Length Gauge Elongation Index

LT-A0045 | Length comparison of coarse aggregate particles

Six size fractions • Fixed gauge openings • Mechanical operation



6.3-50 mm

TEST PARTICLE SIZE RANGE

1.8 ×

LIMIT RELATIVE TO MEAN SIEVE SIZE

BS 812-105.2 • Coarse aggregate elongation index method

LT-A0045

Photograph and Gauge Components

Measuring pins, fixed openings, metal strip and supporting base

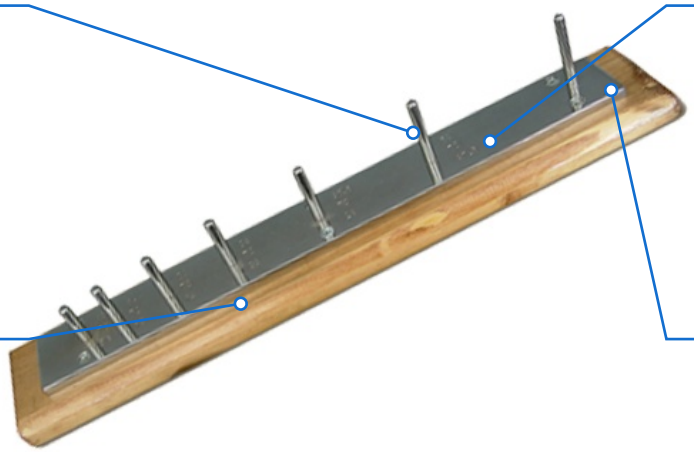
LT-A0045 checks coarse aggregate particles separated into sieve fractions against the relevant length limit. Use the appropriate pin spacing for each fraction; collect and weigh elongated particles separately.

MEASURING PINS

Compare the greatest particle dimension against the length limit for the fraction.

FIXED OPENINGS

Provide different measuring intervals for six size fractions. Check each fraction separately.



SUPPORTING BASE

Supports the pin arrangement on the bench. Position the gauge on a stable surface.

METAL GAUGE STRIP

Check the section holding the pins for cleanliness and damage.



Pin arrangement and adjacent gauge openings



Metal gauge strip and supporting base

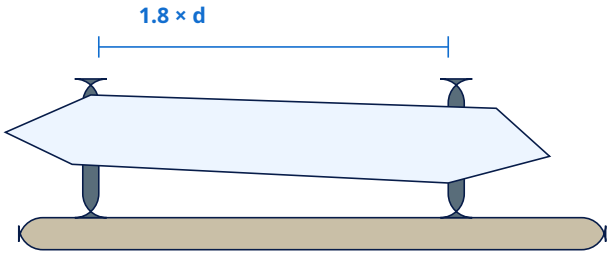
LT-A0045

From Particle Length to Elongation Index

Sieve • Select fraction • Check greatest dimension • Weigh and calculate

PIN SPACING AND ELONGATED PARTICLE COMPARISON

LIMIT = 1.8 × d



L > 1.8 × d: ELONGATED PARTICLE

d = (lower sieve + upper sieve) / 2

CHECK THE GREATEST PARTICLE DIMENSION

A SEPARATE OPENING FOR EACH SIEVE FRACTION

me: ELONGATED MASS • M: MASS TESTED

EI (%) = 100 × me / M

REPRESENTATIVE COMPARISON • NOT TO SCALE

Classify the Sample

Prepare the sample by the method and separate six size fractions. Record the mass tested.

Separate Elongated Particles

Compare each greatest dimension with the appropriate opening. Collect particles exceeding the limit.

Weigh and Calculate

Weigh elongated particles. Express their mass as a percentage of the total mass tested.

Particle length is its greatest dimension. A particle is elongated when this exceeds 1.8 times the mean of the lower and upper sieve apertures defining its fraction. Elongation index is based on mass percentage rather than particle count. Keep fractions separate throughout the checks.

Size Range and Opening Selection

The method excludes material passing the 6.3 mm sieve or retained on the 50 mm sieve. Prepare applicable fractions separately and use the relevant gauge opening for each one.

Compare the greatest particle dimension. Do not force particles between pins or break them during classification. Keep sieve and gauge records together.

Mass Records and Gauge Checks

Record total mass tested and elongated particle mass in the same units. Prevent material loss and assess the result with the applicable method and project specification.

Check pins for bending, looseness and changes in spacing. Remove particles and dust after use. Store the gauge without applying loads to its measuring pins.

LT-A0045

Technical Specifications and Test Workflow

LT-A0045 • Size range, classification criterion and mechanical comparison

Technical Specification	Value / Description
Product Code	LT-A0045
Product Name	Length Gauge / Elongation Index
Test Method	BS 812-105.2
Specimen Type	Coarse aggregate
Test Particle Size Range	6.3-50 mm
Number of Size Fractions	6
Elongated Particle Criterion	L > 1.8 × mean sieve size
Dimension Assessed	Greatest particle dimension
Result	Elongation index • Mass percentage
Operating Principle	Mechanical comparison • No power required
Overall Dimensions	370 × 70 × 70 mm
Approximate Weight	0.82 kg

Use the Elongation Method Specified for the Application

Where BS 812-105.2 is specified, select size fractions and length limits by that method. Complete classification with the gauge and use a suitable balance for mass measurement.

From Coarse Aggregate to Elongation Index

01
Sieve
Prepare the six applicable size fractions.

02
Check
Assess each fraction at the relevant pin spacing.

03
Separate / Weigh
Collect elongated particles and determine mass.

04
Calculate
Calculate the elongated mass percentage.

Product Page | liyatest.com.tr/en/urun/length-gauge-elongation-index-bs/