CIS expert expands portfolio with industrial scanner for internal inspection and quality control of tubes, pipes and bores

**BoroCIS: World innovation from Tichawa Vision makes automated tube inside inspection real!**

**Friedberg/Germany, February 2nd, 2021. Tichawa Vision GmbH now offers the worldwide unique BoroCIS for internal inspection and optical quality control of the interior of tubes, pipes and bores. The industrial contact image sensor (CIS) scanner enables a distortion-free 360° internal view of tubes, round or angular pipes and profiles made of laminate, plastic, metal and glass with diameters ranging from 10 to 80 mm. With an immersion depth of up to 250 mm, the BoroCIS detects defective seams, paint defects, chips or bubbles. In tubes, it ensures imaging down to the tube bottom, optionally even including the tube bottom. Up to ten tubes per second may be 100% inspected directly in the production line. Manufacturers protect themselves from complaints and liability cases due to defective products with fast amortisation.**

The BoroCIS developed by Tichawa in its application laboratory in Friedberg dives into tubes, pipes and bores in a fully automated process and creates images with a resolution of 50 to 600 dpi corresponding to a pixel size of 0.04 to 0.5 mm. The use of long focal length optics ensures clean images even under very harsh production conditions. Users can choose between monochrome (black and white) and colour (RGB) imaging. At a transport speed of up to 60 m/min, the BoroCIS can inspect tubes and pipes with diameters between 10 and 80 mm. An integrated interchangeable lens enables different tube widths to be inspected in one production line. The BoroCIS is optionally available with additional UV light for high-contrast detection of dust and clear differentiation between plastic and metal.

"Especially in the health and bodycare sector, quality defects in tubes, for example metal chips in a skin cream, can have a very unfavourable effect on companies," says Dr Nikolaus Tichawa, Managing Director of Tichawa Vision GmbH. "This is where our new BoroCIS comes in. With its seamless 100 per cent inspection, it reliably detects all defects and protects companies from recalls and the resulting liability consequences. Across Europe, around 16 billion tubes are produced each year. A huge market is opening up for the BoroCIS," Tichawa continues. Two patent applications are currently pending for functions of the BoroCIS.

**Proven technology**

Tichawa's Contact Image Sensors (CIS) have long been established on the market as an alternative to conventional line scan cameras as industrial scanners for demanding inspection tasks. Consisting of a reading guide line, an optical system and light source, CIS are used in applications requiring high accuracy. Based on the low-distance image sensor technology, Tichawa Vision is continuously developing its contact image sensors and offers a comprehensive product portfolio for a wide range of applications. More products at [Tichawa Vision GmbH](http://www.tichawa-vision.de/en).

**About Tichawa Vision**

Since the foundation in 1991, Tichawa Vision GmbH has specialised in the development, production and distribution of camera technologies for industrial image processing for the purpose of optical surface inspection and product control. Tichawa is the worldwide leader in the field of Contact Image Sensors (CIS), which –consisting of a reading line, an integrated lens and an optimized light source –generate reliable analytical results with an aspect ration of 1:1 for applications as well as glass processing, silk screen printing, wafer inspection, sorting of postal items or automation technology.

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