NATIONAL TYPE EVALUATION PROGRAM

Certificate of Conformance

for Weighing and Measuring Devices

For:
Belt Conveyor Scale
Load Cell Electronic
Model: NAR-X-Y-Z
Integrator Model: S5200
Capacity: 102 ton/hr to 10 200 ton/hr

Submitted By:
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Standard Features and Options

Model number NAR-X-Y-Z: X = Number of Idlers Y = Belt Width Z = Idler Spacing
Model S5200 integrator, includes master weight totalizer, rate of flow indicator, alarms and fault indication, and status of zero tracking.

Standard Features:

- Rocking Flexure Approach-retreat Design with Isolation Lever and Mass Counterbalance
- Calibration Test Weight and Storage Assembly
- Automatic Calibration, Automatic Zero Setting Mechanism, Low-flow Lockout
- Isolated Outputs for Rate, Totals, Low Flow Indicators, and Alarms

Options:

- Intrinsic Safety Barriers, serial and device level communications (read only), printer and recorders

Load Cell Used:

- Totalcomp Model TS-XX, Type "S" (Certificate of Approval Number 3994-93)

Number of Idlers	4, 6 or 8
Belt Width	18 in to 96 in
Idler Spacing	36 in to 60 in
Belt Speed	100 ft/min to 1 000 ft/min
Belt Loading	34 lb/ft to 340 lb/ft
Scale Capacity	102 ton/hr to 10 200 ton/hr
Weighbridge Length	12 ft to 40 ft

Temperature Range: -10 ºC to 40 ºC (14 ºF to 104 ºF)

This device was evaluated under the National Type Evaluation Program and was found to comply with the applicable technical requirements of "NIST 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.

Randy Jennings
Chairman, NCWM, Inc.

Judy Cardin
Chairman, National Type Evaluation Program Committee
Issued: June 17, 2010

Thayer Scale, Hyer Industries

Belt Conveyor / NAR-X-Y-Z

Application: In motion weighing of bulk material.

Identification: An identification plate containing required and additional information is permanently attached to the weighing element and is on the side of the weigh frame. An identification plate is also permanently attached to the front of the cabinet containing the 5200 integrator.

Sealing: All sealable parameters are located in the integrator which is housed in a metal cabinet. A "Security Release" switch allows access to the calibration and configuration adjustments and is located below the integrator. A wire security seal secures a clear plastic cover over the switch, preventing access to the integrator calibration parameters. Additionally, the cabinet may be sealed with a tamper evident paper seal over the cabinet door latching screw.

Test Conditions: This Certificate supersedes Certificate of Conformance Number 05-091 and is issued to increase the number of idlers and the weighbridge length. Information submitted by the manufacturer was reviewed by the NTEP Laboratory and the NTEP Administrator and no additional testing was deemed necessary. Previous test conditions are listed below for reference.

Certificate of Conformance Number 05-091:

Laboratory Test: The emphasis of the evaluation was on the system's design and operation. The system submitted for the evaluation consisted of a Thayer Series 5200 integrator and a Thayer Model NAR-4-48-36 approach-retreat weighbridge. The load cell used was a Totalcomp, Inc. Model TS-150 (Certificate of Approval Number 3994-93). The weighbridge was 144 in long and the belt was 48 in wide. Belt loading was conducted at SSC max of 90.476 lb/ft and SSC min of 60.00 lb/ft. Simulated belt speed was 400 ft/min. Tests were conducted over a temperature range of -10 °C to 40 °C (14 °F to 104 °F). Power voltage tests of 100 VAC to 130 VAC were conducted at 20 °C.

Field Tests: The emphasis of the field evaluation was on the system's design, performance, and operation. A Thayer Series 5200 integrator and a Thayer Model NAR-6-72-48 approach-retreat weighbridge was submitted for the evaluation. The scale was installed at Duke Power located in Salisbury, North Carolina, on a 240 ft long conveyor running at 701 fpm at a 15° incline with 35° trough idlers. Tests were performed using coal as the testing material. A certified and calibrated railroad track scale was used as the reference standard. The belt-conveyor scale had a weighbridge length of 24 ft and the capacity was stated as 4800 tph maximum and 1680 tph minimum. Maximum belt loading was stated as 228.180 lb/ft. Three sets of performance tests were conducted in November of 2004 at 4600 tph, resulting in errors of 0.15%, 0.08%, and 0.09%. The system was then used for 6 months and the system was re-tested in May 2005. Three sets of performance tests were repeated at 4600 tph resulting in errors of -0.08%, 0.04%, and 0.09%. Results of the evaluation indicate the devices comply with applicable requirement.

Evaluated By: K. Jones (CA) 05-091, 05-091A1

Type Evaluation Criteria Used: NIST, Handbook 44: Specifications, Tolerances and Other Technical Requirements for Weighing and Measuring Devices, 2010. NCWM, Publication 14: Weighing Devices, 2010.

Conclusion: The results of the evaluation and information provided by the manufacturer indicate the device complies with applicable requirements.

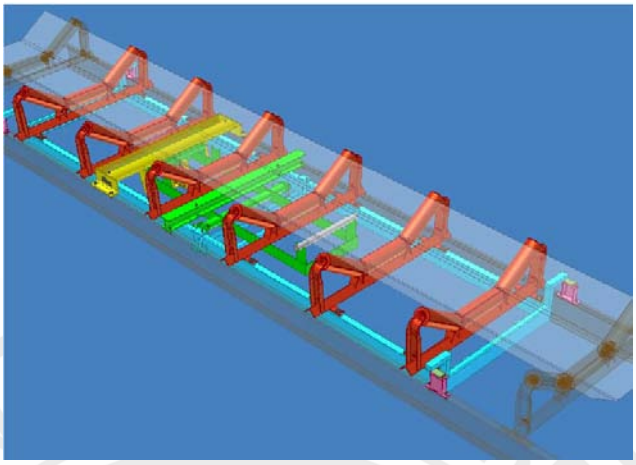
Information Reviewed By: S. Patoray, L. Bernetich (NCWM) 05-091; J. Truex (NCWM) 05-091A1

Thayer Scale, Hyer Industries

Belt Conveyor / NAR-X-Y-Z

Examples of Device:

Integrator



Weighbridge