ENGT 3652 Project 3: Threaded Bolt Circles

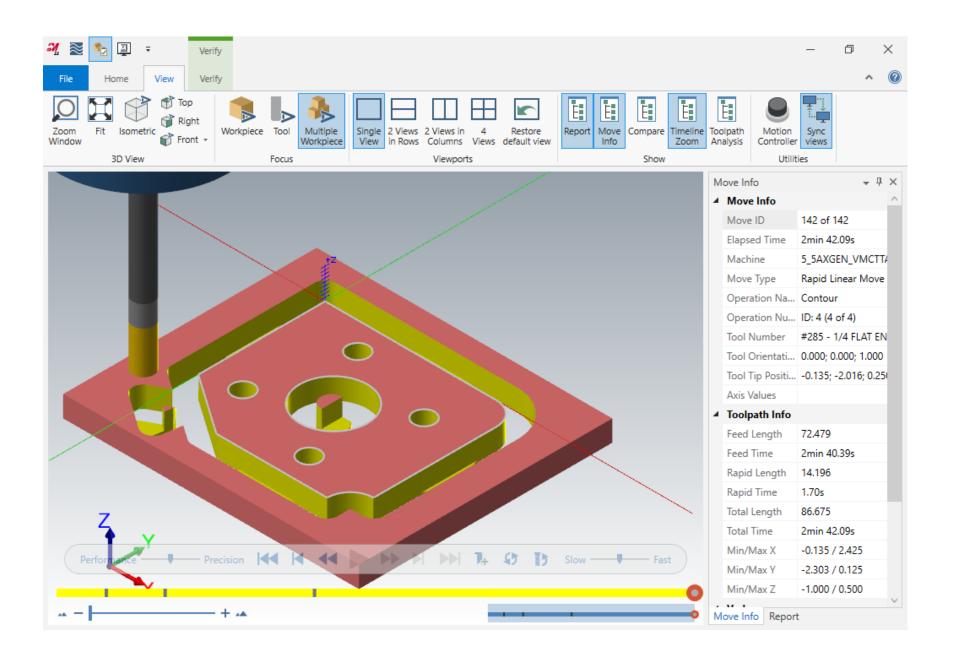
Leomar Durán

 $27^{\rm th}$ April 2023

Chapter 1

Verification of operations in MasterCAM





Chapter 2

The MasterCAM-generated Gcode

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N410 Z.2
044800(Duran - Bolt Circles)
                                             N420 G1 Z-.0675 F12.22
                                           N430 X1.075 F27.5
(DATE=DD-MM-YY - 27-04-23 TIME=HH:MM -
→ 06:13)
                                             N440 G3 X.825 Y-1. IO. J-.25
                                        N450 X1.1 Y-1.275 I.275 J0
N460 X1.375 Y-1. IO. J.275
N470 X1.1 Y-.725 I-.275 J0
N480 X.825 Y-1. IO. J-.275
(MATERIAL - ALUMINUM INCH - 6061)
                                             N450 X1.1 Y-1.275 I.275 JO.
( T110 | NO. 7 DRILL | H110 )
                                             N470 X1.1 Y-.725 I-.275 JO.
( T219 | 1/4-20 TAPRH | H219 )
( T285 | 1/4 FLAT ENDMILL | H285 )
N100 G20
                                              N490 X1.075 Y-1.25 I.25 J0.
N110 GO G17 G40 G49 G80 G90
                                             N500 G1 X1.2084
N120 T110 M6
                                              N510 Y-.75
N130 GO G90 G54 X.7075 Y-.3202 AO. S7601 M3 N520 Z-.135 F12.22
N140 G43 H110 Z.5 M8
                                               N530 X1.075 F27.5
N150 G99 G81 Z-.8 R.5 F14.59
                                               N540 G3 X.825 Y-1. IO. J-.25
N160 X1.7798 Y-.6075
                                              N550 X1.1 Y-1.275 I.275 J0.
N170 X1.4925 Y-1.6798
                                               N560 X1.375 Y-1. IO. J.275
N180 X.4202 Y-1.3925
                                              N570 X1.1 Y-.725 I-.275 J0.
N190 G80
                                               N580 X.825 Y-1. IO. J-.275
                                               N590 X1.075 Y-1.25 I.25 J0.
N200 M5
N210 G91 G28 Z0. M9
                                               N600 G1 X1.2084
N220 AO.
                                               N610 Y-.75
N230 M01
                                               N620 Z-.2025 F12.22
N240 T219 M6
                                               N630 X1.075 F27.5
N250 GO G90 G17 G54 X.7075 Y-.3202 AO.
                                           N640 G3 X.825 Y-1. IO. J-.25
                                               N650 X1.1 Y-1.275 I.275 JO.

