

2024 BIT  
EVENT 

# FLEXIBILIDADE EM PEÇAS 3D

Pedro Sousa

# Exemplos desenhados e maquinados apenas com ALPHACAM



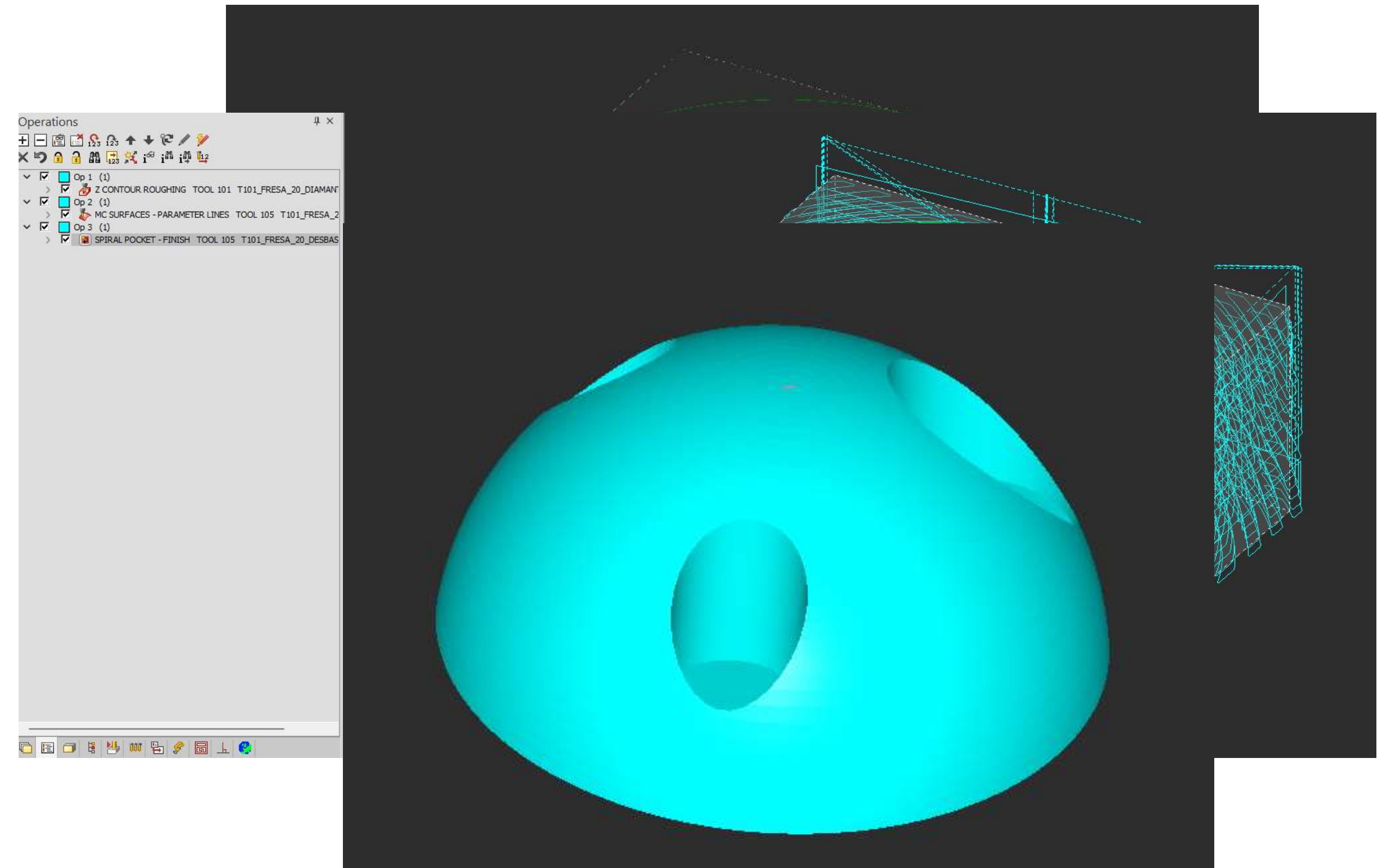
# + ALPHACAM

- Mesa de apoio



# + ALPHACAM

- Planos
- 3D Surface
- Pre-Desbaste
- Acabamento 5 Eixos
- Maquinação Plano de Topo



# + ALPHACAM

- Peça na Máquina



# + ALPHACAM

- Mesa de apoio





# Telha

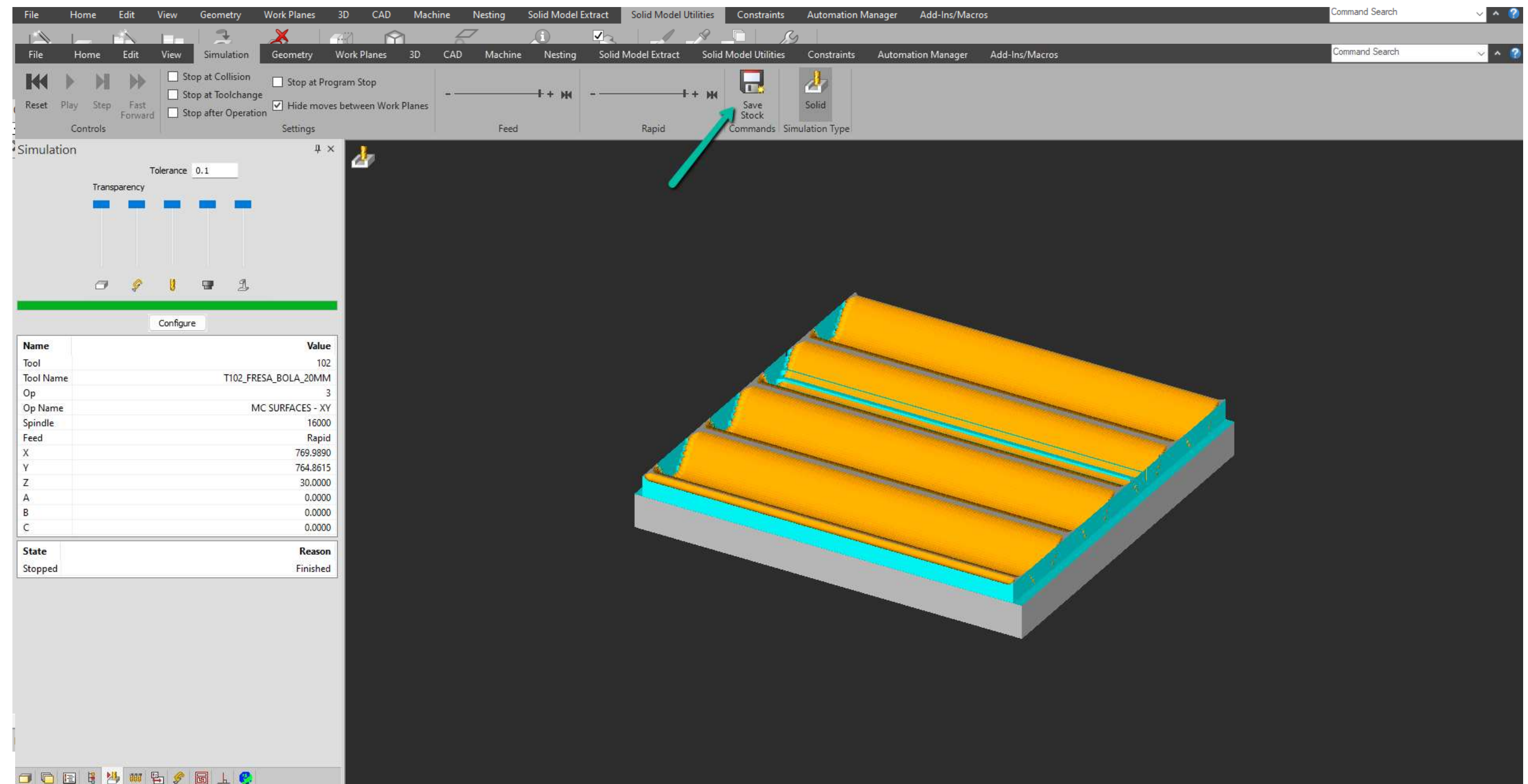
Desenhada integralmente no ALPHACAM  
Maquinada a 3 Eixos  
Peça com maquinação dos 2 Lados

