

## Review Report on Diploma Thesis

Name of student: Mr. Petros Sifiso Nkosi

Title of diploma thesis: Lamination of Nonwovens with Nanofibrous Layer

### Comments:

The aim of the work is to develop new material using spun bond (PP and PE) and nanofiber material (PAN) to form a new nonwoven layer which has specific properties such as softness, comfortable and excellent. For these reason two steps were used

1. To form a bicomponent nonwoven fabric through lamination machine by using spun bond and nanofiber materials in various ratio.
2. Testing of samples such as penetration, efficiency, tensile and flexural rigidity tests.

In theoretical part, production of nonwoven and bicomponent fabrics was described in adequate extent.

The experimental part was well planned. The experiments deal with measurement of all the relevant tests. I appreciate self-sustaining approach and high quality laboratory work of the author.

The results are understandably presented and discussed. The goal of diploma was achieved. The results are useful and will help nonwoven research work in future.

There are some points which should be clarified and corrected:

1. In introduction section the application area of nonwoven fabrics are not clear.
2. Some abbreviations are missing.
3. There is not enough information about nanofibers in introduction.
4. Which type of standard was used for tensile test measurement?
5. There is not enough information about PAN nanofibers in experimental part.
6. In result and discussion part, why Table 2 has the temperature at 130-140°C while others 120-130°C?

**Total evaluation: Very Good– 2**

In Liberec, May 21, 2012

Fatma Yener

