Application Group

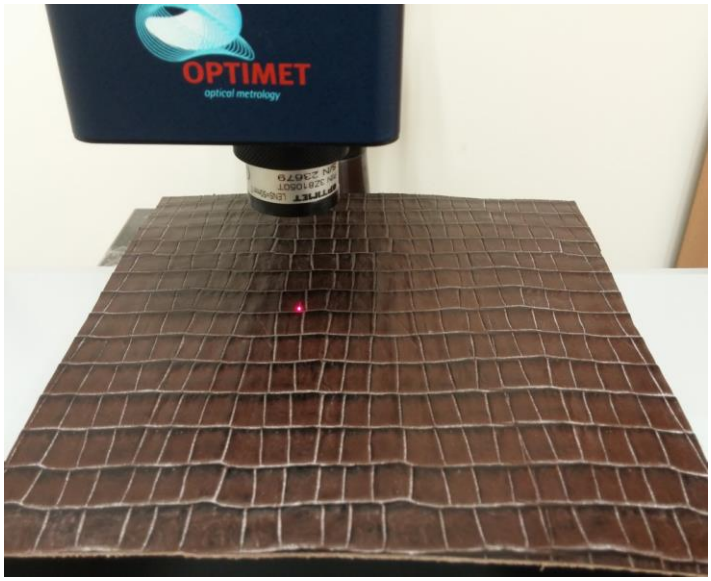
Test Results

Measurements of a Leather Patch

26/3/2015

General

The following report presents the measurements of a leather patch. The measurements were performed using Optimets' Conopoint -10 with a 50mm lens. The scanner used was the Conoscan 3000. (see figure below).



The results indicate that there were no issues in measuring the Leather material with high Signal to Noise Ratio (SNR) with no loss of points.

Main Conclusions

1. Optimets' sensor is most suitable for measuring these types of leather objects.
2. The measurements results were acquire with high SNR
3. No points were lost.
4. All the grooves and shapes are well define
5. The roughness of the sample is the neighborhood of around 2-5um.
6. The results were the same for with and without Autoexposure.

Test Results

A. Sample structure

We performed on a small area a 3D scan of the sample.

The general structure that was scanned is shown below;

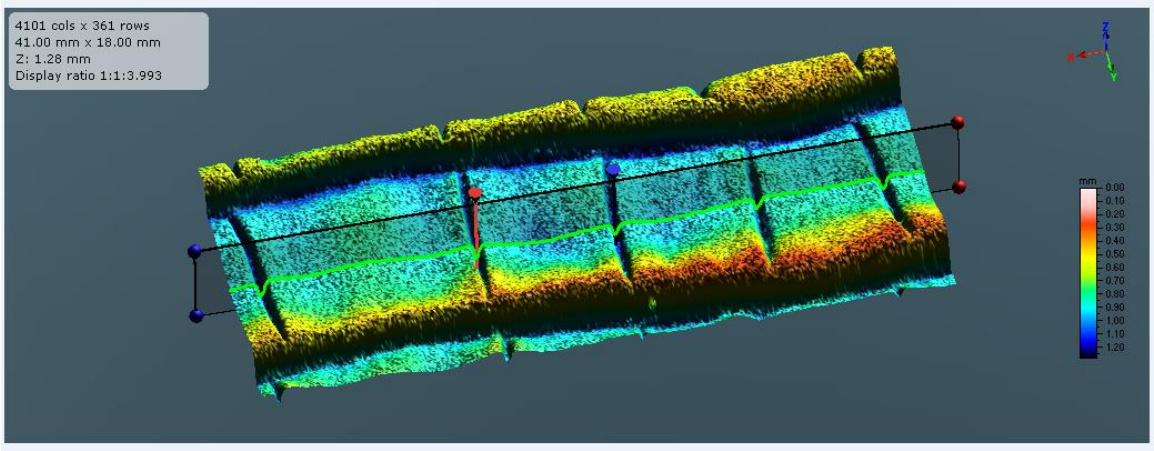


Figure 1 – Area scanned

In figure 1 All the points are measurable and valid without any loss.

Taking a cross section of the area scanned shows clearly the structure of the sample with its grooves.

