SATYAM SANGWAN

(Computer Numerical Content Machine)

Orgital Fabrication Lab.

Aim: To write CNC codes and perform the process (milling and twining using the corritor

Materials required:

:) Milling machine

ii) Tuening machine

)) Nylon on acoustin

Machining is a process in which a material (often metal) is cut to a desired final shape and size by a contocolled material -removal process

Milling is a machining process that involves the use of cutting tools that are notated at a set speed and then brought into the contact with a work piece.

Turning is a form of pmachining, a material removal process, which is used to create rotational parts by cutting away unwanted material.

Gr-code is the most widely used computer numerical control programming, language. It is used mainly in computer manufacturing to control automated machine

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## Some of the Grades.

Goo - Rapid move

- Linear move.

Circular interpolation

G03 to Counterclockwise interpolation

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- Absoluted coordinate potentiam ostantino a pol

M-codes

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End of Paragram

Spindle On Clockwise.

Moy - Device on Counter Clockwise.

- Tool Change

- Coolant on

Mog - Coolant off

Milling: Program to machining of the given material. 600 X5 Ylo Z5 to 2 52000 6 9X G01 I. 8 X Z -1 5.2 G01 X 2 5 7 200 78.7 Goi F.FX 00 A 602 x 41 12 600 Goi X46 X6.7 GOI Y25 (m00 603 XYI Y30 R5 SOFX (00) 600 01-5 Gol Z1 0EX 000 £ 8X 60 X20 RSZOX 602 od A Gno X5-5410-0X Gol Z205 F.8X 102 . Set up the milling machine with the acrylyn material. Open the application and write the code in it and Set the home axes and touch off. accordingly Stort the milling process and wait untill the process comp. Tuening: she is be used when the prince X9 Z1 F50 S2000 Johnston 600 Desiry milling, the conthe spindle betold 18.8X GOD denostly otherwise the motorial on or-5 tos & G01 X8.7 Gol ZYEG SIF FLO WENT BOOKE PORTS 600 X801 Z1 600 Z-1001-56-G01 X8.7 - Z-10 GoD

600 X8.7 Z1 GOI Z-5 600 Goi X8.7 X 7.9 601 GOO ZI Z-10 Goo X6,9 Gol X8.7 GO1 Z-5 600 ZI 600 X7,7 GOI X8.7 901 2-10 GOO ZI G01 X8.7 X6.7 600 600 ZI Z-5 Goo X7.5 601 X8.7 Goi Z-10 600 ZI G01 X8.7 X6.50 600 500 ZI 601 X6.5 Z-5 600 X7.5 X8.7 2-5 GOI Z-10 GOI X8.7 fice on the source filling or the Precaution Rapid more should not be used when the tool is touching the material. · During milling, twen on the spindle before moving it denearly, otherwise the material or the tool may get damaged. · If something goes wrong , turn off the process, then of the spindle. In twining, the cut on the material should not be more than 0.2 mm