# Lado 1

Desenho de perfil e superfície

Pré-Desbaste e acabamento

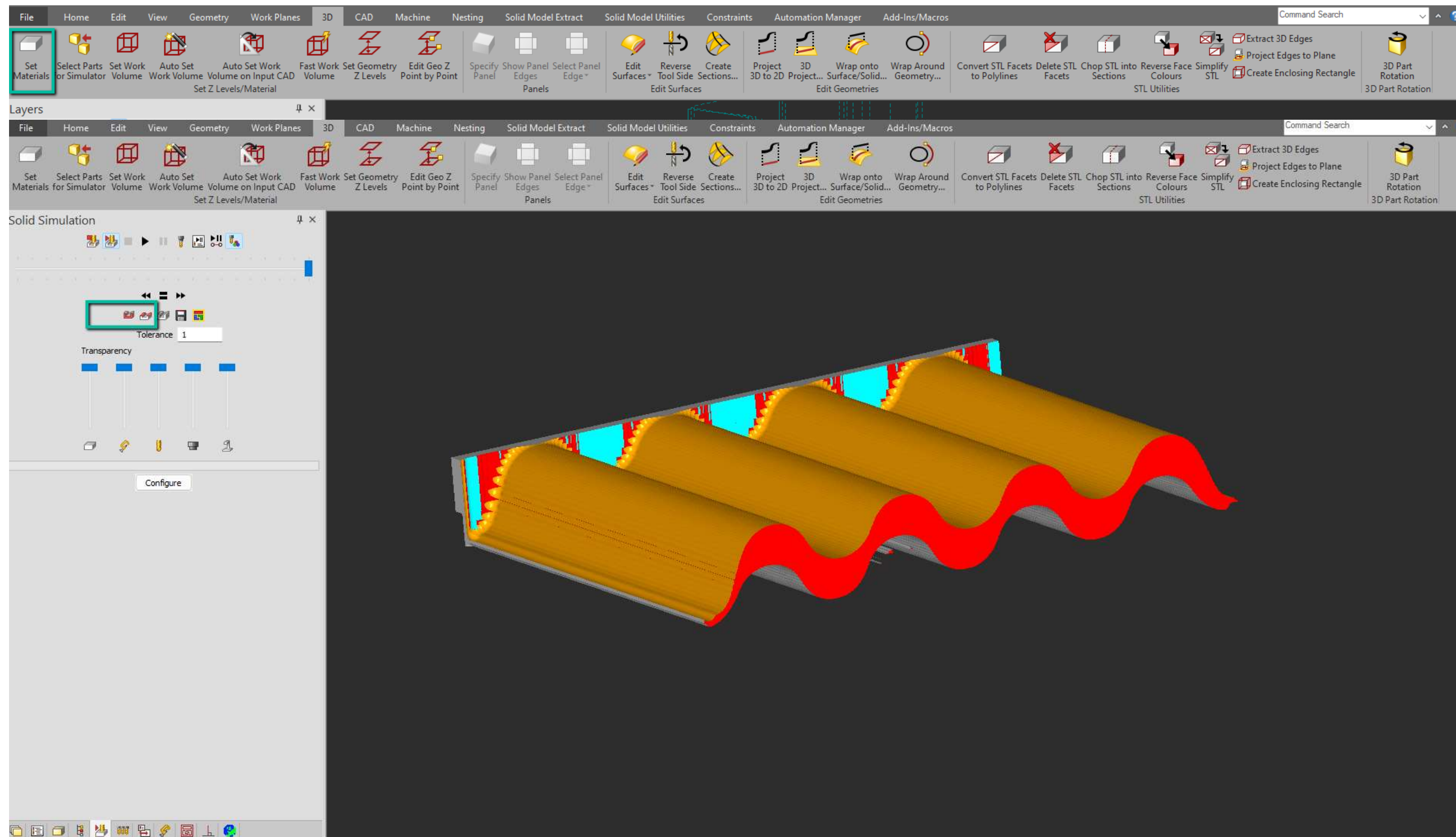
Guardado STL da simulação para usar no lado B





# Lado 2

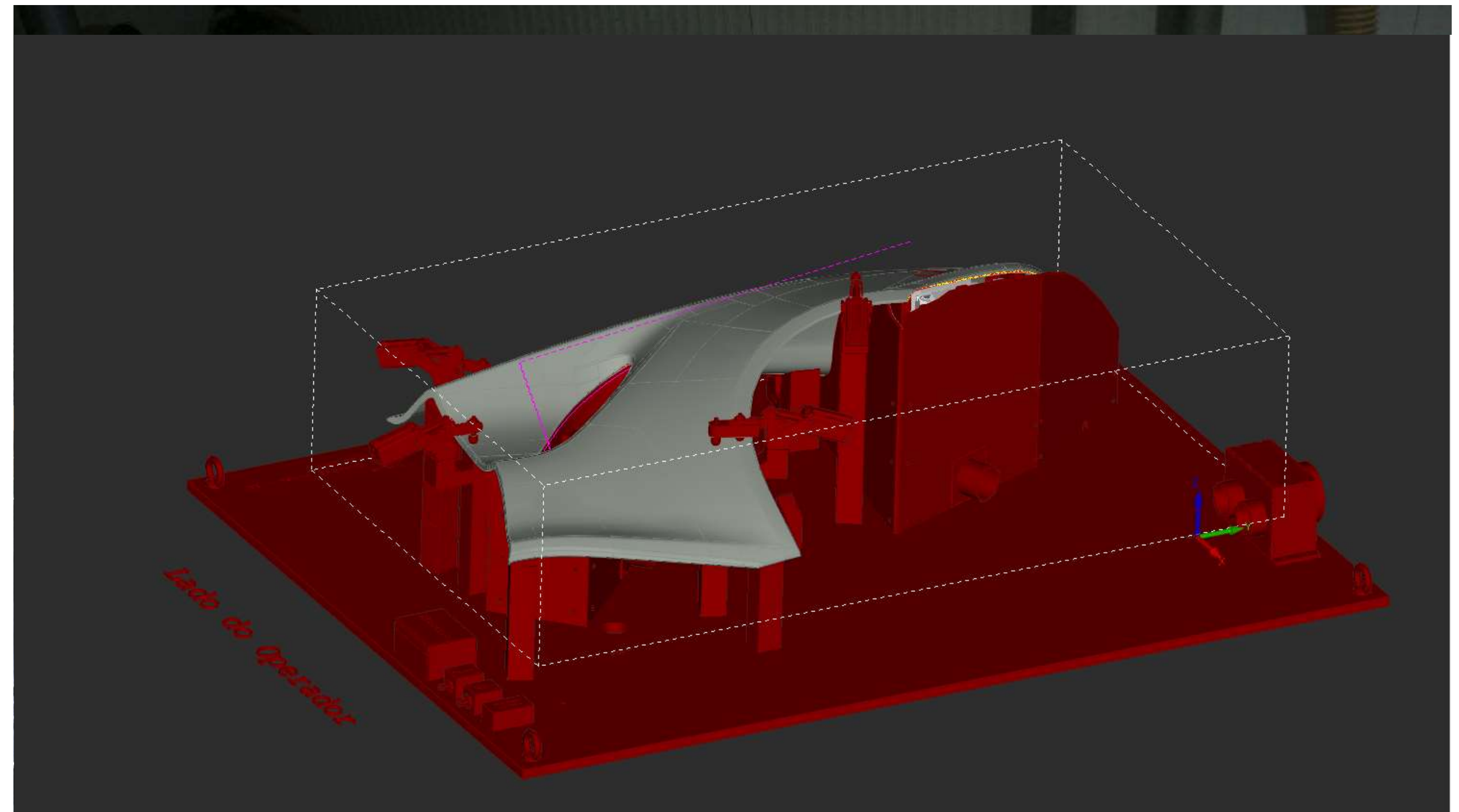
- Desenho de perfil e superfície
- Criado material a partir do STL guardado do lado 1
- Pré-Desbaste e acabamento
- Simulação



