

SYSTEMS CONTROL

A DIVISION OF M. J. ELECTRIC, INC.

P.O. BOX 788

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Electrical, Pneumatic, Control Panel Fabrication, Control Engineering

July 9, 1980

United States Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76010

Attn: Mr. Uldis Potapovs, Chief
Vendor Inspection Branch

Gentlemen:

We acknowledge receipt of your June 11, 1980, letter. Our response follows:

- B.1 The internal audit forms have been revised to include all departments. This form was put into effect July 1, 1980.
- B.2 Certified material test reports were obtained for the ten (10) spools of weld wire in question and are available for your inspection.

The following measures have been implemented to assure that all certifications for welding materials are obtained prior to issuance to the shop:

- (1.) All purchase orders for welding material are issued with the stipulation that certified test reports must be supplied for the material shown on the order.
 - (2.) Welding material is automatically put on "hold" in the receiving department until released in writing by the QC department.
 - (3.) This written release is provided only after Systems Control has received the certified test reports.
- B.3 The following corrective actions were made relative to the specific drawings identified in the NRC inspection report:

-continued-

8007300178

- (1.) Drawing 53079-S6: Revision 1 was destroyed. Revision 2 has gone through the proper approval cycle as dictated by our QC Manual with all signatures being affixed and dated. This drawing is currently an "As Built" drawing and holds revision level 3 with proper approvals indicated in the revision block.
- (2.) Drawing 53079-S5: Revision 1 has been destroyed. Revision 2 was given its proper issue date and approvals with all signatures being affixed and dated as dictated by our QC Manual. This drawing is currently an "As Built" drawing and holds revision level 3 with proper approvals and dates indicated in the revision block.
- (3.) Drawing 85078-S2: Revision 1 has been removed from the shop. Revision 2 has been issued using the proper approval cycle with all signatures affixed and dated.
- (4.) Drawing 85078-S1: Revision 2 has been removed from the shop. Revision 3 has been issued using the proper approval cycle with all signatures affixed and dated.
- (5.) Drawing 6577-W3: Revision 4 has been removed from the shop. Revision 5 has been issued using the proper approval cycle with all signatures affixed and dated.

Please note, as stated in our May 16, 1980, letter, that we are revising our drawing handling procedure which will eliminate future problems like these addressed above.

- B.4 The specific welds which were observed being made outside of our procedure have been taken out and rewelded in accordance with our procedure.

Requalification of the particular WPS which was observed being violated is not required because these welds were taken out and repaired in accordance with the Systems Control approved/qualified procedure.

The final point for Item B.4 "intensified inspection" is covered in our discussion of the welder monitoring program in B.5 below.

- B.5 We have made an evaluation as to the impact, on previous weldments, of the "faulty readings" on the power sources. We tested the meter on each welding power source with a meter traceable to NBS (see attached report). Our investigation showed that these meters were well within the allowable tolerances stipulated by the meter manufacturer. Our investigation also showed that the readings indicated by the tong meters used during your inspection were quite inaccurate.

We can, therefore, conclude that, while the welding power source meters did not possess a calibration sticker, they were not faulty and are sufficiently accurate to preclude violation of AWS D1.1-75 section 3, paragraph 3.1.2. Our welders were in fact following the procedures and thus previous weldments were not impacted in a detrimental way.

The tong meters used during your test were borrowed from another division of M. J. Electric, Inc. in an attempt to verify the accuracy of the welding power source meters. These meters are not used by Systems Control QC personnel for the purpose of calibrating other meters. We, therefore, feel that calibration of the tong meters is unnecessary.

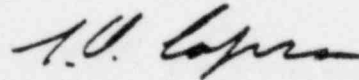
An intensified welder monitoring program has been initiated. We will continue to use procedure No. 128 "In-Process Inspection" and check list "CP-2A". The inspection rate will be changed from monthly to bi-monthly essentially providing a 100% increase in our welder monitoring program.

- B.6 The welding inspector has been reinstructed to inspect welds more thoroughly to preclude recurrence. Also, the QA/QC manager will spot check welds to assure compliance with codes and procedures.

The welders have been reinstructed about use of the procedures and interpretation of codes. All welders were given copies of AWS D1.1-75 section 3.6 (weld profiles) and section 8.15 (quality of welds). A meeting was held with all shop personnel to discuss a "no tolerance for error" philosophy. This meeting was conducted by Mr. David J. Brule (Vice-President of Operations) and Mr. James Pezzullo (QA/QC Manager) to convey the idea that each employee is responsible for the quality of the product we produce.

