Optical Control Systems

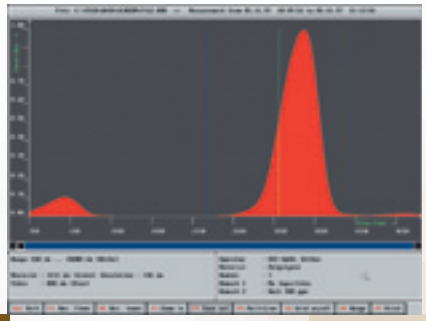
The Solution for the Polymer Industry

Pellet Analyser

PA 66

The Original by OCS

Pellet Analyser PA66



Pellet Analyser PA66

The product quality in the plastic processing industry demands that the raw material itself conforms to the necessary requirements with regard to purity, colour and property of the pellets.
It is a red signal for the raw material producer if the pellets have coloured or black inclusions that are generated in the synthesising and / or pelletising section.
It is just as critical if polymer dust and fines occur in the process that indicate non-optimal transport conditions in the area of loading/unloading trucks and bagging. However, if the fines were shown to have been created in the synthesising area, it would be the responsibility of the downstream cyclone classifying to create "fines"-free pellets before delivery.
Undesired loose impurities on the pellets are carried in, for example, through contaminated conveying air (filter) or in an unclean silo vehicle, and therefore manufacturer, transporters and end processor will be affected hereby. In this case it is essential to have accurate testing documentation available in order to monitor and eliminate the cause of the defects. Moreover, additional costs in further processing can be prevented.

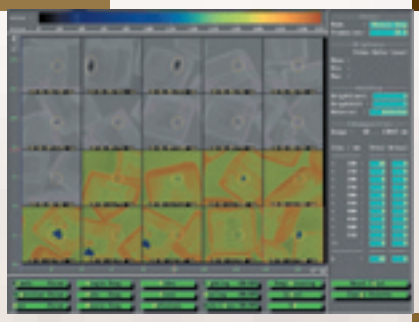
The constantly increasing production speeds in processing demand that the pellet quality complies with technical developments. Continuity with regard to a defined pellet size distribution is required, because at high loads the feed behaviour in the processing machines can react sensitively to even minor fluctuations of a more or less wide distribution. In this context, the pellet shape (e.g. lense/cylinder/dice/sphere) is equally important.
Additional interference occurs in processing pellet mixtures if it has to be guaranteed that the composition remains stable in the processing (no segregation). The same applies to master batches or the subsequent metering of additives.

The PELLET ANALYSER PA66 system complies with the precondition through the combination of the highly sensitive PSSD, PS25C and real colour measurement CM2 (option).

Impurities are measured in the PS25C inspection system with the help of a 3-CCD-chip colour camera according to colours, sizes and shapes.
High-performance evaluation software processes the raw data into extremely variable visual graphics and tables, and also into representations of the defects (mosaic display).

As a modular inspection system the PSSD system counts and measures the size and shape of pellets. The pellet size and shape can be determined in 10 different classes. The PSSD system also detects twins, triples, spikes and dog-bones as well as pellets with fines and tails. The system can indicate dust and tails proportion. By counting all measured pellets the pellet weight (pellets/g) can be determined, in combination with a weighing device.

The colour measurement CM2 (option) determines the colours of the pellets on-line with a spectrometer and presents the data in various standards (e.g. L a b value).



With a suitable layout the system can be operated both off-line and on-line.
The time history for each production batch is documented and filed through the automatic storage of all measured data.

Scope of application

- **Opaque Pellets**
- **Coloured Pellets**
- **Non transparent Pellets**
- **Transparent Pellets**

Technical Data

PS25C:

- **Camera**
  3-CCD-chip colour matrix camera
- **Lighting**
  High Frequency synchronised fluorescent lamp
  Power consumption: 22 W
  White light spectrum

PSSD:

- **Camera**
  CCD Line Scan Sensor
- **Lighting**
  High Frequency synchronised fluorescent lamp
  Power consumption: 32 W
  White light spectrum

- **Computer**
  Industrial CPU Pentium, up-to-date technology
- **Interfaces**
  Ethernet 10/100 M Base-T,
  digital and analogue I/O, USB,
  MODBUS, PROFIBUS, RS232
  BDE, SAP interface or SQL

- **Remote Control**
  Extender max. 100 m
  Service Remote control
- **Software**
  Operating system Windows XP
- **Size**
  Dimension (l,w,h) 120 x 50 x 170 cm
  Weight approx. 120 kg
- **Connection values**
  Power 230 V AC (50 Hz) / 115 V AC (60 Hz)
- **Temperature**
  10 – 40 °C

OCS - Optical Control Systems GmbH

Benefits

- **Exact and consequent automatic analysis**
- **Optimisation of the production process thanks to detailed measured information**
- **24 hour online production surveillance**
- **Trend analysis in parallel to the production**
- **Logging of the production process**

Optical Control Systems ®

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