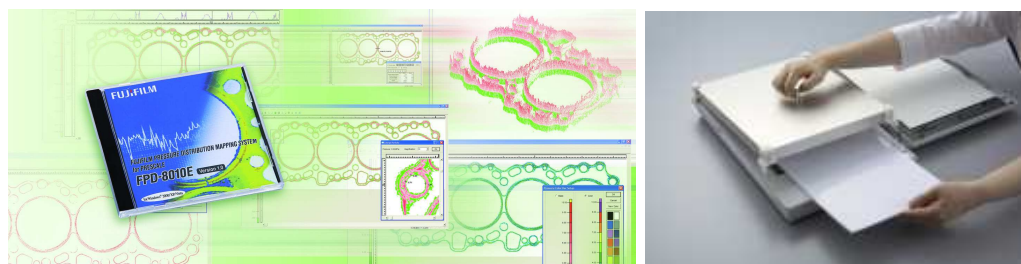


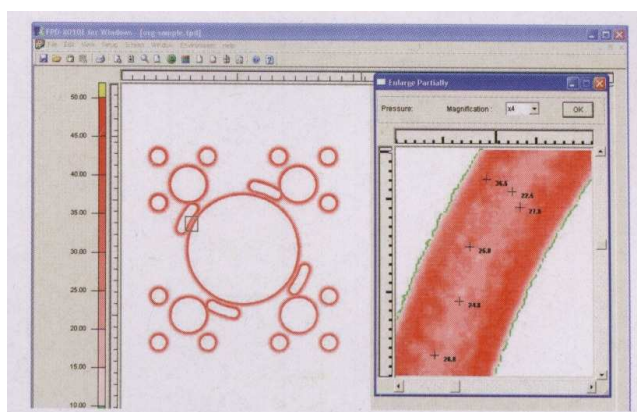
# Computerized Analysis of Prescale Film

## Analysis with flatbed scanner

The Fuji-FDP-8010E software delivers a wide range of evaluation opportunities in conjunction with the scanner from EPSON.



For intensity measurement, the FUJI-print images have to be scanned. The setting of the flatbed scanner is made via a supplied calibration card to adjust the greyscale. In order to measure the scanned footprint with the different red intensities, the program relies on the given calibration curves per film, equal to the manual.



The measured values allow a digital, one-off or planar imaging computation. The program offers various possibilities, such as false color or 3D representation of the surface pressure.

Using this Windows-based image-processing program, the applications for the FujiFilm Prescale have been significantly expanded.

## Examples for Prescale Analysis

The main analysis using the flatbed scanners is to determine the total load on the pressed area and for determination of surface pressures we look for specific points of interest. More options offer the analysis along polar coordinates and the visual 3D representation.

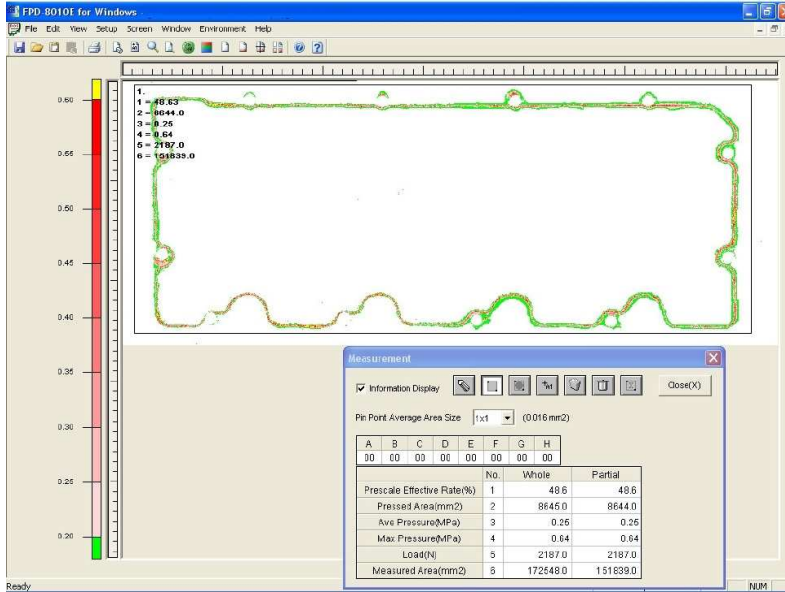
To understand the following examples, we first explain the legend:

- 1 Part of pressed area
- 2 Pressed area
- 3 Ave. surface pressure
- 4 Max surface pressure
- 5 Load on area
- 6 Area measurement
- Whole Area of complete scan
- Partial Framed area

