National Conference on Weights and Measures

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

National Type Evaluation Program

Certificate of Conformance for Weighing and Measuring Devices

For:
Force Transducer (Load Cell)
Single-Ended Shear Beam
Model: PA6140
n_{max}, Multiple: 5000
Capacity: (See Page 2)

Accuracy Class: III

Submitted by:
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Standard Features and Options

The specific load cell capacities, v_{min} values, and minimum dead loads are listed on Page 2.

Number of Wires:	4-wire
Excitation Voltage (nominal):	10 V
Maximum Excitation Voltage	15 V
Output Rating:	3.0 mV/V
Nominal Bridge Impedance:	385 ohms
Material:	Alloy Steel

Temperature Range: -10 to 40 °C (14 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.

Don Onwiler
Chairman, NCWM, Inc.

James C. Truex
Chairman, National Type Evaluation Program Committee

Issue date: December 29, 2005

Yuyao Pacific Weighing Engineering Co. LTD.
Force Transducer (load cell)
Model: PA6140

Load Cell Parameters:

Capacity	**v_{min}, Multiple Cell**	n_{max} Multiple	Min. Dead Load
1000 lb	0.075 lb	5000	10 lb
1500 lb	0.120 lb	5000	15 lb
2000 lb	0.150 lb	5000	20 lb
2500 lb	0.190 lb	5000	25 lb
3000 lb	0.230 lb	5000	30 lb
4000 lb*	0.300 lb	5000	40 lb
5000 lb	0.380 lb	5000	50 lb
7500 lb	0.570 lb	5000	75 lb
10 000 lb	0.750 lb	5000	100 lb
500 kg	0.038 kg	5000	5 kg
700 kg	0.053 kg	5000	8 kg
1000 kg	0.075 kg	5000	10 kg
1500 kg	0.120 kg	5000	15 kg
2000 kg	0.150 kg	5000	20 kg
2500 kg	0.190 kg	5000	25 kg
3000 kg	0.230 kg	5000	30 kg
4000 kg	0.300 kg	5000	40 kg
4500 kg	0.340 kg	5000	50 kg
* Two cells submitted for evaluation			

Application: The load cells may be used in Class III scales for multiple cell applications with up to 5000 divisions consistent with the model designations, number of scale divisions, and parameters specified in this certificate. Load cells of a given accuracy class may be used in applications with lower accuracy class requirements provided the number of scale divisions, the v_{min} values, and temperature range are suitable for the application. The manufacturer may market the load cell with fewer divisions (n_{max}) and with larger v_{min} values than those listed on the certificate. However, the load cells must be marked with the appropriate n_{max} and v_{min} for which the load cell may be used.

Identification: A pressure sensitive identification badge containing the manufacturer, model designation, and serial number and other required marking information is located on the load cell or on accompanying document.

Test Conditions: Two 4000 lb capacity load cells with 3.0 mV/V output were tested at NIST Force Group. The data were analyzed for multiple load cell applications. The cells were tested over a temperature range of -10 °C to 40 °C. Three tests were run on each cell at each temperature. The temperature effect on zero was measured and a time dependence (creep) test was performed. The barometric pressure test was waived due to the insensitivity of the load cell design to changes in barometric pressure.

Type Evaluation Criteria Used: NIST Handbook 44, 2005 Edition, NCWM Publication 14, 2005 Edition

Evaluated By: NIST Force Group, NIST Office of Weights and Measures

Conclusion: The results of the evaluations and information provided by the manufacturer indicate the devices comply with applicable requirements.

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