National Conference on Weights and Measures

15245 Shady Grove Road, Suite 130 • Rockville, MD 20850

Certificate Number: 03-046 Page 1 of 2

National Type Evaluation Program Certificate of Conformance for Weighing and Measuring Devices

For:

Indicating Element Digital Electronic Model: AD-4329 n_{max}: 10 000

Accuracy Class: III/IIIL

Submitted by:

A & D Engineering 1555 McCandless Drive Milpitas, CA 95035 Tel: (408) 263-5333 Fax: (408) 263-0119 Contact: Jesus Zapien

Standard Features and Options

Automatic zero setting mechanism (AZSM) Initial zero setting mechanism (IZSM) Semi-automatic (push-button) zero Semi-automatic (push-button) tare Center of zero annunciator Vacuum fluorescent display RS-232 bi-directional serial communication Gross/net indication Pound or kilogram indication Motion detection Multi-interval capability Serial printer interface

Temperature Range: -10°C to 40°C (14°F to 104°F)

This device was evaluated under the National Type Evaluation Program (NTEP) and was found to comply with the applicable technical requirements of Handbook 44, "Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices." Evaluation results and device characteristics necessary for inspection and use in commerce are on the following pages.

Ross J. Andersen Chairman, NCWM, Inc.

Louis & Strawb

Louis E. Straub Chairman, National Type Evaluation Program Committee Issue date: June 17, 2003

Note: The National Conference on Weights and Measures does not "approve", "recommend", or "endorse" any proprietary product or material, either as a single item or as a class or group. Results shall not be used in advertising or sales promotion to indicate explicit or implicit endorsement of the product or material by the NCWM.

A & D Engineering Indicating Element Model: AD-4329

<u>Application</u>: For use as a general purpose indicating element when interfaced with an approved and compatible weighing element.

Identification: A tamper evident adhesive identification label is located on the right side of the indicator.

<u>Sealing:</u> A wire security seal prevents access to the calibration switch (labeled "CAL") located behind the indicator's front cover plate. This may be accomplished by threading a wire security seal through the head of a cover plate screw and a flange on the cover plate.

<u>Test Conditions</u>: The emphasis of the evaluation was on device design, performance, marking requirements, and compliance with influence factor requirements. The Model AD-4329 indicator was submitted for evaluation and interfaced with a load cell simulator. Several increasing/decreasing load tests were performed over a temperature range of -10° C to 40° C (14° F to 104° F) and with line voltages of 100 VAC and 130 VAC. The indicator was also interfaced with a weighing element and printer for zero, zone of uncertainty, discrimination, motion detection, and printing tests.

The results of these evaluations and a review of technical information supplied by the manufacturer indicate the device conforms to the applicable requirements of NIST Handbook 44.

Type Evaluation Criteria Used: NIST Handbook 44, 2003 Edition

Tested By: K. Jones (CA)

Information Reviewed By: S. Patoray (NCWM), L. Bernetich (NCWM)