Very truly yours,

SYSTEMS CONTROL



L. A. Capra

LAC:sc
cc: D. J. Brule
W. J. Brule
QC file
Encl.

SYSTEMS CONTROL/DIVISION OF M. J. ELECTRIC, INC.

SHOP CALIBRATION ON WELDING MACHINES

JUNE 18, 1980

I. Introduction

After reviewing the NRC docket No. 99900712/80-01, specifically item B.5, we have conducted a controlled "welding machine meter" shop calibration. The readings presented below were taken under the identical conditions that prevailed during the QA program inspection conducted by your Mr. L. E. Ellershaw on March 25-26, 1980.

The calibration procedure was conducted by connecting a Simpson model No. 464D-2 (SN/58148) digital multimeter in parallel with the existing analog type meters supplied with the welders. (The Certificate of Conformance for the digital meter is attached for your reference.)

The writers experience in the field of electrical measurements, specifically with tong type DC ammeters, dictates that they should not have been used to verify the readings of the welder panel meters. The DC wave form present in welder currents introduce gross errors in tong type meters, as the results of the NRC inspection and the writers results unquestionably support. Please note that the tong type readings are so erratic, that the readings listed below vary somewhat from the readings taken during the original inspection.

II. Results

<u>Item</u>	<u>Welder Meter Reading</u>	<u>Calibrated* Meter Reading</u>	<u>Tong Meter S/N AM 43766</u>	<u>Tong Meter S/N AM 43774</u>
1. Ammeter Welder #SCD1829	132a	135a	160a	150a
2. Ammeter Welder #SCD1838	150a	154a	170a	170a
3. Ammeter Welder #SCD1838	150a	154a	170a	170a
4. Ammeter Welder #SCD1828	130a	133a	150a	150a
5. Ammeter Welder #SCD1845	147a	146.4a	190a	195a

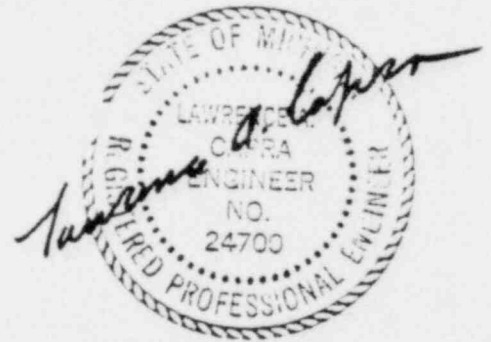
*Readings were converted from measurements of welder ammeter shunt voltages.

III. Conclusion

The above results verify that the welding machines, as all welding machines in our shop, have been operating well within the allowable tolerances of plus or minus 10% of the mean for a given welding procedure.

I Lawrence A. Capra hereby certify the above calibration data.

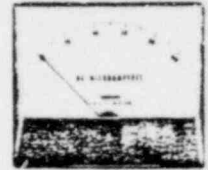
L. A. Capra P.E.





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"CERTIFICATE OF CONFORMANCE"

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SIMPSON ELECTRIC COMPANY CERTIFIES THAT THE INSTRUMENT(S) LISTED BELOW WAS (WERE) TESTED AND INSPECTED PRIOR TO SHIPMENT, AND THAT IT (THEY) MET ALL PUBLISHED SPECIFICATIONS FOR THIS INSTRUMENT.

SIMPSON ELECTRIC COMPANY CALIBRATION MEASUREMENTS ARE TRACEABLE TO THE NATIONAL BUREAU OF STANDARDS TO THE EXTENT ALLOWED BY THE BUREAU'S CALIBRATION FACILITIES.

SIMPSON ELECTRIC COMPANY'S QUALITY CONTROL PROGRAM SATISFIES THE REQUIREMENTS OF MIL-Q-9858, MIL-I-45208, MIL-C-45662 AND MIL-STD-105.

SIMPSON ELECTRIC COMPANY

<u>QUANTITY</u>	<u>MODEL NO.</u>	<u>P.O. NO.</u>	<u>DATE</u>
1	464D-2 SN/58148	3000-76	2-7-80

Applicable NBS Numbers

AC-807675

DC-216868

OHMS-214691

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