→ S1222 M3

N260 G43 H219 Z.5 M8
                                              N660 X1.375 Y-1. IO. J.275
N270 G94
                                               N670 X1.1 Y-.725 I-.275 JO.
N280 G99 G84 Z-1. R.5 F61.1
                                               N680 X.825 Y-1. IO. J-.275
                                             N690 X1.075 Y-1.25 I.25 J0.
N290 X1.7798 Y-.6075
                                             N700 G1 X1.2084
N300 X1.4925 Y-1.6798
N310 X.4202 Y-1.3925
                                              N710 Y-.75
N320 G80
                                               N720 Z-.27 F12.22
N330 G94
                                               N730 X1.075 F27.5
                                               N740 G3 X.825 Y-1. IO. J-.25
N340 M5
N350 G91 G28 Z0. M9
                                               N750 X1.1 Y-1.275 I.275 JO.
N360 AO.
                                               N760 X1.375 Y-1. IO. J.275
N370 M01
                                               N770 X1.1 Y-.725 I-.275 J0.
N380 T285 M6
                                               N780 X.825 Y-1. IO. J-.275
N390 G0 G90 G17 G54 X1.2084 Y-.75 A0. S6876 N790 X1.075 Y-1.25 I.25 J0.
                                               N800 G1 X1.2084
N400 G43 H285 Z.25 M8
                                               N810 Z-.07 F12.22
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N820 GO Z.25 N830 X.275 Y-2.303

N840 Z.2

N850 G1 Z-.065 F12.22

N860 G41 D285 X.4184 Y-2.0982 F27.5

N870 G3 X.4636 Y-1.9548 I-.2048 J.1434

N880 X.357 Y-1.75 I-.25 JO.

N890 G1 XO. Y-1.5

N900 YO.

N910 X2.025

N920 G2 X2.3 Y-.275 IO. J-.275

N930 G1 Y-1.725

N940 G3 X2.025 Y-2. IO. J-.275

N950 G1 X.7141

N960 X.357 Y-1.75

N970 G3 X.2136 Y-1.7048 I-.1434 J-.2048 N1510 Y-1.1805

N980 X.0089 Y-1.8114 IO. J-.25 N990 G1 G40 X-.1345 Y-2.0162

N1000 X.275 Y-2.303

N1010 Z-.13 F12.22

N1020 G41 D285 X.4184 Y-2.0982 F27.5

N1030 G3 X.4636 Y-1.9548 I-.2048 J.1434

N1040 X.357 Y-1.75 I-.25 JO.

N1050 G1 XO. Y-1.5

N1060 YO.

N1070 X2.025

N1080 G2 X2.3 Y-.275 IO. J-.275

N1090 G1 Y-1.725

N1100 G3 X2.025 Y-2. IO. J-.275

N1110 G1 X.7141

N1120 X.357 Y-1.75

N1130 G3 X.2136 Y-1.7048 I-.1434 J-.2048 N1670 G91 G28 Z0. M9

N1140 X.0089 Y-1.8114 IO. J-.25

N1150 G1 G40 X-.1345 Y-2.0162

N1160 X.275 Y-2.303

N1170 Z-.195 F12.22

N1180 G41 D285 X.4184 Y-2.0982 F27.5

N1190 G3 X.4636 Y-1.9548 I-.2048 J.1434

N1200 X.357 Y-1.75 I-.25 JO.

N1210 G1 XO. Y-1.5

N1220 YO.

N1230 X2.025

N1240 G2 X2.3 Y-.275 IO. J-.275

N1250 G1 Y-1.725

N1260 G3 X2.025 Y-2. IO. J-.275

N1270 G1 X.7141

N1280 X.357 Y-1.75

N1290 G3 X.2136 Y-1.7048 I-.1434 J-.2048

N1300 X.0089 Y-1.8114 IO. J-.25

N1310 G1 G40 X-.1345 Y-2.0162

N1320 X.275 Y-2.303

N1330 Z-.26 F12.22

N1340 G41 D285 X.4184 Y-2.0982 F27.5

N1350 G3 X.4636 Y-1.9548 I-.2048 J.1434

N1360 X.357 Y-1.75 I-.25 JO.

N1370 G1 XO. Y-1.5

N1380 Y-.9802

N1390 Y-.9502 Z-.23

N1400 Y-.2602

N1410 Y-.2302 Z-.26

N1420 YO.

N1430 X.7733

N1440 X.8033 Z-.23

N1450 X1.4933

N1460 X1.5233 Z-.26

N1470 X2.025

N1480 G2 X2.3 Y-.275 IO. J-.275

N1490 G1 Y-.4605

N1500 Y-.4905 Z-.23

N1520 Y-1.2105 Z-.26

N1530 Y-1.725

N1540 G3 X2.025 Y-2. IO. J-.275

N1550 G1 X1.6795

N1560 X1.6495 Z-.23

N1570 X.9595

N1580 X.9295 Z-.26

N1590 X.7141

N1600 X.357 Y-1.75

N1610 G3 X.2136 Y-1.7048 I-.1434 J-.2048

N1620 X.0089 Y-1.8114 IO. J-.25

N1630 G1 G40 X-.1345 Y-2.0162

N1640 Z-.06 F12.22

N1650 GO Z.25

N1660 M5

N1680 G28 XO. YO. AO.

N1690 M30

Chapter 3

Plot of MasterCAM-generated Gcode in NCViewer