# + Sólidos + ALPHACAM

- Porta Curva
- Painel Curvo

Utilização de sólidos facilita o processo de maquinação  
Mais facilmente se garante o encaixe das partes  
Facilita uso de operações mais complexas



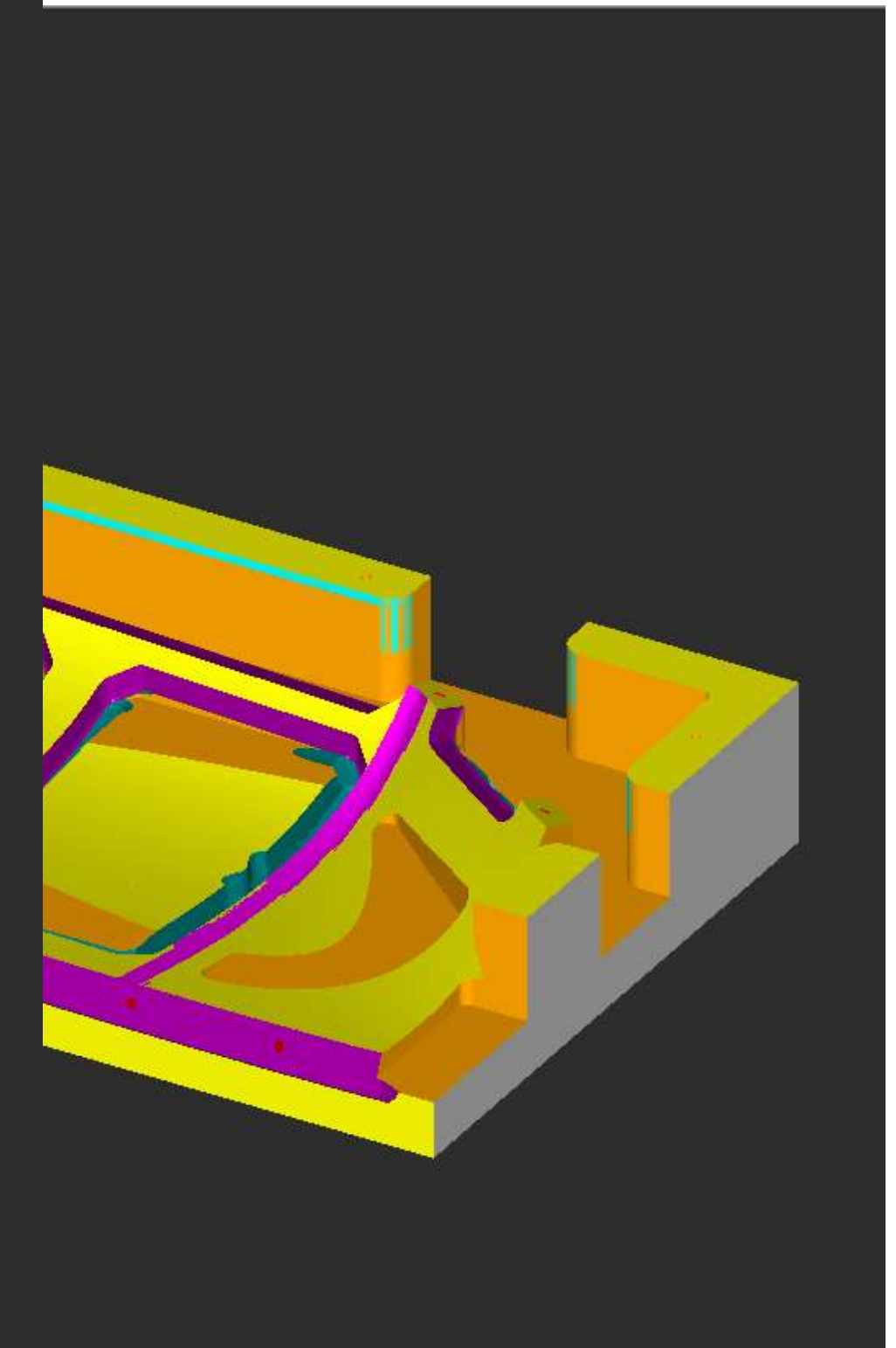
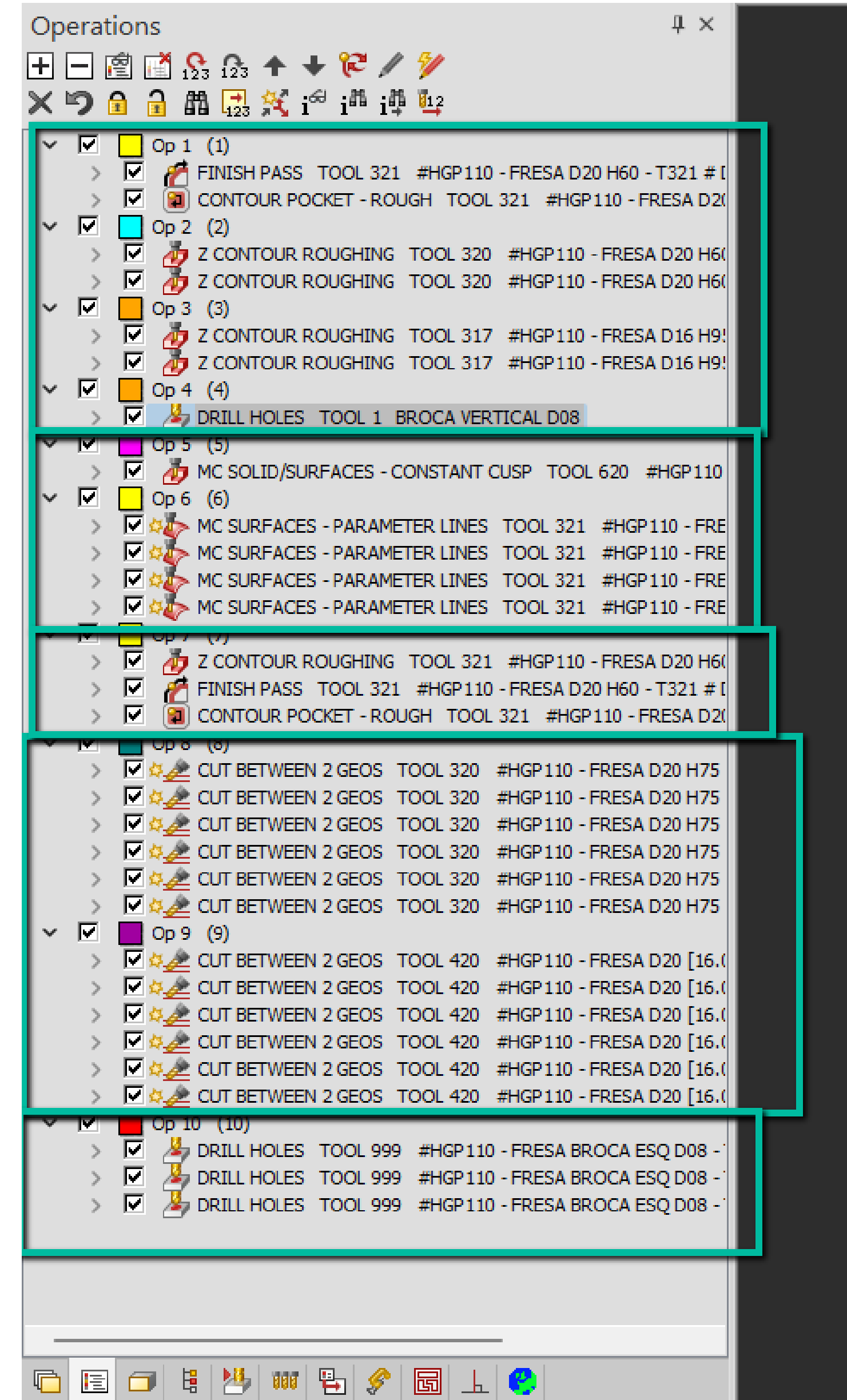
# Porta Curva - Lado1

