



Concrete Advancement Network (CAN)

NSF Industry-University Cooperative Research Center (IUCRC)



PROJECT STATEMENT

Processes for Quantifying Limestone Variability in PLC for Precast Concrete Producers

Introduction:

The concrete industry has shifted from ASTM C150 cement (OPC) to the use of ASTM C 595 IL cement. This has often resulted in OPC no longer being available in some markets. This change has presented some precast producers with challenges in achieving early strengths. This has been particularly impactful to the dry cast industry.

It has been proposed that in some regions, the consistency of the limestone content in the ASTM C595-IL cement is a concern. As such, data is needed to assess this claim and a procedure is needed to quantify this variability in a practical way so that producers can modify their production processes.

Objective:

The objective of the project is to develop a guidance document for producers to understand this variation and to be able to perform simple tests to assess it. To support this objective, a short focused effort is needed to test samples and to develop the document.

Scope of Work

1. Identify variation that is occurring for 3 to 5 producers by measuring samples over a two-to-three-month production series
2. Develop a short document for producers to outline the step-by-step procedure to measure the variation for themselves on the cement that is provided

Deliverables

Publications:

- 1) Document on the limestone variation in ASTM C595 IL cement for 3 to 5 concrete producers
- 2) Document on “Step by Step procedures to quantify variation in cements and concrete plants.