Plant Prequalification Program

Raising the Bar for Quality Precast Products

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The Plant Prequalification Program (PPP) is a reputable, third-party certified program that holds precast concrete manufacturers to a higher standard of production quality. It's the most comprehensive pipe and manhole certification program in North America. There's no added cost associated with PPP certified products so it acts as free quality control. Based on the PPP's applicability and reputation over the years, highway and city groups across Canada are beginning to adopt it into their local specifications. A PPP certified manufacturer gives designers, owners, and the public peace of mind knowing that an unbiased party has audited and tested both the production facility and the finished product.

The PPP originated in Ontario in 1965 and is still included as a requirement in various provincial codes and standards for underground infrastructure. The Plant Prequalification Advisory Committee that oversees the PPP is comprised of representatives from the Municipal Engineers Association (MEA), Ministry of Transportation Ontario (MTO), Ontario Provincial Standards (OPS), Canadian Precasters Association of Ontario (CPA), and Ontario Concrete Pipe Association (OCPA); the committee also includes a third-party auditor who is a licensed Professional Engineer in the province of Ontario.

Figure 1: All precast concrete products that meet the strict PPP requirements are stamped with the program logo, a black triangle with a "P" inside.

Inland Pipe has been PPP certified for over a decade now. PPP reviews all aspects throughout the production process, from the quality of the raw material used in product manufacturing to durability testing of finished products. All ingredients, production data, and product test results are strictly audited annually with a third-party professional inspector. A prequalification certification is earned or renewed upon sufficient auditing results each year. The prequalification certification can also be cancelled at any time when deficiencies are found

during a random audit; a manufacturer is given a limited amount of time for corrective actions. The Plant Prequalification Program audit is broken down into three categories, as listed below:

Inputs:

1. Conformance of all raw materials must be supported with vendor certificates or the manufacturer's own test data, such as sieve analysis of aggregates and steel mill certificates with lab testing data.

Process:

2. All equipment involved in the production process is requested to be calibrated regularly. Calibration certifications are checked at each audit.
3. Concrete mix recipes are monitored daily and recorded on file as proof to ensure that concrete mix ingredients and water contents are within the correct ratios.
4. Regular concrete compressive strength test results.
5. Steel reinforcement is checked based on issued engineering drawings before pouring concrete.

Figure 2: A concrete mixer at Inland's Spyhill Plant in Calgary

Output:

6. Each plant is required to submit a six-month interim report between annual inspections to certify that testing and record keeping is being properly maintained. Also, a detailed inspection is conducted every three years.
7. Dimensional checks of finished products. Joint dimensions for 100 percent of pipe and MH sections up to and including 1200mm

Figure 3: Three Edge Bearing Tester used to confirm pipe strength

diameter are gauged; this is unique to the concrete pipe industry.

8. Structural test results for all pipe sizes and strength classes in a Three-Edge Bearing Test.
9. Hydrostatic pressure tests of MH and pipe products in various configurations which include pipe in proper alignment, pipe with joints deflected, and pipe joints under differential load.
10. Concrete durability tests such as air void or salt scaling.
11. Markings on concrete drainage products must include the Prequalification Stamp.

Figure 4: RCP undergoing a Hydrostatic Test

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