

Polypick-1000 : An Import Substitute for Use in Paper Industry

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The speed and precision of modern industrial equipment call for high performance materials which are tough, resilient and hard-wearing materials that give long life and accurate performance, where the properties give improvement in design, operational life or physical advantages.

In India, this need for the high-volume industry has been aggravated by its increasing reliance on imported materials or parts which cost the exchequer crores of rupees in foreign exchange. To meet with their requirement of scarce raw materials like costly and complex alloys, more

their possibilities for diverse applications in the industrial growth were never so extensive as today. Moreover, these polymers were and are still being imported from abroad.

Paper industry has not escaped this spectre of optimum reliance on imports. Even the fest wearing parts/accessories have to be imported every year.

Suction Box Covers, Foils, Etc.

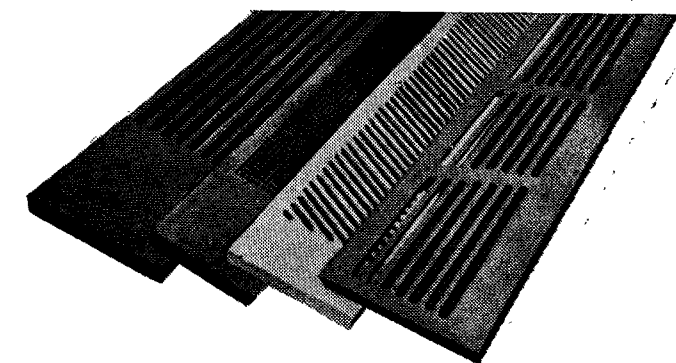
Until the dawn of plastic era, paper makers had to depend on conventional materials like wood, steel, etc. for Suction Box Covers, Foils, Doctors, Forming Boards. The tradi-

resurfacing and higher machine speeds tended to increase problems.

Scant attention was shown to the development of Suction Box Covers so important for the successful and economic operation of paper machines despite the tremendous progress achieved in the field of paper machinery construction.

Different types of materials were used to replace end-of-grain maple (S. Steel, Polyurethane, P. V. C.) but without any substantial progress. These did not contribute to any increase in wire life, due to unfavourable co-efficient of friction, especially on the dry boxes, nor to any increase in their own life when operating on modern high speed machines.

Maple and such alternatives were soon discarded for good in favour of a new material—ULTRA HIGH MOLECULAR WEIGHT POLYETHYLENE, familiar to all paper makers in India as POLYPICK-1000. Within a very short period of its advent, it has been universally accepted as the best material for such paper mill accessories as Suction Box Covers, Hydrofoils, Doctor Blades, Forming Boards—almost all parts supporting the bronze or synthetic wire on the wet end. Polypick-1000 incorporates all those properties desired by the paper maker. Eg.



POLYPICK-1000 Suction Box Covers Protect costly wire, are more durable and are available in one homogeneous lengths as per international standards.

and more uses are being found out of synthetic materials. Although various polymers came on the industrial scene a decade or more ago,

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tional wood Suction Box Covers, for example, had several disadvantages not the least of which was the necessity to keep the cover wet to prevent cracking and warping. Rapid wear also demanded constant

1. **Very Low Co-efficient of friction:** This is the most promising characteristic of Polypick-1000 when compared to other materials. When running dry, the co-efficient value is only 0.09 (wood 0.2-0.3) whereas the presence of water merely acts as a lubricant without affecting the dimensions.
2. Polypick-1000 is resistant to almost all chemical agents used in Paper Making.
3. It has the highest impact strength of any thermoplastics developed to date. The characteristic prevents any breakage or splintering in the covers made out of it.
4. It can be easily resurfaced, if necessary, by means of conventional wood working machinery.
5. Suction Box Covers made out of this material increase wire life by 50-65%, decrease couch power requirement by 0-30% and increase their own life considerably over conventional covers. In certain mills, Polypick-1000 Covers are in use for more than 2 years, without any significant wear. Though its structural strength permits greater open areas in drilled or slotted covers, there is no danger of the small

space areas between the holes breaking off during resurfacing. Its homogeneous and dense structure prevents grits from being embedded in the cover surface, thus removing one of the main reasons for wire wear.

POLYPICK INDUSTRIES, BOMBAY took giant step towards alleviating the problems of paper makers in India when they commissioned their new extruding plant at Indore, M. P. It's a twin-screw extruder that is the only one of its kind in the whole of Asia and one of the fourth in the world. It has now been possible to give covers, and other profiles for paper industry in homogeneous one piece lengths without welding which was hitherto, not possible. With its commissioning, the production capacity has gone up 10 times than what was possible before, bulk of it being exported to U. K. Germany, Belgium, Spain and other European Countries. Suction Covers can now be extruded upto any length without requiring any welding upto a width of 17 1/2" and 21 1/2" thickness.

These extruded covers have a still lower co-efficient of friction (0.07) and are available in many natural colours without any additional

charges or difference in their characteristics. Deliveries are fast and rates have been decreased by more than 10%, than those prevailing last year. Many other profiles can also be extruded without additional cost.

POLYPICK INDUSTRIES have been serving the paper industry in India for the last 8 years. Indian paper Makers Association, Calcutta, has happily bestowed on them the distinction of being an **ANCILLARY UNIT TO PAPER INDUSTRY**.

Uses of Polypick—1000 High Molecular Weight Polyethylene in Paper Industry

Pulping and finishing operations equipment requiring good wear resistance and low friction properties in both wet and dry environment :

Bumper Blocks	Doctor Blades
Chain Guides	Forming Boards
Converter Slats	Guide Rolls
Conveyor Tracks	Screen Wire Strips
Deflector Foils	Splitting Wedges
Guillotine Blocks	Stirrer Blades
Idler Wheels	Suction Box Covers
Pulp Paddles	Suction Box Linings
Pump Channel	Suction Roller
Linings	Packing
Roll Bearings	Washer Linings
Screen Wire Guides	Water Scrapers
Wet Side Spur Gears	