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A futuristic digital interface with a glowing globe in the center. The background is dark blue with various data visualizations, including bar charts, line graphs, and network diagrams. Text elements like 'BUSINESS', 'NETWORK SEARCH', and 'LORDING 100%' are visible. A person's hand is seen at the bottom, interacting with the interface.

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Design and Fabrication of Dual Side Shaper Machine

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ABSTRACT: Many industries strive to be at top position in their specialty. This paper describes about dual side shaper machine using a scotch yoke mechanism which can be used in industries for cutting process. A Shaper is a machine used for shaping (metal removal) operation on the work piece. A usual shaper machine operates by a principle of Whitworth quick return mechanism where materials are processed at one end and other end remains idle. But in a dual side shaper machine, materials are processed at both ends which become advantageous when compared to usual shaper. Nowadays, Industries try to achieve high production rate at a minimal amount of time, cost etc. Usage of dual side shaper machine eliminates most disadvantages faced by a single side shaper. The main advantage of dual side shaper is that it decreases time as well as production cost. Thereby it increases productivity. This model uses a single power source which can be connected to gears for increasing or decreasing the speed of cut.

KEYWORDS: Metal Frame , AC Motor ,Chain Sprocket ,Shaping tool ,Vise ,Quick return mechanism ,Links

I. INTRODUCTION

Many industries strive to be at top position in their specialty. To be at top position they have to be best in every aspect that includes finishing jobs at time, providing better quality, etc. the machines like shaper machine, planner, broaching machine have more cycle time which reduces production rate of the jobs. It's true that machines like CNC are cut over these machines but they are rather costlier. The modification in old shaper machine can be done to increase production rate at Many industries strive to be at top position in their specialty. To be at top position they have to be best in every aspect that includes finishing jobs at time, providing better quality, etc. the machines like shaper machine, planner, broaching machine have more cycle time which reduces production rate of the jobs. It's true that machines like CNC are cut over these machines but they are rather costlier. The modification in old shaper machine can be done to increase production rate at These machines are used for machining very small area of plain surface, vertical surface, angular surface, grooving etc. It removes the materials from job only at forward stroke.

II. RELATED WORK

The basic aim of this paper is to study and know the research Dual Shaper machine reduces the production cost as well as the time. In this project, a dual side shaper machine is designed with the help of quick return mechanism, the rotary side Many industries strive to be at top position in their specialty. To be at top position they have to be best in every aspect that includes finishing jobs at time, providing better quality, etc. the machines like shaper machine, planner, broaching machine have more cycle time which reduces production rate of the jobs. It's true that machines like CNC are cut over these machines but they are rather costlier. The modification in old shaper machine can be done to increase production rate at These machines are used for machining very small area of plain surface, vertical surface, angular surface, grooving etc. It removes the materials from job only at forward stroke. So it takes more machining time to complete The height of the table can be adjusted to suit the work piece, and the table can traverse sideways underneath the reciprocating tool, which is mounted on thermal. Table motion may be controlled manually, but is usually advanced by automatic feed mechanism acting on the feed screw. The ram slides back and

forth above the work. The ram slides back and forth above the work. At the front end of the ram is a vertical tool slide that may be adjusted to either side of the vertical plane along the stroke axis. This tool-slide holds the clapper box and tool post, from which the tool can be positioned to cut a straight, flat surface on the top of the work piece. The tool-slide permits feeding the tool downwards to deepen a cut. The tool-slide permits feeding the tool downwards to deepen a cut. When a load is placed on the input rod of the scotch yoke by an actuator, sideward thrust causes the input rod and yoke arm to bow and twist.

III. METHODOLOGY

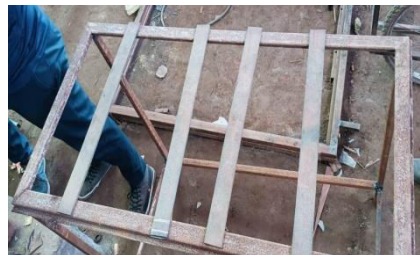
Exemplar based inpainting technique is used for inpainting of text regions, which takes structure synthesis and texturesynthesis together. The inpainting is done in such a manner, that it fills the damagedregion or holes in an image, with surrounding colour and texture. The algorithm isbased on patch based filling procedure. First find target region using mask image and then find boundary of target region. For all the boundary points it defined patch andfind the priority of these patches. It starts filling the target region from the highestpriority patch by finding the best match patch. Thisprocedure is repeated until entire target region is inpainted.

The algorithm automatically generates mask image without user interaction that contains only text regions to be inpainted.

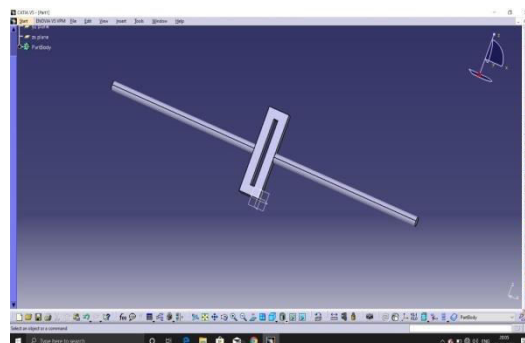
IV. EXPERIMENTAL RESULTS

Figures shows the results of text detection from an image and inpainting by using exemplar based Inpainting algorithm. Figs. 2, 3, 4 (a) shows the original image. (b) is the image obtained by applying first set of criteria. All objects whose area greater than 10000 and filled area greater than 8000 are eliminated and major axis lengths are in between 20 to 3000 are considered to be text. Still, some small non-text objects are detected.

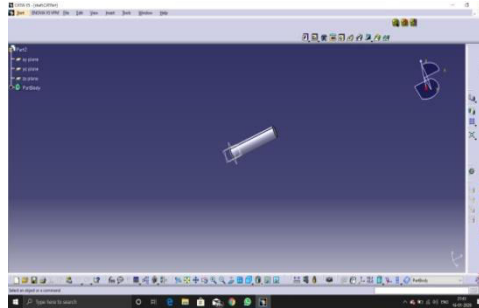
1. Metal Frame :



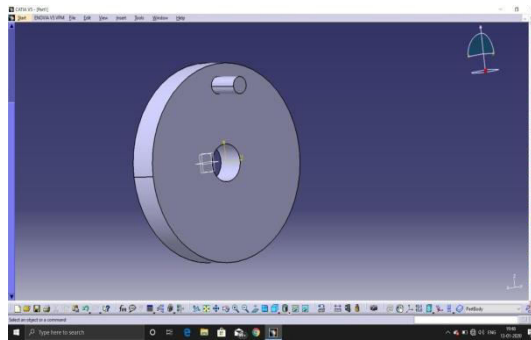
2. Slotted Lever:



3. Shaft:



4. Crank:



V. CONCLUSION

A shaping machine (usually called shaper) is mainly used for producing flat surfaces, which may be horizontal, vertical or inclined. Sometimes irregular or curved surfaces are also produced by shapers. In this project while first. Ram moves forward direction, second ram will move in opposite direction to that of the first one simultaneously. when first ram moves forward direction material will be removed from the work piece, at the same time Material will not remove while second ram move reverse direction, this dual ram shaping machines the stroke length can be varied depends upon the changing the distance between centre of the bull gear and pivot pin.

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