

INDIA – NONWOVEN AND WOVEN FABRICS FOR FILTRATION

(Dry and Liquid Filtration)

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SUMMARY & HIGHLIGHTS

This report is an overview of technological and market developments in the filtration Industry of India with particular reference to the filter media used. The major segments covered are for Dry and Liquid filtration encompassing the trends of woven and nonwoven fabric usage in India. The trends covered are for 2009 and projections till 2014 have been analysed.

Summing up the major highlights of the industry of India we can say that India is the fifth largest steel producer in the world and ranks twelfth in the list of world's top 15 automakers. It is the second largest producer of cement and ranks fourth in the pharmaceutical industry. India is also the seventh largest energy producing country and ranks twelfth in the world for production of chemicals and petrochemicals by volumes. Furthermore India is the fourth largest producer of agrochemicals after USA, Japan and China and ranks sixth in the world in terms of petroleum demand. India will add up over 81,000 MW of power generation capacity and currently produces 141,000 MW annually through coal, water, gas and other means.

After careful evaluation during the last 12 months and constant interviewing of all important filtration companies and many leaders in their respective fields, we have concluded that the filter media market in India in 2009 amounted to 108.2 Mn USD (INR 541 crores) and is growing at a healthy rate of 17-18 %. India is a fast growing filtration market, although the current technology is not totally at the same level as compared to other major markets. The need for 'transition' is well recognized and we expect significant investments in the coming years, most notably in 'nonwovens'. A brand new 'needled felt' plant in India of BWF Tec India Pvt. Ltd. from Germany is the latest sign of these developments. Larox is also setting up a subsidiary in India and Donaldson has further expanded its base in India for manufacturing filtration systems and parts.

The single largest segment is represented by the baghouse filter media market of USD 30 Mn (INR 150 crores). The cement and steel industry and increasingly power generating plants are representing the largest potential for baghouse systems. Since the Indian Government reduced the outlet emissions to 50mg/nm³ the ESP's require significant additional investment, thus loosing competitiveness to baghouse systems. We expect in coming years many ESP's to be replaced by new more efficient baghouse.

Needled felts are currently produced by a few domestic manufacturers however, except maybe for 3 companies, the majority of domestic producers offers needled felts from Polyester and polypropylene only. The so called high temperature fibre needled felts made out of meta-aramids, PPS, P84, PTFE and ePTFE membrane media - are mostly supplied by companies from China, Europe and the US.

Very recently a spark of demand was ignited in India for face masks due to the spread of swine flu which is a global outbreak of a new strain of influenza, a virus sub-type H1N1.

The last quarter of 2009 saw a major rise in the demand of 3-ply face masks and most of the existing producers in India are doubling their capacities.

The Indian pharmaceutical industry is one of the leading users of HEPA/ULPA filters. India being the world's fourth largest producer of pharmaceuticals by volume, accounting for around 8% of global production is seeking the establishment of a complete manufacturing environment in this sector which is giving a healthy push to HEPA / ULPA filter industry. Growing at 15% this industry is largely dependant on imports for filter media but things would change .

The automotive industry may still be small by world standards but it is the second fastest growing auto industry – after China - worldwide. We believe growth for automotive filters in India is at least 10 – 15% annually in coming years. The 'small car segment' is by far the largest worldwide and fastest growing one. The numbers of filters are the same if it's a large, medium or a small car though the sizes may differ. Engine oil and air-intake filters require improved filter materials, and nonwovens are increasingly being used for air-intake filters as in other Asian countries – notably Japan, China and Korea.

Another significant filtration segment is identified as the Liquid filtration sector which constitutes of the vacuum and pressure filtration, liquid vessel bags, disposable liquid cartridges , blood filters, membrane backing filters, coolant filters etc. India is strong and manufactures virtually all woven fabrics within its borders which see a lot of usage in this liquid segments . According to our findings the current total market for all liquid applications is nearly 50% of the total – INR 270cr. - \$ 54 million - but is seeing better growth than the dry segments as many applications have just been introduced and primarily the filters are imported.

Nonwoven media for Liquid filtration are on the rise and are positively being accepted. In the woven category only special materials – like fine precision mesh – is imported. The domestic woven filter media industry is strong and growing.

All vaules are mentioned in US Dollars and Indian Rupees and the exchange rate taken is 1 USD= INR 50

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