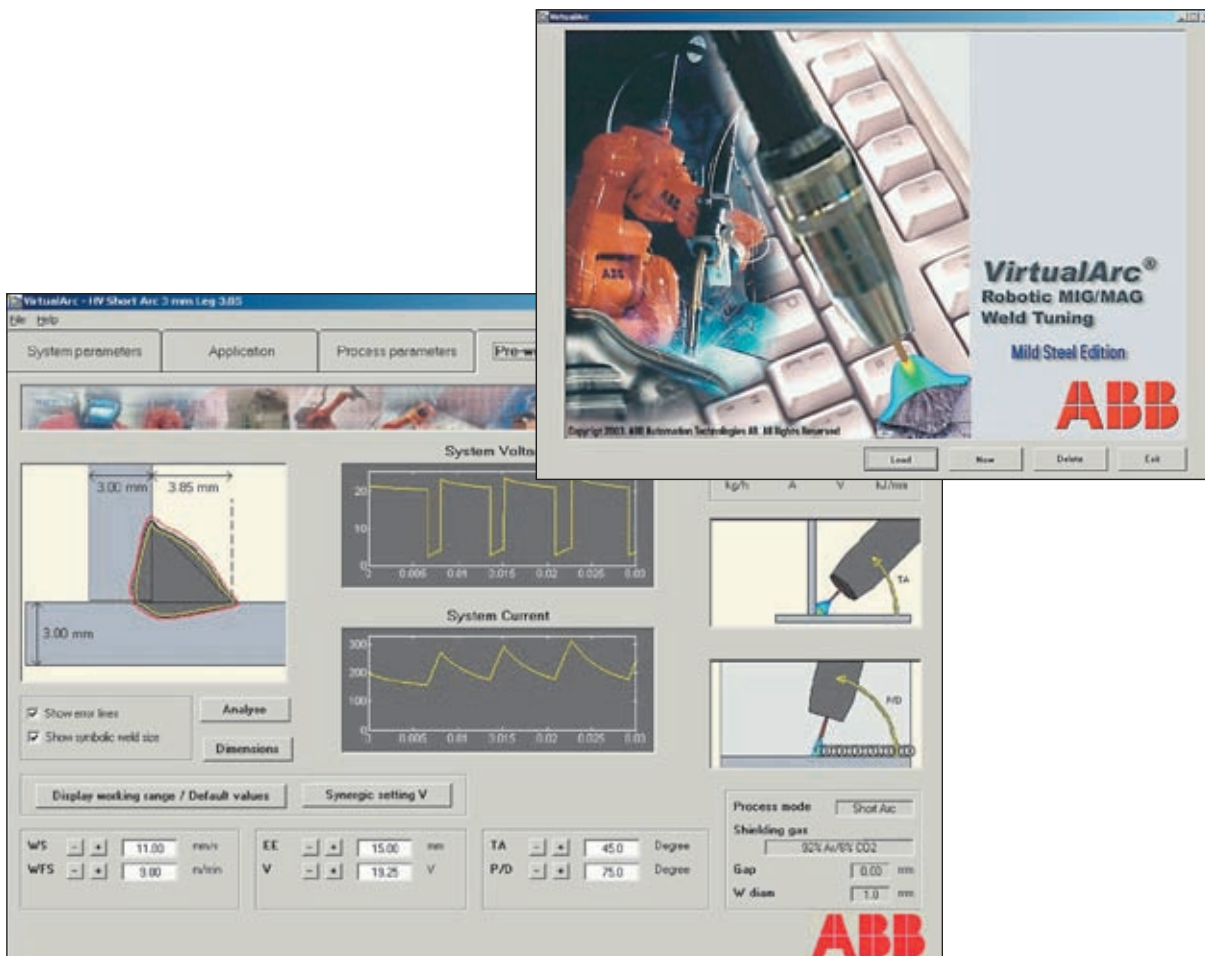


PC Tool for off-line Arc Prediction

VirtualArc® – Robotic MIG/MAG Weld Tuning



- Off-line tuning of welding parameters
- Off-line prediction of weld shape & penetration
- Off-line prediction of weld quality
- Off-line prediction of welding defects

Benefits/features

- Shorter process implementation time
- Optimised welding productivity
- Optimised welding quality
- Simple weld procedure documentation

Resulting in lower product costs!

PC Tool for off-line Arc Prediction

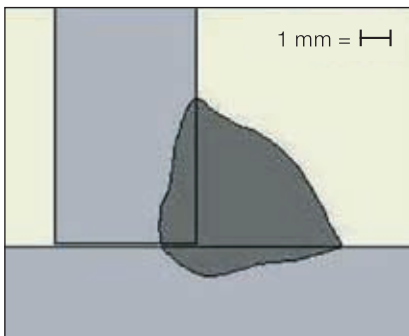
VirtualArc® – Robotic MIG/MAG Weld Tuning

Short general system description

The method behind the software VirtualArc® is based on the combination of arc physics, self-consistent two-dimensional wire-arc-work piece simulation tool, arc welding practical experience and experimental measurements.

The software consists of different modules that are strongly inter-connected in the whole process system, including the power source and connecting cables.

Weld profile and quality predictions are obtained using Bayesian Neural Network tool. Predictions from arc simulations, heat and mass transfer to the work-piece, are used as input to the neural network to predict weld quality and profile as well as weld defects.



Predicted Weld Profile



Real Weld Profile

