

FABRICATION OF POTATO CHIPS MAKING MACHINE

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ABSTRACT

This paper discusses about the fabrication of potato chips making machine, the small industry will having requirement of proper skills about it for increasing rate of cutting chips with minimum manual effort that times it was used sharp edges of cutter by the operator due to this production rate was not better and producing slice having thickness which has unequal but in the present life used machinery for increasing productivity in a short time. In this project we used the paddle stage bearing (UCP205). the bearing is used for this project of shaft diameter 25mm. The machine totally operate on electric energy that's way we used A.C motor for starting the process. This machine is fabricated for decreasing manual effort and increasing productivity.

Keywords:- potato slice ,chopper, conveying system, chopper , potato ,cutting blade

Aim : To fabricate the potato chips making machine

INTRODUCTION

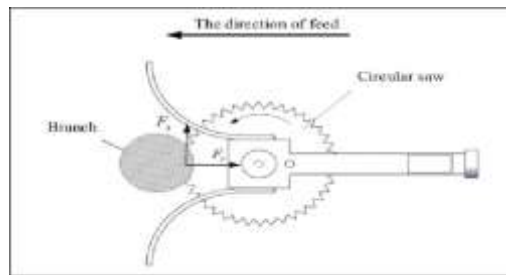
According to Technology Research Centre in the world says that the potato is the king of all vegetable because it contain Solanum Tuberosum & near about 80% of water and 20% of dry matter. The dry matter is highly edible protein content which makes it as nutritionally superior vegetables & staple food not only in our country but also in the whole world. Improved processing requires use of tools and techniques that are reliable, efficient, labor saving, safe, simple, and cost effective. The twisted potato slicing machine is simple workable and efficient machine, which can be adopted to reduce mechanical energy input in potato processing and also to improve product quality.



FABRICATION OF POTATO CHIPS MAKING MACHINE

For the fabrication of Potato chips making machine the following various process is carried out.

I.CUTTING: Cutting is the opening or separation of physical object, into two or more portion, by the application of direct force. Cutting is a phenomenon of shearing and compressive forces. For the making metal frame which is the chassis of our machine a metal pipe having square cross section is used. For that breaking it into various sizes as per the requirement cutting operations were performed.



. 5.I.A : Cutting operation

II.WELDING: It is a fabrication process of joins metal by using application of heat. Heat effect cause metal to be melt the parts together and allow them to cool causing fusion. Herssese *arc* welding is used to join metal to metal by using electricity to create heat to melt metal and electrode is used to as a filler rod. The various parts of pipe joint together by means of arc welding to form single frame. Whereas for mounting motor, solar plate, chain drive welding process were performed.

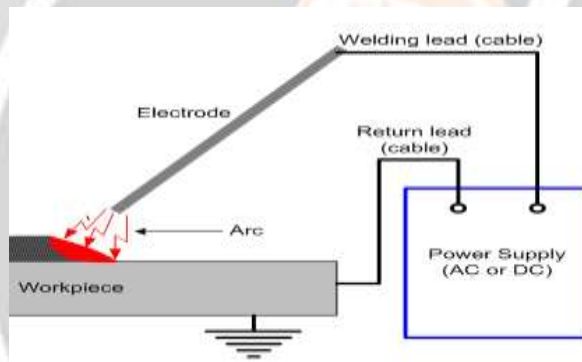


Fig. 5.II.A : Arc welding

III.DRILLING: It is a process of cut a hole of circular cross-section in solid materials by using drill bit. The bit is a rotary cutting tool which pressed against the work piece, this forces the cutting edge and chips from the hole as it is drilled. For making groves for fitting nut and bolt drilling operation carried out on frame.

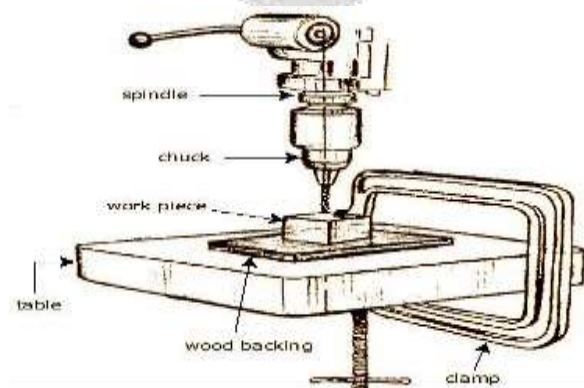


Fig. 5.III.A : Drilling operation

IV.GRINDING: It is an abrasive machining process that uses a grinding wheel as a cutting tool. It is used for to safe and finish component made of metals and others. Before the welding process every part whose have to weld going through grinding process. I which cutting side of part get fine surface so it provide good strength of welding area.

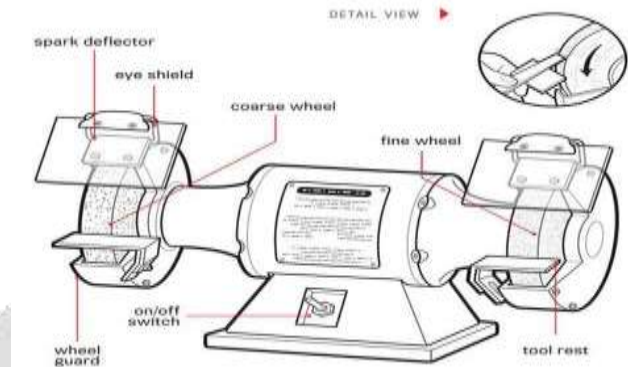


Fig.5.4: Grinding operation

OBJECTIVES

- To design and fabricate the motorized potato chips making for the people which are not employment
- To design and fabricate the linkages mechanisms to smooth movement of all three part of machine.
- To make a device which is suitable economically for the public taking in to consideration the cost factor this device is suitable and cost efficient..
- To reduce manual effort
- To achieve large production of potato chips
- Portability of machin
- Low cost production
- Time consuming
- To make a complete mechanical device

CONCLUSION

the potato chips machine is the time consuming machinery which give the potato chip of 0.25mm of slice after completion of process.

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