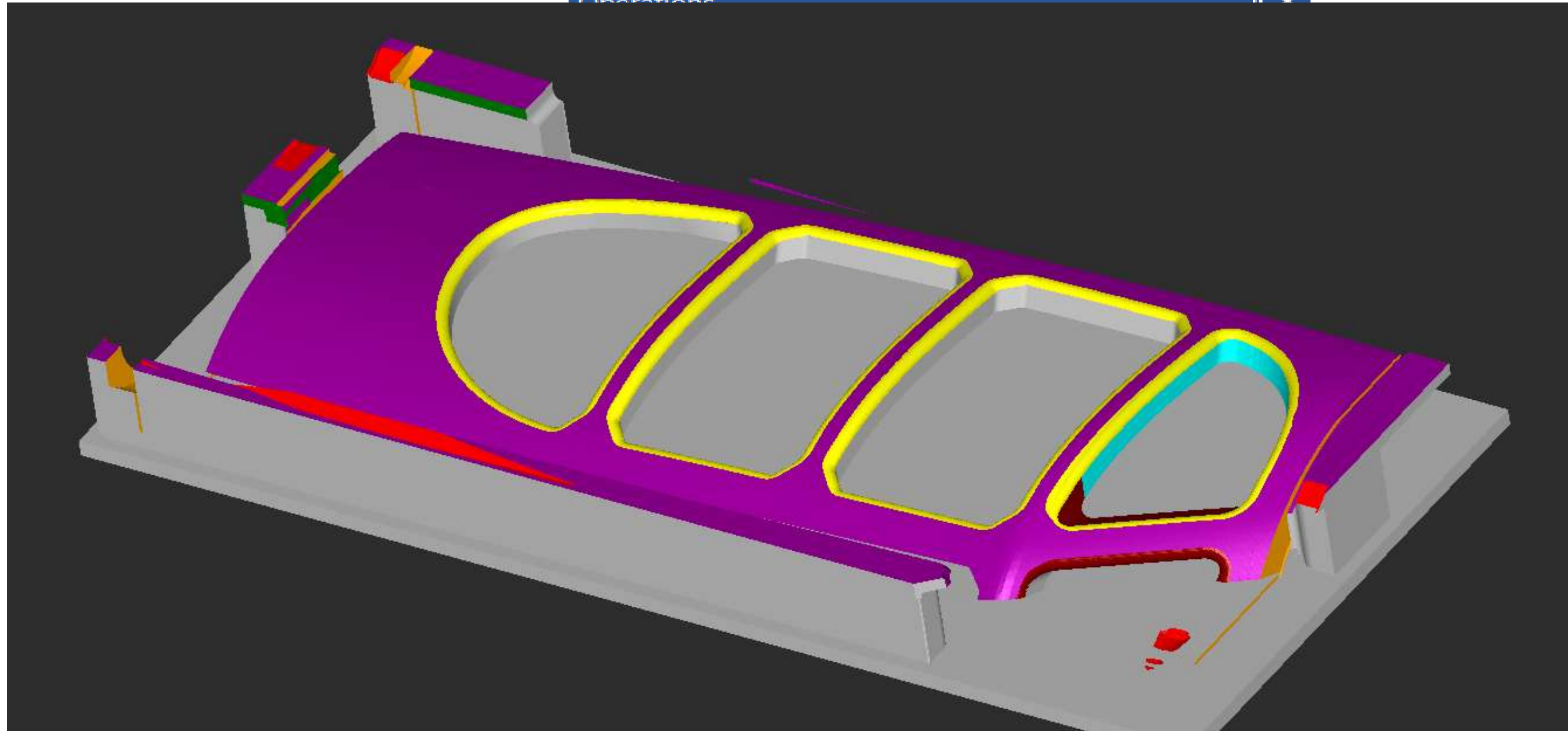
Operações de desbaste

Operações de acabamento

Cortes de 5 Eixos

Furações em planos inclinados





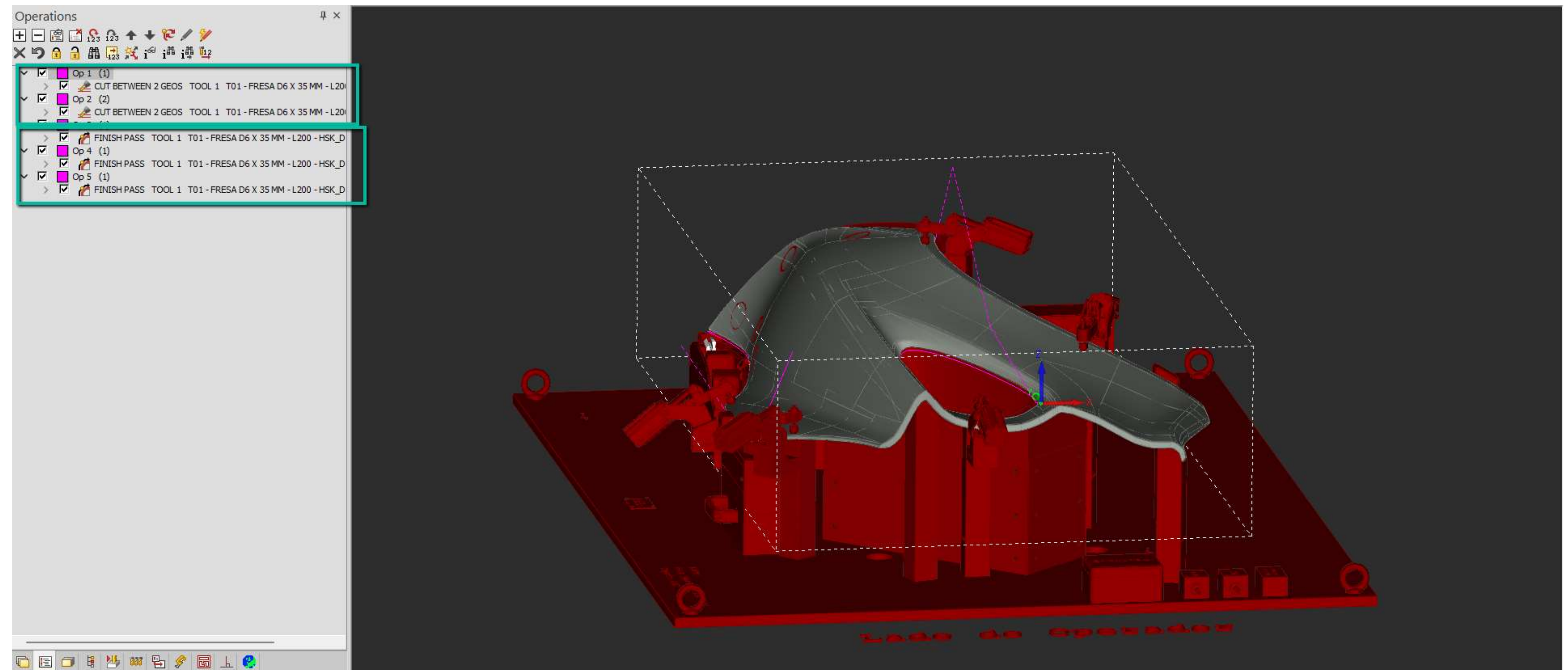
# Porta Curva - Lado2

Criado material a partir do STL guardado do lado 1  
Pré-Desbaste e acabamento  
Simulação



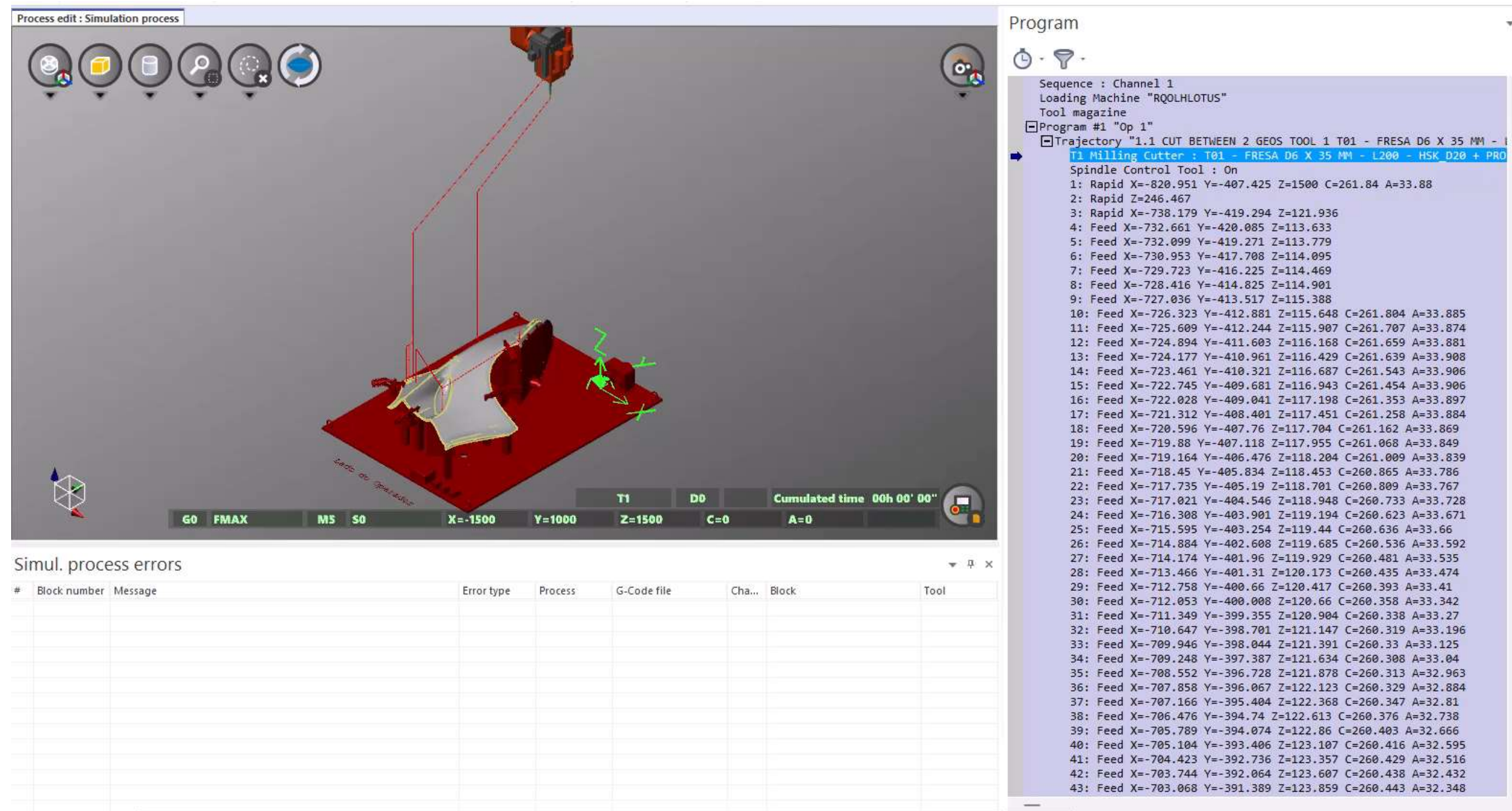
# Painel Curvo

- Cortes 5 Eixos
- Cortes em planos
- Fixações complexas



# Painel Curvo

Simulação do movimento real da máquina guiado pelo pós-processador  
Objetivo de prevenção de colisões



The screenshot displays a CNC simulation environment. The top left shows a 3D view of a machine tool with a red trajectory line. The top right is a 'Program' window containing G-code instructions. The bottom left features a 'Simul. process errors' table, and the bottom right shows machine parameters like 'GO FMAX MS S0 X=-1500 Y=1000 Z=1500 C=0 A=0'.

