

Testing concrete beams for flexural strength

APPLICATION C206

Type of Company: [Public Transportation Agency](#)

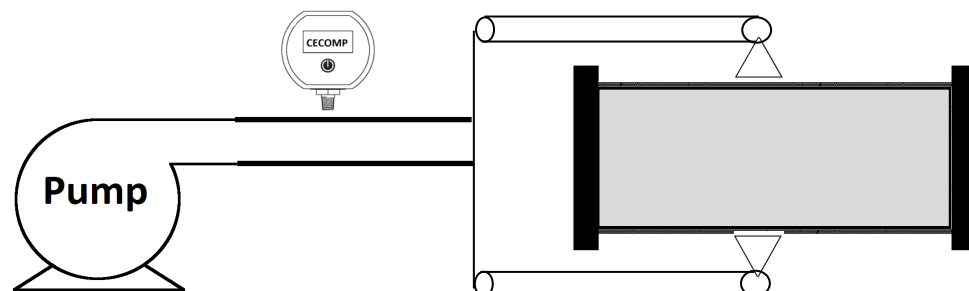
Location: [Illinois](#)

Most state DOTs will require a test for “flexural strength” of concrete beams used on paving projects. Flexural strength is one measure of the tensile strength of concrete. It is a measure of the concrete beam or slab to resist failure. This test utilizes a beam testing machine which permits a hydraulic load to be applied until a beam failure is obtained.



The Engineering Issue

- The engineer has a requirement to accurately measure and record the “beam failure” pressure.
- The currently-used analog gauges have significant errors due to mechanical shock and field conditions.



The engineer used a Cecom F16B digital pressure gauge to monitor the test. This Cecom gauge has 0.25% accuracy over the full pressure range, a 1 PSI resolution, and can handle the “abuse” because of its ruggedness, both electrically and mechanically.

Problem. Solved.