



Sesotec Metal Separator Finds "Invisible" Metal Particles That are Enclosed in Plastics

Plastic Bushing Manufacturer (Germany)

Product:
PROTECTOR

Purity of plastic products guaranteed

In the case described below a manufacturer of plastic bushings for magnet coils had problems with metallic inclusions that made the finished product unusable. In an intensive investigation of all the factory's internal production processes, however, no place could be found where these contaminations could have occurred. In cooperation with the raw material supplier the manufacturer then inspected the granulate (new material) that was used, but even the most thorough examination did not show any metallic contaminations.

Searching for the source of contamination

In order to find a solution for this problem the plastic

bushing manufacturer for test purposes installed a PROTECTOR metal separator made by Sesotec. Two bags from a granulate delivery were inspected with the metal separator. The test was performed under realistic injection-moulding shop conditions. The PROTECTOR actually separated several grains of granulate. That these grains had metal inclusions absolutely could not be seen from the outside. Only X-ray inspection revealed the existing contaminations, in this case small pieces of copper wire.



A PROTECTOR with 40 mm passage width for example detects FE metal contaminations starting from a diameter of 0.4 mm.

Material supplier and user both could not see these contaminations because the wire strands were completely enclosed in the granulate. Only the PROTECTOR system with its inductive detection technology was able to detect these metallic contaminations. Sesotec metal separators detect and separate all metals, both ferro-magnetic and stainless steel, aluminium, copper, brass, or lead,

irrespective of whether the metal is sheathed, coated, painted, insulated, enclosed, or in open form.

High benefit and fast return on investment

Based on these test results the plastics processing company now uses Sesotec PROTECTOR metal separators as standard equipment in production.

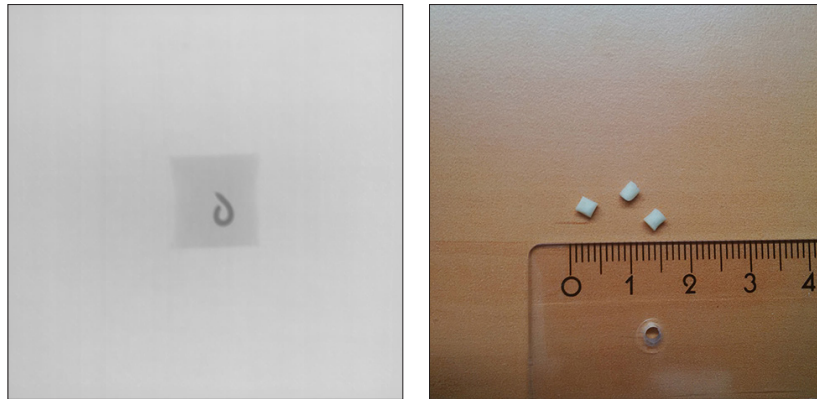
They guarantee that plastic parts are free from metal contaminations and are an important component of quality assurance. The metal separators are installed directly at the material inlet of the injection-moulding machines, at the so-called "Last-Chance-Control Point".

As in the above-described application, Sesotec metal separators are used both for the quality assurance of end products and for the protection of processing machines and moulds. Metal separators reduce the amount of rejects caused by contamination and minimise expensive and time-consuming malfunctions (down times, repairs). They clearly increase process continuity, productivity, and product purity. Metal separators thus provide a fast return on investment.

Says Stefan Taupp, Sesotec Area Sales Manager: "In the test the PROTECTOR metal separator convinced our customer with its high sensitivity and reliability. All the contaminations, also those that were enclosed in the granulate, were reliably detected and separated."

PROTECTOR metal separators find application in all industry sectors that use injection-moulding and blow-moulding machines, e.g. in the production of packing containers/caps, medical technology articles, technical plastic parts, connectors or housings in the automotive

industry, and from toys through to household appliances.



The tiny copper wire contaminations only were detected when the plastic granulate grains (grain diameter approx. 2.2 mm, grain length approx. 3 mm) were X-rayed.

Sesotec - an overview

The Sesotec group is one of the leading manufacturers of machines and systems for contaminant detection and material sorting. Product sales primarily focus on the food, plastics, and recycling industries. Sesotec's global presence includes subsidiaries in Great Britain, Singapore, China, USA, France, Italy (2), India, Canada, Thailand, a representative office in Turkey, and more than 60 partners all over the world.

www.sesotec.com