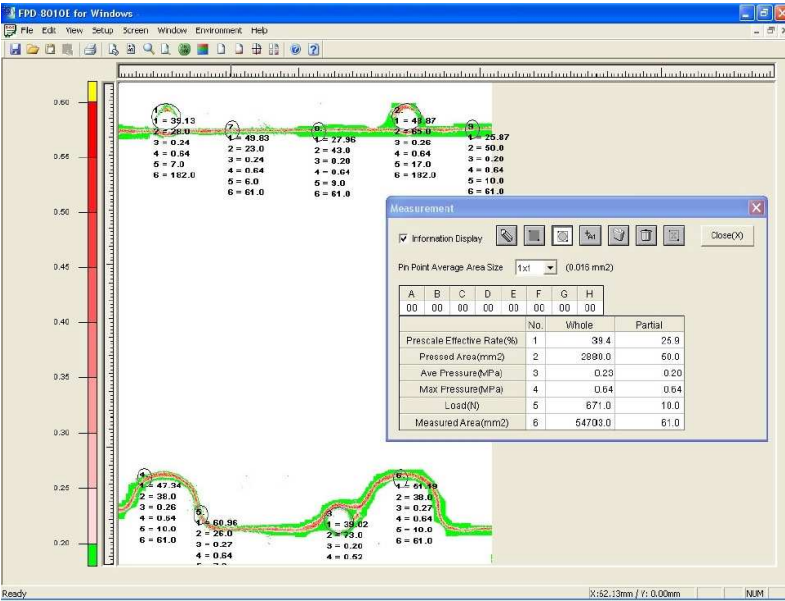
	No.	Whole	Partial
Prescale Effective Rate(%)	1	77.6	79.2
Pressed Area(mm2)	2	44929.0	43633.0
Ave Pressure(MPa)	3	0.91	0.92
Max Pressure(MPa)	4	3.06	3.06
Load(N)	5	40975.0	40318.0
Measured Area(mm2)	6	60138.0	53567.0

**Examples:**

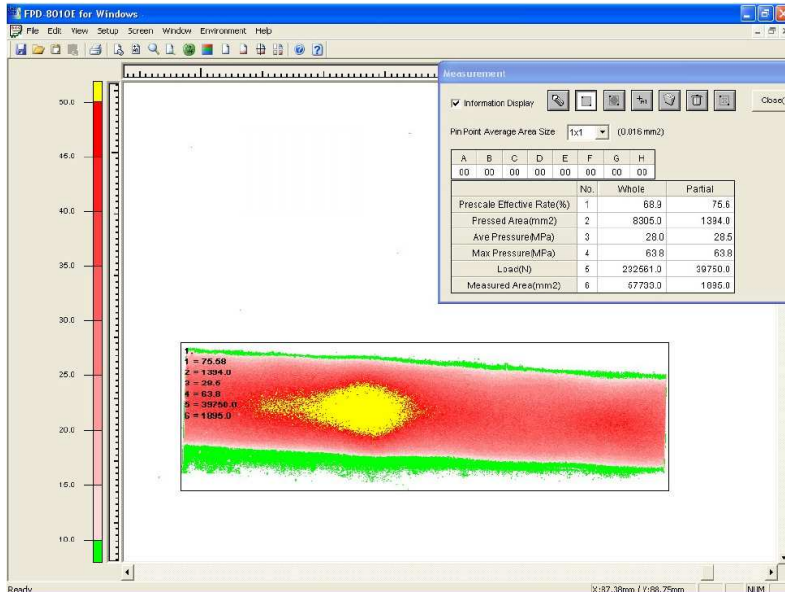
**Cylinder head gasket – total load**



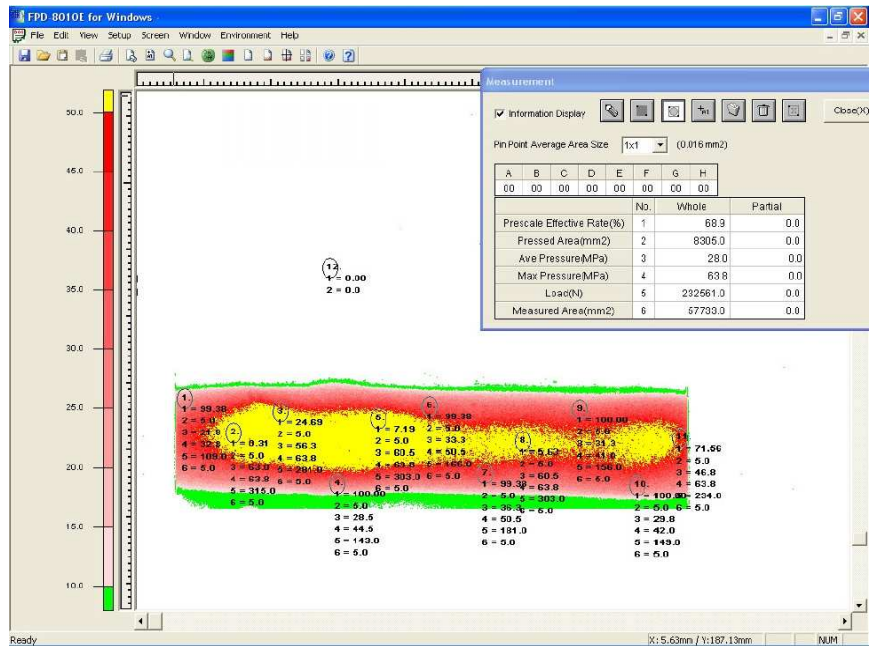
**Cylinder head gasket – areas of interest**



