PELLET DURABILITY INDEX TEST PROCEDURES

PDI %

Purpose:

Continuous monitoring and measurement of pellet and cube quality by the pellet mill operator will help assure that a more consistent quality product is produced and shipped from the manufacturing plant. This test is used to measure pellet and cube quality as described below with the results logged and compared on the daily production record.

Tests can be performed on each daily production run and comparisons between like runs can be made to help establish and determine minimum standard of quality. Changes in ingredients, formulations, equipment, or production methods can then be tested and compared to the minimum standards that are established for that particular finished pellet product. As improvements are made in pellet quality, as measured by higher PDI %, then the minimum quality standards can be increased along with increased customer satisfaction with the finished product.

Procedures:

1. Pellet Durability Index test (PDI %) to be performed on each run of pellets and cubes.

2. A representative sample of the finished pellet to be obtained and tested from the pellet cooler discharge area. This is to check for proper cooling which is important for maximizing quality of finished pellets.

3. Screen the cooled sample on a U.S. No. 7 sieve screen and then weigh out accurately 100 grams of cooled, screened product.

4. Place the 100 gram sample in the pellet tumbler testing canister along with five ½" hex nuts.

5. Tumble the pellet sample for 5 minutes.

6. Screen the tumbled sample to separate the fines on a U.S. No. 7 sieve and reweigh the pellet sample.

7. Read the scale and record the finished product reading (0-100) and convert to %, which would be the recorded PDI % for that product.

Note: A 500-gram sample can be used for testing if a larger sample size is required.