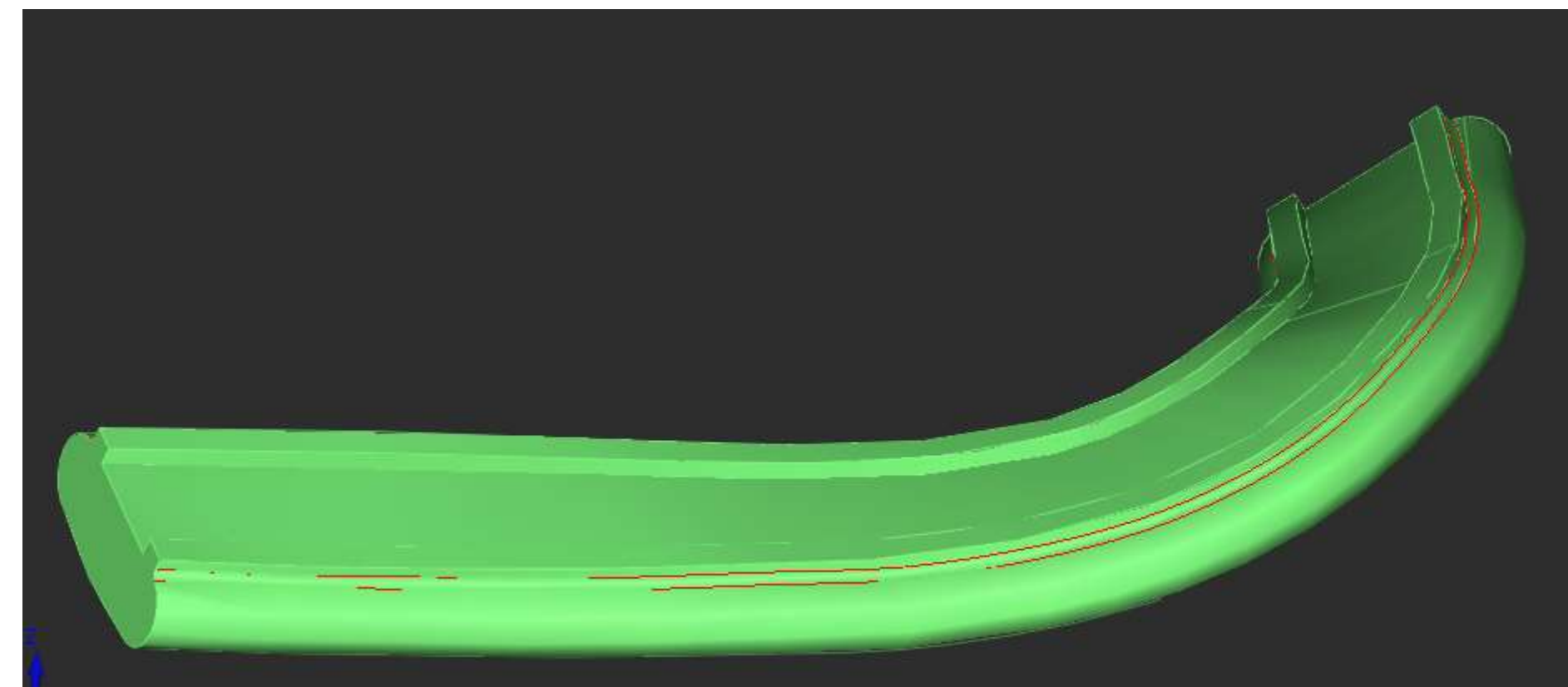
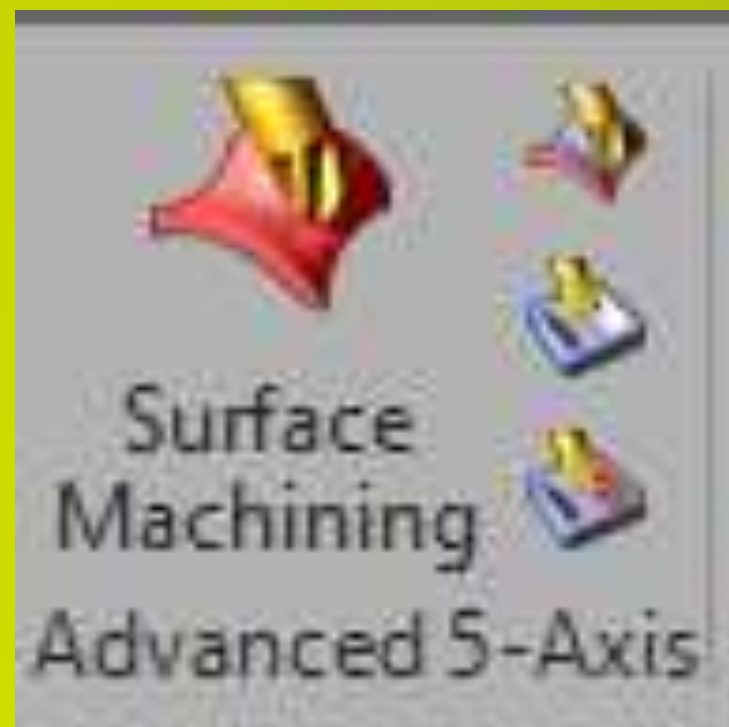
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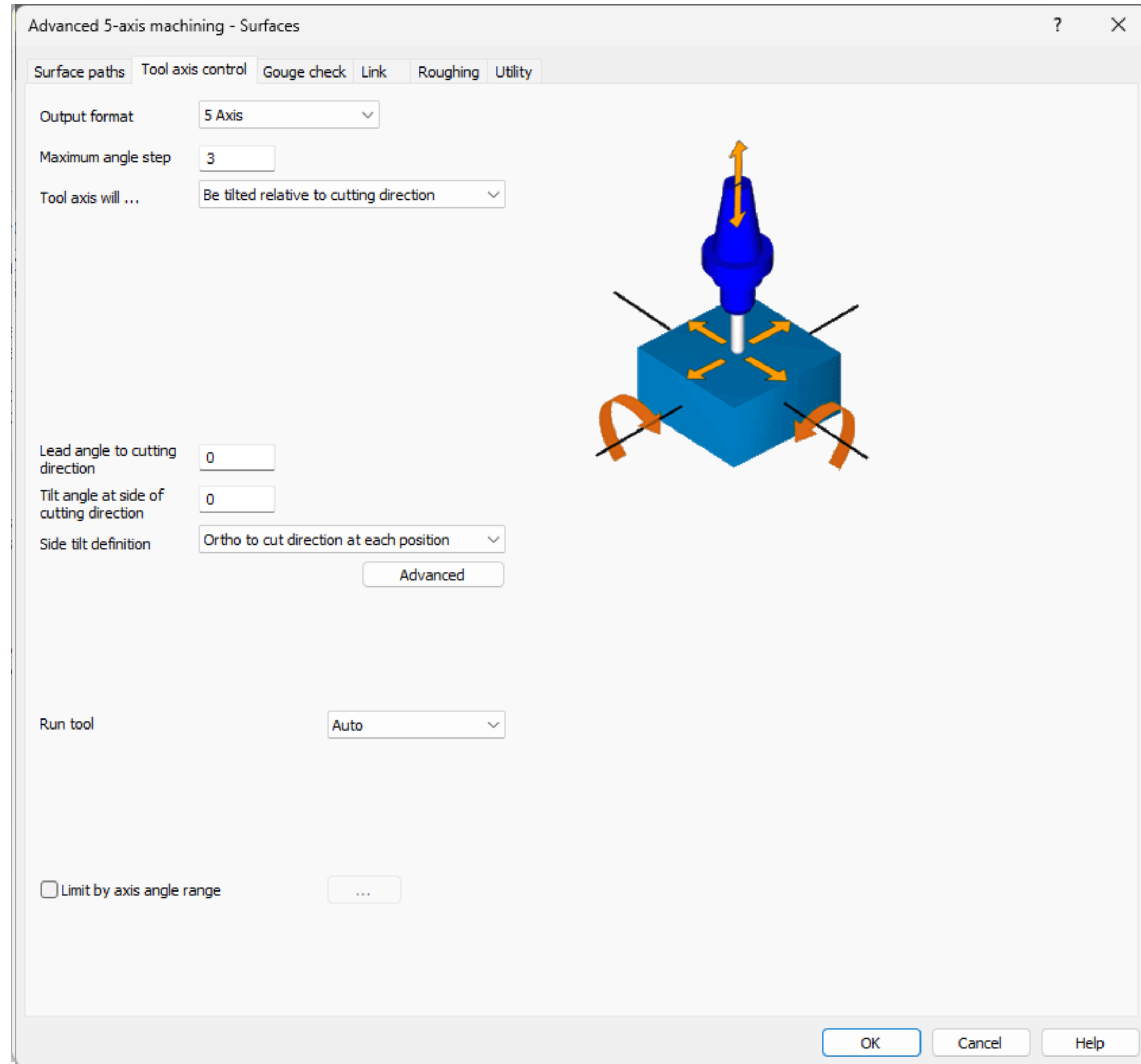
Sequence : Channel 1
Loading Machine "RQOLHLOTUS"
Tool magazine
Program #1 "Op 1"
Trajectory "1.1 CUT BETWEEN 2 GEOS TOOL 1 T01 - FRESA D6 X 35 MM - L
1 Milling Cutter : T01 - FRESA D6 X 35 MM - L200 - HSK D20 + PRO
Spindle Control Tool : On
1: Rapid X=-820.951 Y=-407.425 Z=1500 C=261.84 A=33.88
2: Rapid Z=246.467
3: Rapid X=-738.179 Y=-419.294 Z=121.936
4: Feed X=-732.661 Y=-420.085 Z=113.633
5: Feed X=-732.099 Y=-419.271 Z=113.779
6: Feed X=-730.953 Y=-417.708 Z=114.095
7: Feed X=-729.723 Y=-416.225 Z=114.469
8: Feed X=-728.416 Y=-414.825 Z=114.901
9: Feed X=-727.036 Y=-413.517 Z=115.388
10: Feed X=-726.323 Y=-412.881 Z=115.648 C=261.804 A=33.885
11: Feed X=-725.609 Y=-412.244 Z=115.907 C=261.707 A=33.874
12: Feed X=-724.894 Y=-411.603 Z=116.168 C=261.659 A=33.881
13: Feed X=-724.177 Y=-410.961 Z=116.429 C=261.639 A=33.908
14: Feed X=-723.461 Y=-410.321 Z=116.687 C=261.543 A=33.906
15: Feed X=-722.745 Y=-409.681 Z=116.943 C=261.454 A=33.906
