



**INSPECTION & ACCEPTANCE
GROUND GRANULATED BLAST FURNACE SLAG (GGBFS)**

GENERAL

Acceptance of Ground Granulated Blast Furnace Slag (GGBFS), the glassy, granular material produced when molten blast furnace slag is rapidly chilled, will be on the basis of approved sources and upon satisfactory test results on samples obtained at the project site.

Approval is based upon slag produced when the blast furnace is utilizing specific processes. Any change in the processes will void any source approval and require that a new approval be sought.

SOURCE APPROVAL

Approval of a GGBFS source is based on the requirement of ASTM C989.

A source may furnish Ground Granulated Blast Furnace Slag on the basis of certification provided:

- A. The quality-monitoring program meets the minimum sampling and testing frequencies established in ASTM C-989. At least one sample for each 30 consecutive days shall be tested by the producer for conformance to Iowa Department of Transportation Specifications. The test reports for all monitor samples shall be submitted to the Iowa Department of Transportation, Office of Materials, within 45 days of the sampling date.

The Quality Control Laboratory will be considered approved if it is properly equipped and staffed to perform the tests required for an accepted Quality Control Program. Continued approval of the control laboratory will depend on the comparison of its test results with the Iowa Department of Transportation Central Materials Laboratory. If major differences are found, an attempt to resolve them shall be made as quickly as possible. Continued unresolved differences in test results will be considered a basis for discontinuing control laboratory approval.

- B. The Ground Granulated Blast Furnace Slag has shown conformance to the applicable specifications for a continuous period of at least six months.
- C. Each shipment of Ground Granulated Blast Furnace Slag is properly certified.

The supplier of certified Ground Granulated Blast Furnace Slag shall furnish, for the project records, two invoices or bill of lading copies, which bear the following certification statement and the signature of a responsible company representative:

Certification Statement

The material herein described has been sampled and tested as prescribed by the Highway Division of the Iowa Department of Transportation and complies with the applicable specification requirements for Ground Granulated Blast Furnace Slag.

Date _____ Signed _____

The bills of lading or invoices shall include project number, if available, source name, source location, source code, grade, and quantity of the shipments.

These copies of bill of lading or invoice shall accompany each load, and shall be retained at the project or ready mix plant for the Project Engineer record. The truck tanker shall have a copy of the invoice or bill of lading attached directly to the tanker portion of the truck. When the tanker unloads the contents at the project site, the unloading time and material final destination (storage "pig" number) shall be marked on this copy and left with the invoice or bill of lading copies.

In the case of more than one project being supplied by a ready mix plant, the plant shall furnish the Project Engineer, for each project, either a copy of each bill of lading or invoice, or a listing of the bills of lading or invoices representing the ground granulated blast furnace slag incorporated in the project. This listing shall bear the signature of a responsible supplier representative.

The source, car or truck number, ticket number, grade, and quantity of each shipment of ground granulated blast furnace slag used on a project shall be recorded on Form #830211, Form #830224, or other applicable form.

- D. Monitor samples secured and tested by the Iowa Department of Transportation indicate compliance with current specifications. The District Materials Engineer will obtain yearly samples.