

Attaphon Chaimanutsakun 2010: The Development of Latex Separator's Filter Cleaner. Master of Engineering (Mechanical Engineering), Major Field: Mechanical Engineering, Department of Mechanical Engineering. Thesis Advisor: Assistant Professor Kriengkrai Assawamartbunlue, Ph.D. 77 pages.

Concentrated latex is mostly produced by centrifuge method. A disadvantage of this method is that the latex discs need to be cleaned regularly in order to remove latex particles from their surfaces, usually every 2 to 3 hours. Nowadays, the disc cleaning process is based on human labors. The discs are removed from the machine, cleaned and then assembled in the machine.

The above cleaning process causes problems and difficulties for manufacturers in terms of labors, production efficiency and concentrated latex quality. The cleanness of latex discs directly affects the concentrated latex quality and employees have to work in an area where fills with ammonia and water by which the cleaning efficiency reduces.

This research is to develop an latex disc's cleaner in order to facilitate and increase cleaning efficiency based on engineering designs. The cleaner is made of simple mechanics and require low maintenance. Several methods of disc cleaning are proposed and experimented to determine the most suitable cleaning method. A prototype cleaner is constructed and tested its performance.

The results show that the best method to clean the latex filter is to use rolling brushes to clean both inside and outside surfaces associated with the use of water spraying onto the rolling brush to lubricate and clean the rolling brushes and disc surface. The speed of rolling brushes should be between 250 and 400 round per minute. The only use of high pressure water cannot perfectly clean the surface of the latex disc.

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Thesis Advisor's signature