16: Feed X=-722.028 Y=-409.041 Z=117.198 C=261.353 A=33.897
17: Feed X=-721.312 Y=-408.401 Z=117.451 C=261.258 A=33.884
18: Feed X=-720.596 Y=-407.76 Z=117.704 C=261.162 A=33.869
19: Feed X=-719.88 Y=-407.118 Z=117.955 C=261.068 A=33.849
20: Feed X=-719.164 Y=-406.476 Z=118.204 C=261.009 A=33.839
21: Feed X=-718.45 Y=-405.834 Z=118.453 C=260.865 A=33.786
22: Feed X=-717.735 Y=-405.19 Z=118.701 C=260.809 A=33.767
23: Feed X=-717.021 Y=-404.546 Z=118.948 C=260.733 A=33.728
24: Feed X=-716.308 Y=-403.901 Z=119.194 C=260.623 A=33.671
25: Feed X=-715.595 Y=-403.254 Z=119.44 C=260.636 A=33.66
26: Feed X=-714.884 Y=-402.608 Z=119.685 C=260.536 A=33.592
27: Feed X=-714.174 Y=-401.96 Z=119.929 C=260.481 A=33.535
28: Feed X=-713.466 Y=-401.31 Z=120.173 C=260.435 A=33.474
29: Feed X=-712.758 Y=-400.66 Z=120.417 C=260.393 A=33.41
30: Feed X=-712.053 Y=-400.008 Z=120.66 C=260.358 A=33.342
31: Feed X=-711.349 Y=-399.355 Z=120.904 C=260.338 A=33.27
32: Feed X=-710.647 Y=-398.701 Z=121.147 C=260.319 A=33.196
33: Feed X=-709.946 Y=-398.044 Z=121.391 C=260.33 A=33.125
34: Feed X=-709.248 Y=-397.387 Z=121.634 C=260.308 A=33.04
