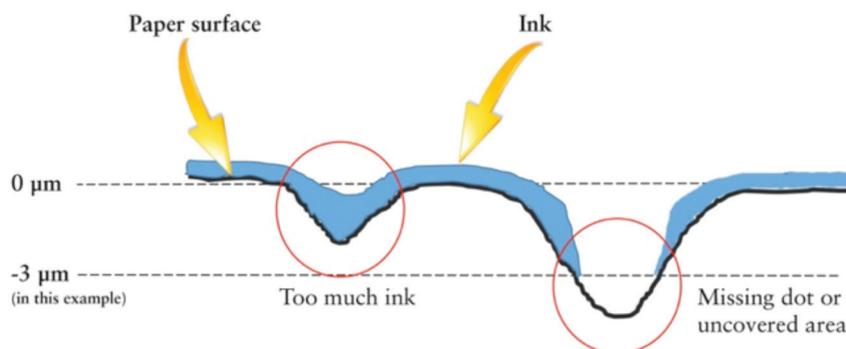


Tester predicts printing problems in just 10 seconds

Left unaddressed, miniscule surface craters and fine surface variations could cause uneven topography and jeopardise printability. However two new measurements from Lorentzen & Wettre's (L&W) OptiTopo measuring device can give paper and board manufacturers the quality assurance and visibility they need to minimise such risk.



L&W OptiTopo detects craters of different depths and areas of potential risk

Optical topography (OptiTopo) is a measurement technique whereby light is projected from two positions, at an acute angle and the resulting stereoscopic image shows shadows cast by surface topography variations. The image is used to create a gradient image, from which a height map can be calculated.

Co-developed with pulp and paper research institute Innventia, the L&W OptiTopo device lets paper and board manufacturers measure surface crater characteristics. The precision is such that the device can predict the risk of missing dots leaving areas of paper uncovered, as well as identifying areas where too much ink is likely to fall, for example.

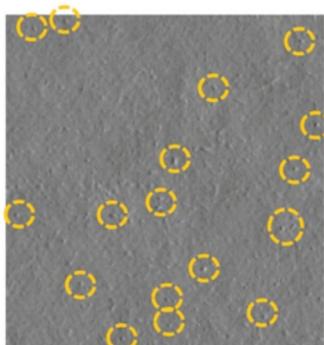
“The crater value measurement is totally new to market,” says Håkan Österholm, Product Manager, L&W. The device can also detect surface deviations significantly smaller than achievable by more traditional air leak methods and much faster than advanced microscopy technologies such as confocal displacement, chromatic aberration and laser triangulation. Disparities as fine as 0.2µm can be measured by the instrument. Innventia research has shown it is the discrepancies at the smaller end of the spectrum that have the most impact on print quality, making measurements at such a microscopic level a new benefit offered by the device. This greater precision in the OptiTopo Surface Deviation

(OSD) value is due to the tool’s particularly powerful camera which can measure area that is 20 times larger than that of traditional methods such as Bendtsen, Sheffield, PPS and Emveco Stylus. Also, its speed is such that it can analyse up to 1000 mm² in less than 10 seconds with results presented immediately. In addition to these advanced measurements, more traditional readings such as PPS, Bendtsen, Sheffield and Stylus Roughness Emveco are also provided as estimated values.

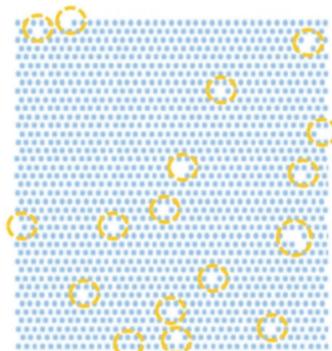
The user friendly instrument comes complete with built-in 8.3” touchscreen, thermo-printer and strip feeder for profile measurement. It is also a less expensive device than traditional methods and can be used to predict how ink will cover flexo, gravure, offset or hybrid paper, board or sack.

“Quick, cost-effective paper prediction is now within reach of most paper manufacturers,” observes Österholm. “In addition to reducing the need for print trials, and thereby saving time, money, and resources, L&W OptiTopo can help improve customer satisfaction by fixing potential problems before they impact end users. ■

Paper surface



After printing



Deep craters can cause missing dots in printed matter