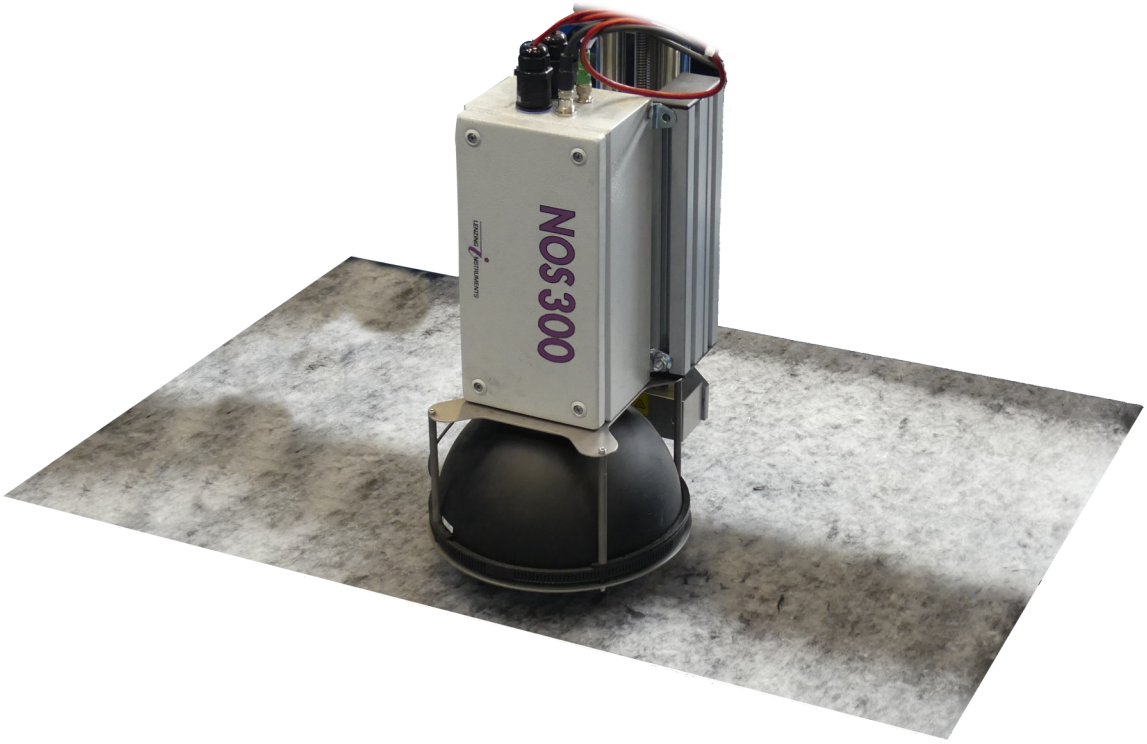
NOS 300

LENZING INSTRUMENTS

NONWOVENS ORIENTATION SYSTEM



The fiber orientation and its distribution along and across the machine direction is of crucial importance for web characteristics such as strength, tenacity and working capacity.

This demand for accurate monitoring of the fiber orientation is fulfilled by **NOS 300**, which offers online or offline inspection of the web. Out of the detected distribution of the fiber orientation, the relation of the strength along and across the web can be estimated.

With **NOS 300**, producers of nonwoven web receive fast and non destructive control of the MD:CD ratio of the fiber orientation, thereby also receiving an indication of the homogeneity of the fiber orientation.

Applied online, **NOS 300** leads to faster and less costly set up of machines and processes at production begin or beginning a new charge. The consistent process monitoring means less waste and a constant quality level, which can be controlled automatically by applying the optional closed-loop control.

Developed in cooperation with FIBRE fiber institute in Bremen, Germany

The Testing Company

NOS 300

NONWOVENS ORIENTATION SYSTEM

Scope:
Determination of the fiber orientation characteristics of a nonwoven web, online or offline. Since the strength of the nonwoven material is directly connected to the fiber orientation, the web strength can be derived based on the automatic calculation of the ratio of fibers in machine- and cross direction of the web.

Method:
An intensive LED lamp illuminates the web with incident light whereas images are grabbed continuously by a high resolution camera. By means of a special algorithm, the fiber orientation is then calculated.

Results:
The algorithm analyses the fi ber orientation according to the frequency of the fiber position angle related to the machine- and cross directions. Thereafter the mean value of the angle, the standard deviation and the ratio between MD:CD are calculated and presented in the software. NOS 300 features a real time software analysis program, which continuously gives feedback about the present fiber orientation.

Illumination:
LED lamp (white)
24 V, 32 W

Distance optics - object:
10 - 50 mm

Observed image area:
50 mm x 40 mm

Sampling rate:
Selectable:
max. 20 measurements/min
(option: 60 measurements/min)

Web speed:
Max. 80 m/min

Ambient temperature:
10 - 60 °C

Relative humidity:
max. 90 %, not condensing

Protection class:
IP 64

Power supply:
230/115 VAC ± 10 %
50/60 Hz

Evaluation and control unit:
PC with Windows®-based software

Optionally available:

- OPC UA interface

Technical data and pictures are subject to change.

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