35: Feed X=-708.552 Y=-396.728 Z=121.878 C=260.313 A=32.963
36: Feed X=-707.858 Y=-396.067 Z=122.123 C=260.329 A=32.884
37: Feed X=-707.166 Y=-395.404 Z=122.368 C=260.347 A=32.81
38: Feed X=-706.476 Y=-394.74 Z=122.613 C=260.376 A=32.738
39: Feed X=-705.789 Y=-394.074 Z=122.86 C=260.403 A=32.666
40: Feed X=-705.104 Y=-393.406 Z=123.107 C=260.416 A=32.595
41: Feed X=-704.423 Y=-392.736 Z=123.357 C=260.429 A=32.516
42: Feed X=-703.744 Y=-392.064 Z=123.607 C=260.438 A=32.432
43: Feed X=-703.068 Y=-391.389 Z=123.859 C=260.443 A=32.348
  
```

#	Block number	Message	Error type	Process	G-Code file	Cha...	Block	Tool

# + Solidos + ALPHACAM + 5 Eixos Avançados (ECO)

Mais possibilidades de controlo de movimentos da máquina  
Maior leque de opções de manipulação de operação de  
maquinação





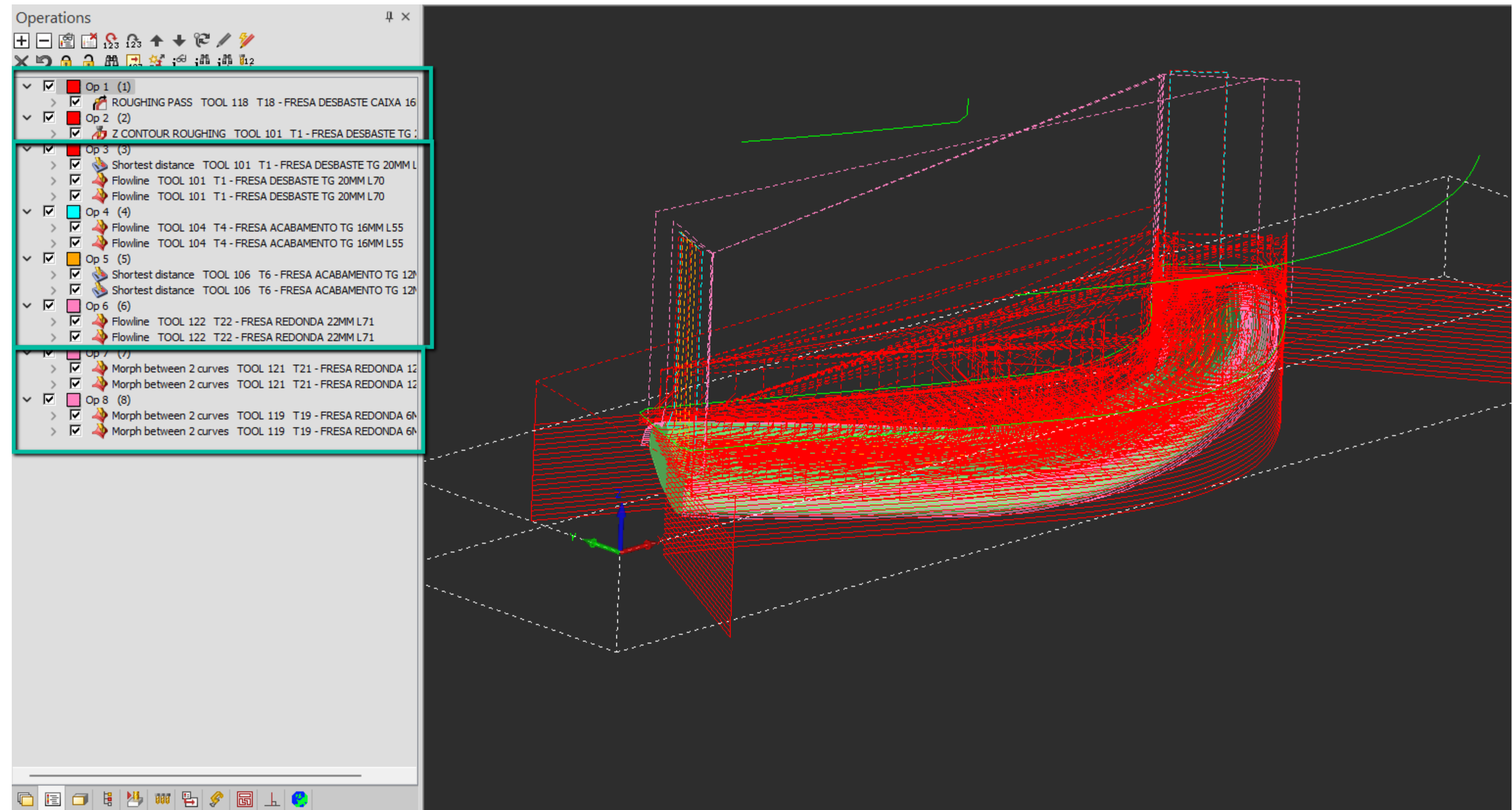
# Advanced 5 Axis

Moduleworks versão 2020.12

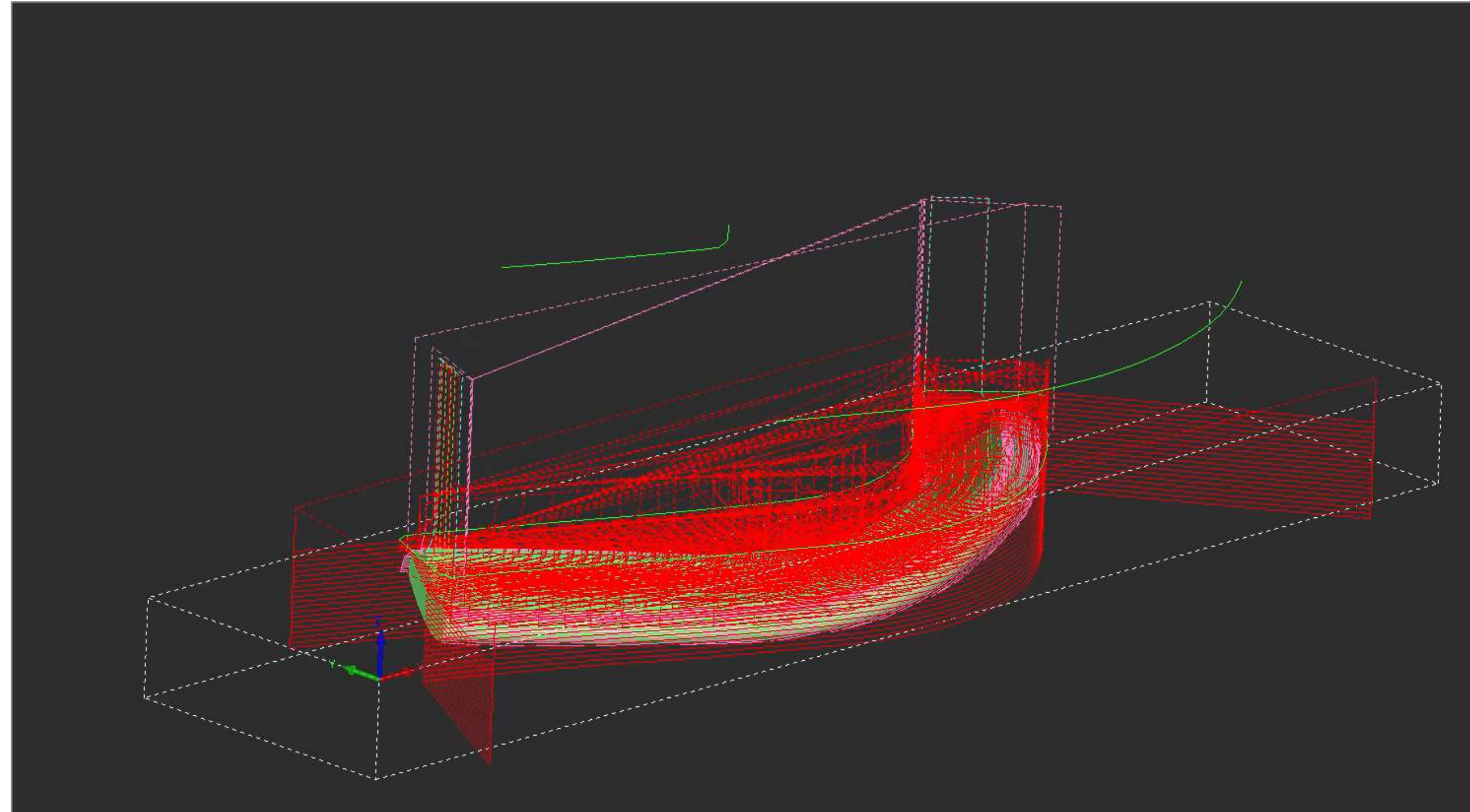


# Corrimão

- Pré-desbaste
- Maquinação de superfícies com linha de controlo de movimento
- Corte entre geometrias



# Simulação



# OBRIGADO

Use o seu telemóvel para ler o QRCode e responder ao questionário.

