

Spot Weld Monitoring Application - Self assessment Audit Form

Dear Customer,

Thank you for considering our resistance weld monitoring product.

In order to ensure complete satisfaction and quality of service before supply, please take some time to consider and complete as far as possible the following questionnaire.

We know from experience that it is quite common for resistance welding applications to be effective but not fully understood or processed controlled, so the questionnaire is designed as an aide-memoire in checking and recording what is known and what isn't.

Resistance welding is a simple process affected by a large number of variables. For effective weld process monitoring, it is important to consider and understand as far as possible, those variables that affect the quality & consistency of the welding process so that they may be understood and controlled.

Monitoring the welding process allows a user to set and detect operational process tolerances, however the real value in adding a resistance weld monitor to your process is to ensure high quality and consistent production with minimal maintenance or intervention, thus the more that it is known and defined before monitoring is installed, the better the long-term result.

The weld monitoring will readily detect process problems, but it can't cure them!

This questionnaire is designed to help us, help you make the most of a weld monitoring device.

For each product type you are considering for weld monitoring, please answer as far as possible the following questions.

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Product joint identifying name: _____

Power Supply Details

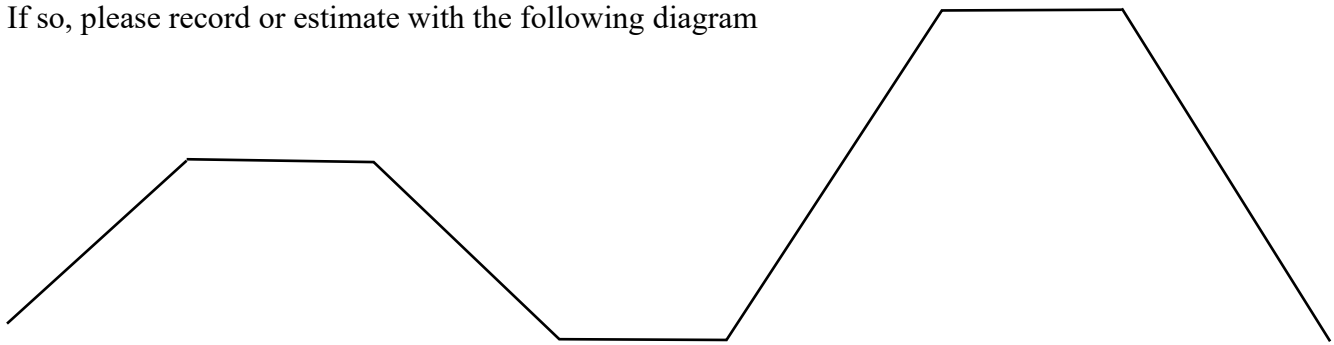
Power supply – Make and Model: _____

Nominal Power supply settings used for the joint: _____

Allowable variances of power supply settings used in manufacturing: _____

Do you have a record of the nominal amplitude and shape of the welding current pulse(s) (Y/N)?

If so, please record or estimate with the following diagram



P1 Rise Time P1 peak Time P1 Fall Time Dwell Time P2 Rise Time P2 Peak Time P2 Fall Time

_____ms _____ms _____ms _____ms _____ms _____ms _____ms

Shortest time between successive welds (ms): _____

If you are using a controlled power supply, please specify the operating mode for each pulse.

Weld Head Details

Weld Head – Make & Model :

Type of weld : Opposed Welding [] Parallel Gap [] Step Weld []

Nominal Weld head Force: _____

Allowable variances of weld head force settings used in manufacturing : _____

Are the upper and lower mechanical weld head stops set and checked (Y/N)? _____

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Upper Electrode Details :

NB : If Parallel gap or step weld, assume upper means Left, Lower means Right

Upper electrode Material: _____

Upper electrode nominal dimensions: _____

Electrode profile sketch: _____

Upper electrode extension from holder in mm: _____

Polarity of upper electrode: _____

Lower Electrode Details :

NB: If Parallel gap or step weld, assume upper means Left, Lower means Right

Lower Electrode Material: _____

Lower electrode nominal dimensions: _____

Lower electrode extension from holder in mm: _____

Polarity of lower electrode: _____

Electrode Setup

Do you use a mechanical jig to set the electrode extensions? _____

What criteria is used to trigger redressing/cleaning of the electrodes? _____

How often are the electrodes redressed/cleaned? _____

How often are the electrodes reshaped? _____

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Product and Joint Details

Product type, material and nominal dimensions in contact with upper electrode:

Product type, material and nominal dimensions in contact with lower electrode:

What criteria is used to determine a good weld versus a bad weld?

Do you have pull and peel test facilities and are these criteria known for this joint?

Process Details

Has your welding process been determined and optimised by documented trials? If so, please detail.

Do you think your welding process has been optimised by historic trial and error and experience?

Please list the key problems you encounter with your welding process:

e.g. electrode stick, sparking, excessive need to redress electrodes, unexplained poor or weak welds

Thank you for your time and feedback with this questionnaire, it will be invaluable in helping us to help you with your welding.