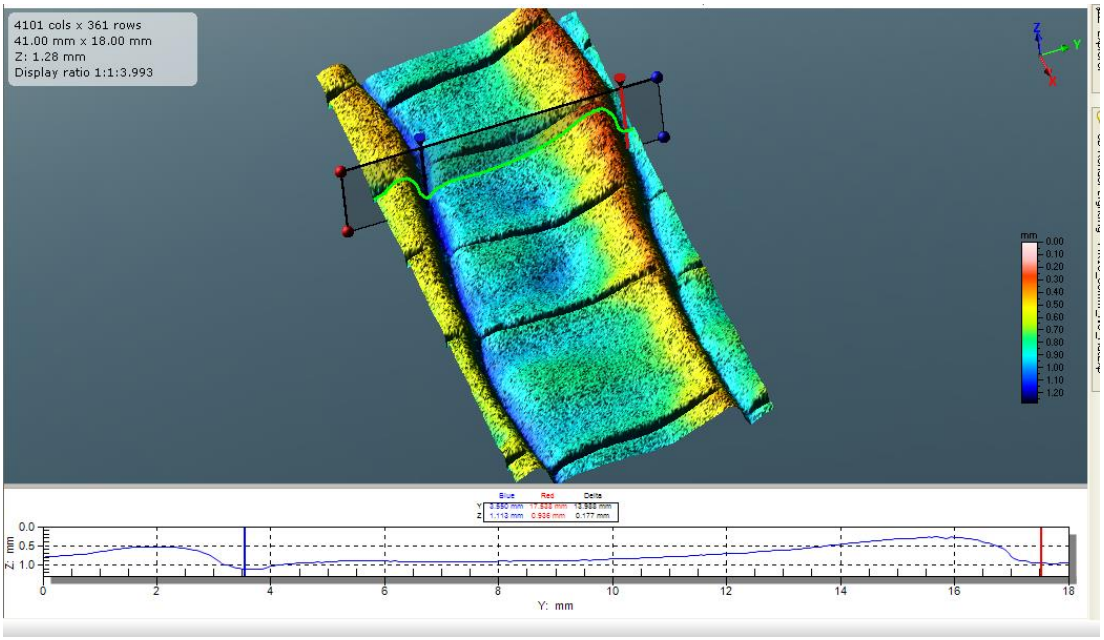


Figure 2 – Cross section in Y direction

Figure 2 shows a cross section in the “Y” direction. The distance between the two bars (blue and red) is 13.988mm and the depth difference in “Z” direction is 177um.

The cross section in the “X” direction is shown in Figure 3.

