



Portable Building Glass Washer Machine

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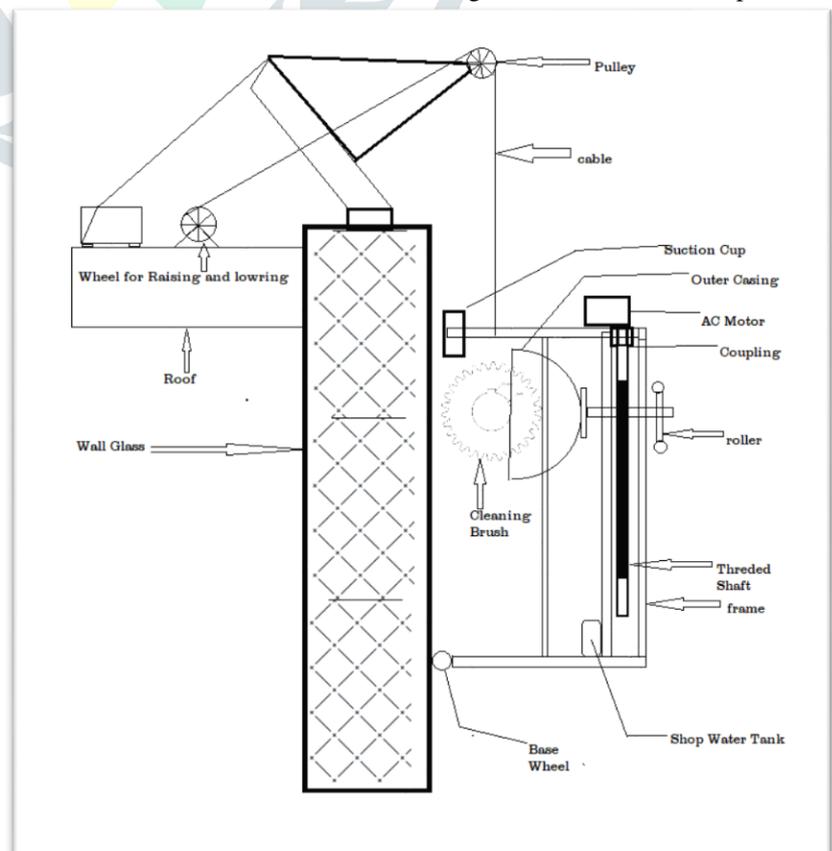
Abstract:

Now, there is a safe and inexpensive way to clean building glass window, frame and exterior of buildings. It's called Portable Building Glass Washer Machine and it is the chronological breakthrough in window and building washing equipment. It is portable and ideal window cleaning system. It is safe, quick and profitable window cleaner. It can clean entire glass of building. It is much safer and easier to use than manual window cleaning equipment. Manual window cleaning is very risky process. In this concept we are making process by motor rotation. Motor is rotating a soft material buffer and there is a water sprinkle in the mechanism and there is a rubber wiper's wiping action and last is sponge roller cleaning.

Keywords: Glass Washer Machine, Machine control foam Brush, Rolling outrigger, Façade cleaning,

INTRODUCTION:

Demand for the development of various service equipment is increasing to release humans from risky jobs and to investigate high pipes and walls. The window washing and cleaning makes the architectural glass of the building free of dust and dirt. The traditional way of cleaning office windows cannot be applied to high altitude windows with wide sections of glass. The reason is that Windows is extremely inaccessible. Special tools are needed to go up to clean the windows from the outside and are really insecure. This paper is based on the climbing system for the purpose of cleaning the glasses of multi-storey buildings using a suction cup to stick to the glass. The idea is to create a small window climbing robot with a suction cup that is capable of moving autonomously along the outside surface of the window with a relatively sufficient area and can clean and wash in the meantime. Traditionally cleaning the house/house windows is usually done by cleaning workers or specialized employees. It is not so easy to clean the window from the inside of the room, but the outside is not so easy. Cleaning windows on high and multi-storey buildings are a more boring and extremely dangerous process. It requires a hosting machine for manual cleaning or large, heavy and very expensive automatic cleaning machines. As a result, the window usually remains in a dirty or dusty form that can block the view of the living room. Instead, our cleaning machine can be attached to the outside surface of the window. The machine will automatically run and complete the window cleaning function.

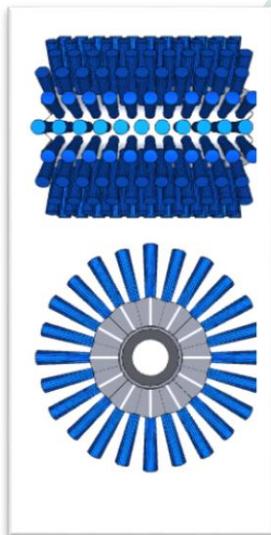


OBJECTIVE: Objective of this machine to clean glass window with motor operator brush.

