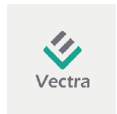


VDG 40.2 VIDEOGRANULOMETER

Measurement of granularity and shape of granular mixtures



XP P 18-566-2002

XP P 18-540

Description

The VDG 40 videogranulometer is an optoelectronic device aimed at rapidly determining the grading curve and shape of aggregates used for road building and civil engineering purposes. The test method, described in French standard XP P 18-566-2002, is referred to in the French aggregate standard XP P 18-540 as an alternative to the sieving test method.

The performance of the VDG 40 allows to analyze each particle of the test portion with a good precision. Washing and drying of the test portion can be avoided, which reduces even more the analysis global time.

The new version incorporates three important new features:

- Automatic calculation of the VDG regularity envelope, aimed at assessing the conformity of the production to the requirements in place of the sieving method.
- Railway ballast angularity assessment routine, giving useful information on the durability of the ballast.
- Possibility to transfer the results to software editing Fiche Technique de Produit (FTP), using Excel.

The VDG 40.2 software features improved ergonomics and new functions. As the sample is introduced into a feed tank, the constituents are conditioned to fall at a controlled dynamic rate in front of an optical analyzer. A software algorithm processes the images to extract information about each aggregate. The operator is assisted throughout the entire operation.



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Highlights

◀ **Time optimization**

→ Reduction in overall sample analysis time thanks to material washing and drying, which can often be avoided

◀ **Follow-up**

→ Monitoring the regularity of quarry production "without sieves" thanks to the automatic calculation of the VDG regularity grid

◀ **Usability**

→ VDG40.2 software with improved ergonomics and new functions

◀ **Software**

→ Possibility of transferring analysis results to Product Data Sheet (FTP) software, via Excel

◀ **Accuracy**

→ Known degree of ballast wear (25/50 mm) thanks to ballast angularity analysis module



Features

Technical features	
Measurement time	Few minutes
Resolution	0.2 x 0.2 mm
Power supply	220 V, 50 Hz ou 110 V, 60 Hz
Encombrement et poids	
Dimensions des éléments	1 to 63 mm
Dimensions	l = 1.60 m ; p = 0.75 m ; h = 1.20m
Masse	90 kg

Applications

A device using image analysis to rapidly characterize the granularity and shape of road-building and civil engineering materials. The device is designed to perform the test in accordance with standard XP P 18 566, and can be integrated into an aggregate production line.

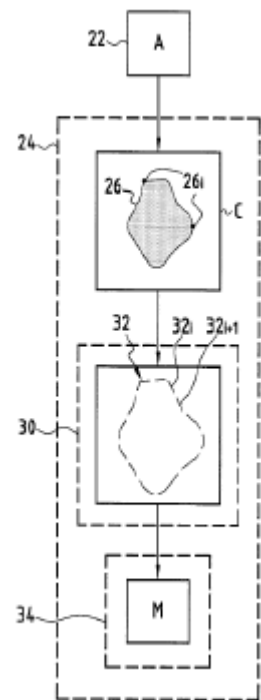
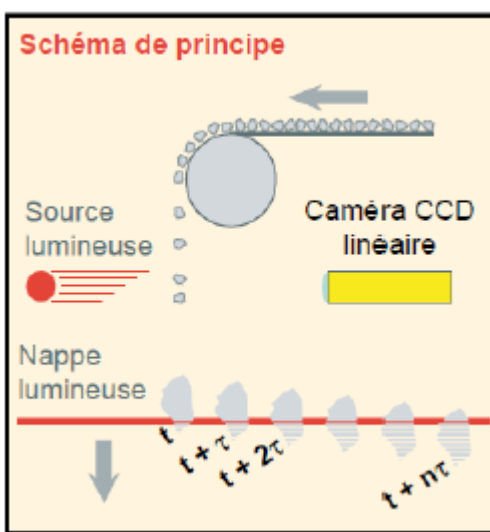
Other possible applications :

- Determination of sample grain size, for fractions from 1mm to 63mm
- Determination of distribution, elongation, angularity and roughness criteria
- Monitoring the regularity of quarry production.

Implementation of the measurement

The invention relates to a method and a device for determining the morphology of a divided material, in particular an aggregate, said divided material being composed of at least one particle, which allow:

- To project a shadow of said particle having a contour 26,
- To determine the coordinates (of points 26 i) of said contour 26, process said coordinates (to approximate said contour 26 by a plurality of consecutive segments (32 i, 32 i+ 1).
- To determine a morphology criterion (of said divided material by processing the relative positions of at least two of said consecutive segments). (32 i, 32 i+ 1).



Schematic representation of the device's acquisition and processing means