

Automatic Plastering Machine

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Abstract-Due to manual process of wall plastering on construction site, there is a huge scale requirement of labour and hence the labour cost is responsible for increasing the price of construction or project work. The quality of work is mostly depending on the skill of the labour work in manual plastering process.

The solution of these problems is just to automate the process, so that there will be a saving of period and cost and getting good plaster finishing to the walls. The plastering machine can plaster the walls automatically and very smoothly. Due to which the process will fast and there will be saving of cost and time this will helps to reduce the total cost, total time which ultimately responsible for the growth and hence the progress rate of a country is going to increase.

I. INTRODUCTION

Construction sector is responsible for a progress of any country, because most of the growth of the nation is depending upon industrialization, civilization, transportation etc. which compulsorily has their initial stage of building construction or simply construction. It is a biggest economic sector because of it the development trade in most countries amounts to 10-20% of the total national product, still due to labour demand and most of the work is repetitive it is a slow manual process [2]. So for improving the economic growth of the country and indirectly developing the lifestyle of the country's people there must be need of improving the techniques of working. Construction sector is unique sector which required more time and money, having very slow and stepwise process.

Presently in construction sector near about all the processes are manual which required more time for their completion. Due to which the cost of the project is maximum, hence it must be necessary to automate the processes in the construction work and improve the efficiency of it. Wall plastering is the main procedure among the processes followed in the building construction, which is used for plaster the walls of the construction to get smooth and finished wall surfaces. Plastering is also essential to give specified strength to the walls; it protects the walls from moisture from both the sides. Wall plastering also gives good look to the walls and ultimately creates best residential condition in the particular room. But in present days wall plastering is being done manually in most of the part of world i.e. the procedure of wall plastering is being done with the assist of labours. Due to which the process is lengthy. So this is an initiative towards the automation in plastering technique.

1.1 PROBLEM IDENTIFICATION

In the manual plastering technique, the crucial factor is skilled labour because of which plastering has been done on the walls, but presently there is lack of skilled labours due to which it is very inconvenient to complete this process. The labour requires more time to finish the process which increases their wages and hence the total plastering or labour cost increases.

1.2 OBJECTIVES

From the above discussion about old plastering techniques, problems in old plastering techniques, their downsides, background of the plastering method and the decided aim to be achieve following are some objective have been decided.

1. This Machine will reduce the human work.

2. It will be straight forward in construction and simple to control.
3. Higher excellence of the plaster can acquire.
5. It will assist to save labour cost.
6. It will avoid wastages of the mortar, thus to save the cost.

II. WORKING

- Put appropriate proportion of sand, cement and water in tank
- Then connect two pulleys by using belt
- Start the motor
- Motor still running up to mortar is ready to spray.



Fig. Working of mortar mixture machine

- After mixing mortar, take it out from tank.
- Connect compressor spraying gun with the help of pipe.
- Take mortar in to bucket of spraying gun.
- Start the compressor.
- Press handle when we want to spray mortar on surface. If we want stop spraying release handle.

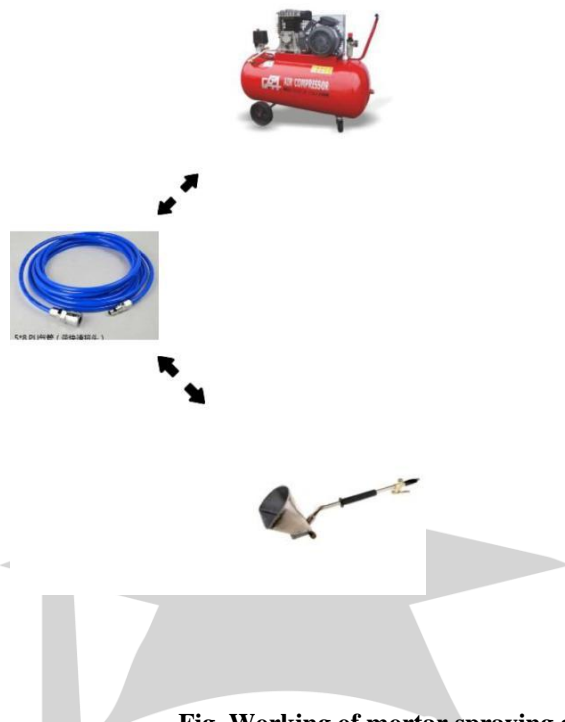


Fig. Working of mortar spraying gun

III. COMPARISON

Sr. No.	Objective	Existing method	Automatic plastering machine
1.	No. of labours required	More	1 or 2
2.	Time required	More	Less
3.	Material	More material required compared to plastering machine as there is more wastage of mortar.	Less material required, compared to conventional method as less material wastage is there.
4.	Cost	Comparatively high cost. (As number of labours and time required is more)	Comparatively low cost. (As no. of labours and time required is less)

IV. CONCLUSION AND RECOMMENDATION

From the project there is a lot of things have been learn , the most important thing is nothing is impossible, if you need to make a solution you must use your knowledge to find the solution or alternatives , other thing the appropriate method to make a good design . The project contributes in reducing the effort of humanity and cost.

V. REFERENCES

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