

## WALL PAINTING MACHINE

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### Abstract

The primary aim of the project is to design, develop and implement Wall Painting machine which helps to achieve low-cost painting equipment. Despite the advances in robotics and its wide spreading applications, interior wall painting has shared little in research activities. The painting chemicals can cause hazards to the human painters such as eye and respiratory system problems. Also, the nature of painting procedure that requires repeated work and hand rising makes it boring, time and effort consuming. When construction workers and robots are properly integrated in building tasks, the whole construction process can be better managed and savings in human labor and timing are obtained as a consequence. In addition, it would offer the opportunity to reduce or eliminate human exposure to difficult and hazardous environments, which would solve same time. These factors motivate the development of wall painting machine.

### 1. INTRODUCTION

Building and construction is one of the major industries around the world. In this fast-moving life construction industry is also growing rapidly. But the labors in the construction industry are not sufficient. This insufficient labor in the construction industry is because of the difficulty in the work. In construction industry, during the work in tall buildings or in the sites where there is riskier situation like interior area in the city. There are some other reasons for the insufficient labor which may be

because of the improvement the education level which cause the people to think that these types of work are not as prestigious as other jobs. Despite the advances in the robotics and its wide spreading applications, painting is also considered to be the difficult process as it also has to paint the whole building. To make this work easier and safer and also to reduce the number of labors wall painting machine was introduced.

## 2. RELATED WORK

Even our project have some disadvantages but when it compared with the advantages disadvantages are negligible

1. The wall painting machine need a power source which is given by a motor and a battery
2. The wall painting machine can only paint the wall to a limited height and width
- 3.The wall painting machine have to be monitored for its adjustments and movements
- 4.wall painting robot
- 5.Design and development of semi wall painting machine.

As we all know these generation people need smart work than hard work. They need instant outputs and t since painting of the building is an extraordinary finishing of a building or wall they need a speed in painting. Which can not be done by the labourers, so we came up with a solution called wall painting machine which haleps in painting a wall in no time.

## 3. IMPLEMENTATION

The painting chemicals can cause hazards to the painters such as eye and respiratory system problems. Also, the nature of painting procedure that requires repeated work and hand rising makes it boring, time and effort consuming. These factors motivate the development of an wall

painting machine. This project aims to develop the interior wall painting machine. This Machine is not designed using complicated components. This machine is simple and portable.

### Methodology

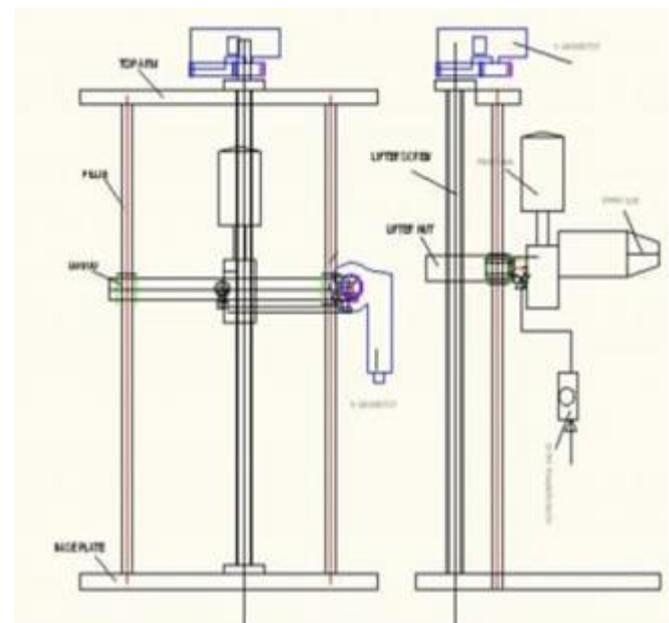
Wall painting machine is a simple device that carries the entire paint application setup from one end to other end of pipe and simultaneously applies a uniform spray coat of paint on the wall pipe. This machine easily solves the above problem which otherwise is really difficult without such aid. The machine needs compressed air supply for movement of the robot and painting operation. But the labors in the construction industry are not sufficient.this insufficient laborers in the construction industry is because of the difficulty in the work. In construction industry,during the work in tall buildings or in the sites where there is more risky situation like interior area in the city.There are some other reasons for the insufficient labor which may be because of the improvement the education level which cause the people to think that these types of work is not as prestigious as the other jobs.the construction industry is labor-intensive and conducted in dangerous situations.In this fast moving life construction industry is also growing rapidly. But the labors in

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#### 4. EXPERIMENTAL RESULTS

Wall Painting machine which helps to achieve less human interaction and low cost painting equipment. Despite the advances in and its wide spreading applications,interior wall painting has shared little in research activities. Despite the fact that the utilization of spreadingframeworks for inside painting was at that point indicated to be attainable and helpful, a ton of tests must be completed later on to convey an exceedingly self-governing for inner part painting.The wall painting machine is made up of iron rods battery bearing chainages spray gun, they present a technique for increasing the speed at which a standard industrial manipulator can paint

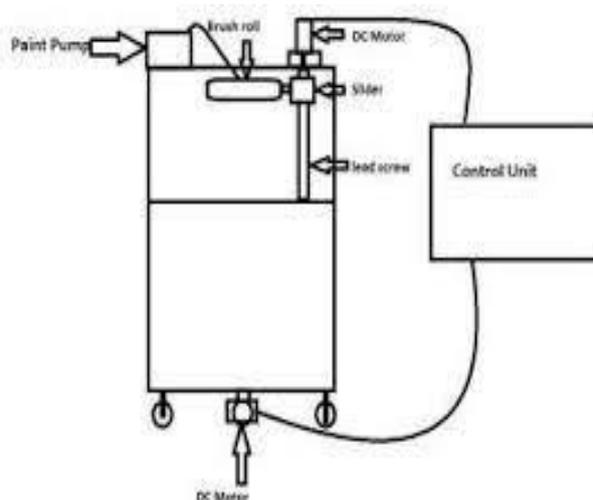
a wall surface. The approach is based on the perception that a small error in the direction of the end effectors does not influence the quality of the paint job. It is far more important to maintain constant velocity throughout the orbit. In doing this, they cast the problem of finding the optimize orientation at each time step into a convex minimized problem that can be solved efficiently and in real time. They show that aim to allow the end effectors to keep higher constant velocity throughout the orbit guaranteeing constant paint coating and substantially decreasing the time needed to paint the wall.



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area in the city. There are some other reasons for the insufficient labor which may be because of the improvement the education level which cause the people to think that these types of work is not as prestigious as the other jobs. The construction industry is labor-intensive and conducted in dangerous situations. The painting chemicals can cause hazards to the painters such as eye and respiratory system problems. Also, the nature of painting procedure that requires repeated work and hand rising makes it boring, time and effort consuming. These factors motivate the development of an wall painting machine. This project aims to develop the interior wall painting machine. This Machine is not designed using complicated components. This machine is simple and portable.

#### Schematic Diagram



#### 5. CONCLUSION

We have designed and fabricated the prototype model for testing purpose which is limited to a certain height, but it can be developed and the limit can be increased. Also, our model requires an external compressor for the compressed air this can be eliminated by using an in-built compressor

#### 6. REFERENCE

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