MAJOR COMPONENT:

- | | |
|---------------------|---------------------|
| 1. Main Frame | 9. Wiper |
| 2. Threaded Shaft | 10. Base Wheel |
| 3. Lovejoy Coupling | 11. DC Motor |
| 4. AC Motor | 12. Suction Cups |
| 5. Slider | 13. Reed Switch |
| 6. Cleaning Drum | 14. Micro Switch |
| 7. Cleaning Brush | 15. Microcontroller |
| 8. Outer Casing | |

DESIGN OF COMPONENT



Cleaning Brush

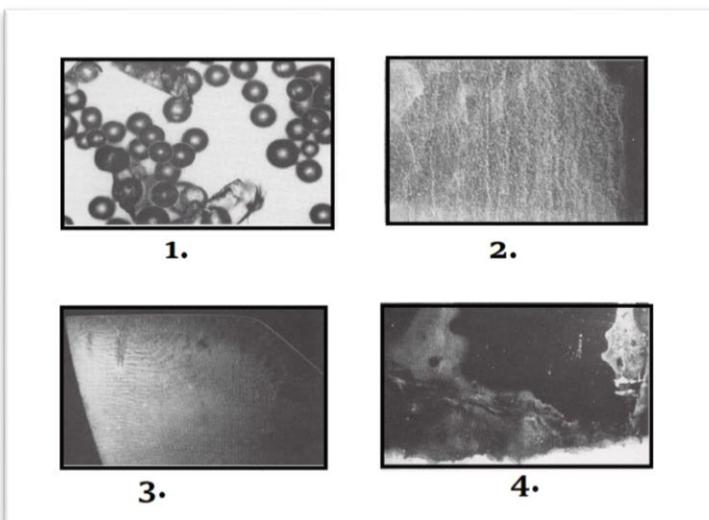


Lovejoy Coupling



PROBLEMSTATEMENT

- It will consume energy.
- It cannot guarantee 100%cleaning.
- Require maintenance.



SEQUENCE OF OPERATION:



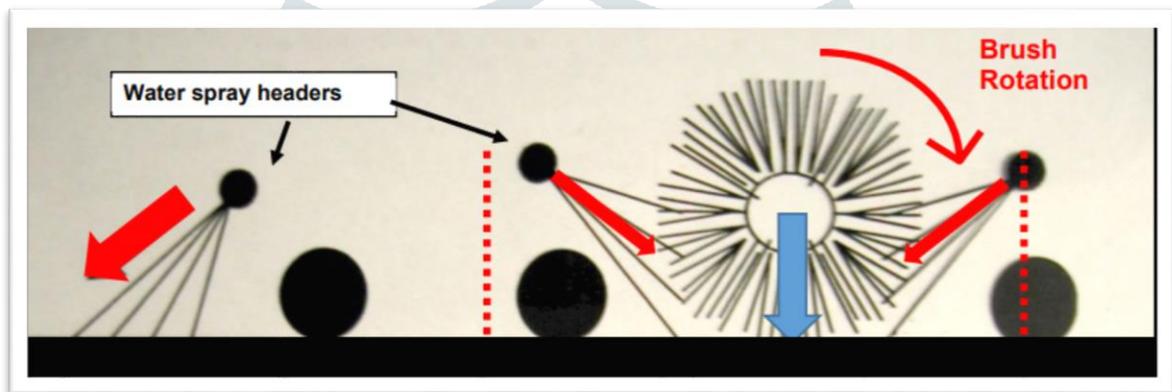
EXAMPLE:

Image 1 to 4 is examples of the different types of dirt on the glass surface.

1. Particulates
2. Surface Residue
3. Reaction Contaminant
4. Surface Corrosion

INSPECTION WORK CARRIED OUT

- Check balancing of project
- Proper fitting parts of project
- Proper wiring of electrical elements
- Water flow as per requirement
- Check brush speed as per cleaning requirement
- Up-down moment

**CONCLUSION:**

This product has a very wide scope in the future. As we know, it is one of the best automated products in the current era of automation that provides ease of operation and requires very less human effort. As we know the current era is of big structural design. Day after day we see new tall buildings in developing cities. The scope of this system is very wide. If we manually clean the glasses of the building with the help of workers, it will take 3-4 days because the workers have to hang on the building many times and it is a very dangerous process. This building glass washer machine can clean the entire building in one day without any risk as the operator operates it from the terrace of the building so it is a low risk process without any risk.

FUTURESCOPE:

- Easy work by only one human
- Business hub window glass clean very shining
- Low cost working product

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