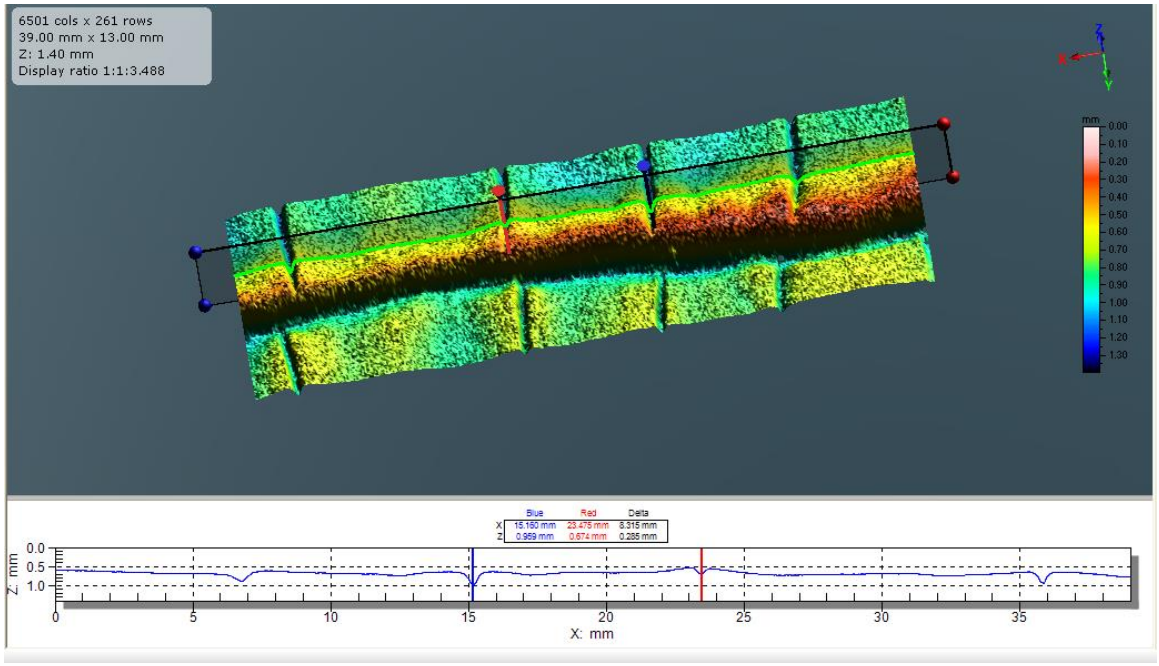
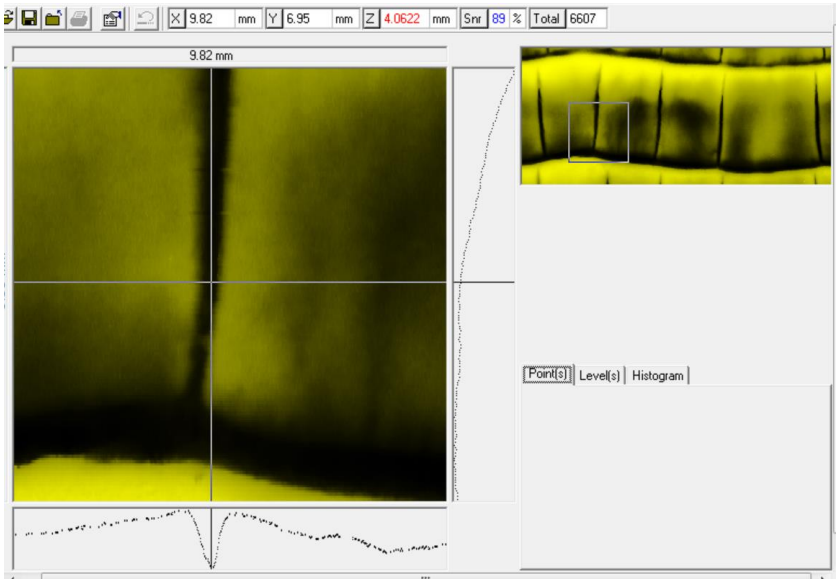


Figure 3- Cross section in “X” direction

In the “X” direction the distance between two grooves are5.315mm and the height difference between the bottom of the groves is 0.285um.

B. Surface properties.

The surface properties was analyzed usin Optimet’s viewer. The general shape of the area scanned is shown in figure 4.



Cross section in X direction shows the details structure of the sample.

Figure 5 – Cross section in “X”

As indicated in figure 5 the roughness on a randomly picked place is around 2.5um

The variability in the grooves depth is shown in figure 6. below

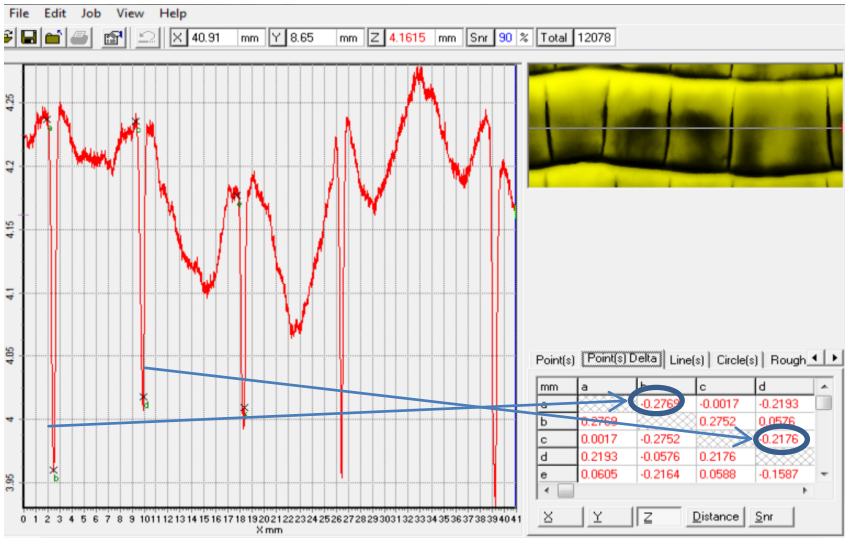


Figure 6 – Variability in grooves depths