**Around the roller – total load**



## Around the roller – areas of interest



## Technical Data

### FUJIFILM PRESCALE:

- Accuracy: +/- 10%, measured at 23°C, 65 % rel. humidity (RH)
- Resolution: 0.1 mm
- Rec. temperature: 20°C to 35°C, for temperatures >80°C we offer a Thermo-Protective-Film
- Rec. humidity: 35 % RH to 80 % RH
- Film thickness: 1 layer 110 µm, 2 layers 90 µm each

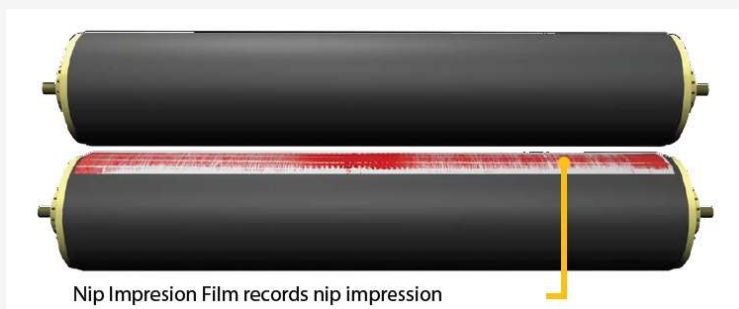
### Fuji Digital Analysis System FDP-8010E

- Package: Software, scanner cover, calibration card
- Scanner: please ask Tiedemann for compatible scanners
- Resolution: 200 dpi
- PC: min. Pentium III, 1 GHz, 512 MB
- MS-Windows: MS-Windows 2000, XP, and Vista, 7



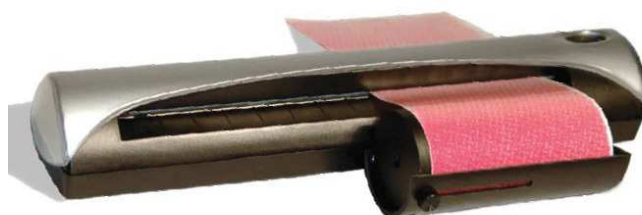
## Strip Scan with Auto-Nis - Evaluation of Nip-Width

Auto-Nis is a Windows based scanner and analysis software system that enables accurate interpretation and analysis of nip-impresion by Fujifilm Prescale film stripes (<http://www.fujifilm-prescale.de>). The sensor film instantaneously and permanently changes colors proportional to the surface pressure when placed between the two nipped rolls.



Bands of only a few centimeters in width are sufficient to detect the nip-impresion and are economically as well. Prescale films stripes can be obtained by Tiedemann as a service.

Auto-Nis scans and interprets the sensor film stripe up to a length of 12 m. It assimilates the data into a variety of easy to read graphical formats and displays of data.

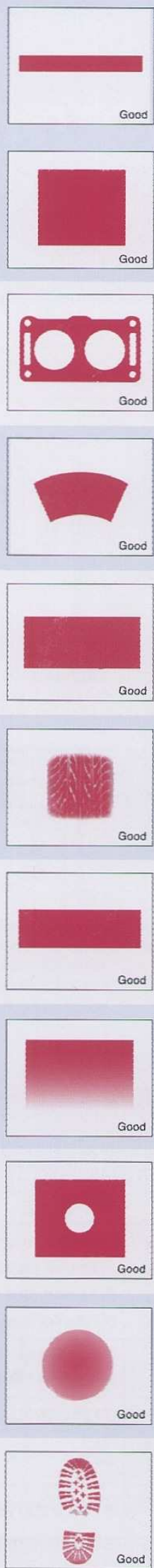
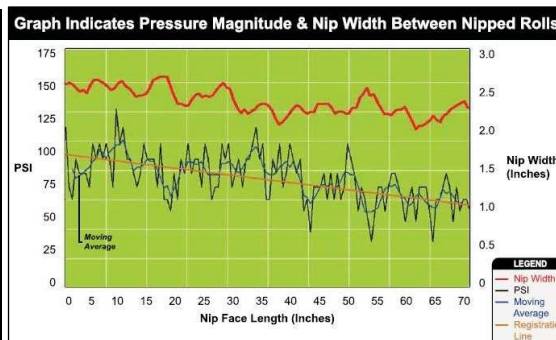


Auto-Nis<sup>®</sup> rapidly extracts nip width and pressure data from the nip impresion paper

Often nip-widths and pressure are not uniform along the length of the rolls. So readjustment is necessary and can be easily controlled by using Auto-Nis.

A final scan can and print out of nip- impresion documents the successful adjustment of the rollers.

Specification of Auto-Nis	
Components	Scanner and Software
Connection	USB
Operating System	Windows 7 und XP
Resolution	75 dpi
Scan Frequency	1,02 mm
Scan Speed	2.5 mm/s
Min. Scan Width	67 mm
Max. Scan Width	230 mm
Max. Length of Stripe	12 m
Dimensions	296 x 110 x 43 mm
Weight	335 g





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