**Relatório das Atividades de DIP VI**

**2022-2**

**Equipe**

|  |  |
| --- | --- |
| *Scrum Master* | Ariane de Novais |
| *Product Owner* | Renato Bernardes |
| *Scrum Team* | Joeliton dos Santos |
|  | Michel de Oliveira |
|  | João Paulo Bueno |
|  | Gabriel Schott |
|  | Ronaldo de Ávila |
|  | Leandro Machado |

***Stakeholders***

Tabela

Descrição gerada automaticamente

**Objetivo**

O objetivo deste projeto é a continuação da montagem e melhoria do módulo de inspeção da célula de manufatura por produto, com predominância em máquina, aplicando os conhecimentos adquiridos em sala de aula e colocando em práticas assuntos de matérias lecionadas aos alunos quando as aulas ainda eram realizadas remotamente, oferecendo uma experiência real aos mesmos. Considerando que o projeto já foi manufatura e montado ao ponto de já realizar a aferição do peso dos frascos, e por sua vez, realizar a inspeção, neste semestre a equipe tem como foco:

* a adição de um suporte de ajuste do posicionamento do produto rejeitado, manufaturado com material compósito;
* sistema supervisório do módulo de inspeção construído no primeiro semestre de 2022;
* Revisão do projeto, melhorias pontuais na estrutura (troca de parafusos etc.).

**Justificativa do Projeto**

Com o aumento da procura por fábricas e linhas de produção mais autônomas, e o aumento da concorrência no mercado mundial, a globalização e a diversificação de produtos, as indústrias se sentem obrigadas a abandonar a antiga filosofia de produção em massa, e estão cada vez mais legitimando algumas medidas de economia, redução de custos, redução de desperdícios, aumento na qualidade do produto e flexibilidade [1]. A célula de manufatura é considerada uma essência da filosofia Lean Manufacturing, por consistir em um arranjo físico de máquinas e/ou recursos, cuja sequência de etapas é igual às etapas produtivas, reduzindo ao máximo os estoques e os transportes de materiais no processo [2].

O tipo de célula de manufatura escolhida para o desenvolvimento deste projeto, foi a célula de manufatura por produto com predominância em máquina, tendo foco no produto, e as etapas produtivas são realizadas em máquinas ao qual ficam à disposição dos operadores para que eles façam as atividades requeridas dentro daquela célula de manufatura, obtendo assim, o produto finalizado [3]. A célula de manufatura será construída para atender às necessidades de a instituição de ensino de ter equipamentos para utilizar em aulas práticas onde os alunos terão a oportunidade de contemplar o funcionamento de máquinas sem muito auxílio de pessoas, e sim, com um funcionamento de predominância autônoma.

O produto a ser inspecionado, trata-se de um frasco simples, muito utilizado para armazenamento de sabonetes e outros tipos de produtos domésticos, que conterá areia em seu interior. A inspeção será realizada através da inspeção de peso do produto, ao qual o peso adequado e pré-estabelecido pelo cliente, é de 75g (Figura 1).

**Figura 1. Produto com   
peso de 75g (peso correto)**

Uma imagem contendo no interior, pia, pequeno, geladeira

Descrição gerada automaticamente

Fonte: Autores (2022)

**Escopo do Projeto**

O projeto consiste no desenvolvimento e construção de uma célula de manufatura para a inspeção de um frasco com areia em seu interior. A célula de manufatura foi dividida em quatro módulos: módulo de alimentação, módulo de transporte, módulo de inspeção e módulo de embalagem. O módulo de inspeção já foi manufaturado e montado no primeiro semestre de 2022, e neste semestre serão realizadas as seguintes etapas para a integração do sistema supervisório e melhorias no projeto:

* Revisão estrutural;
* Revisão eletrônica;
* Revisão no sistema supervisório desenvolvido;
* Testes no funcionamento geral;
* Estudos de melhorias estruturais e eletrônicas, e integração com o sistema supervisório;
* Testes do funcionamento da inspeção e da integração com o sistema supervisório.

**Escopo do Produto**

O módulo de inspeção foi projetado para a realização da aprovação ou reprovação do produto, direcionando-o para a para a finalização do processo com o produto empacotado, com um funcionamento e construção simples, e com materiais e processos de fabricação acessíveis. A estrutura do módulo, foi manufaturada em MDF para fosse realizado o teste de funcionabilidade do conceito, e posteriormente, trocar as peças estruturais de MDF para peças em acrílico. As peças de suporte do módulo, foram impressas em PLA (ácido poliláctico), para facilitar a manufatura e reduzir o tempo de montagem do projeto (Figura 2).

**Figura 2. Projeto montado no primeiro   
semestre de 2022**

**Mesa de trabalho

Descrição gerada automaticamente com confiança baixa**

Fonte: Autores (2022)

O projeto contém uma célula de carga, ao qual é um dos componentes principais de sua estrutura por realizar a inspeção por peso do produto, tendo como pré-requisitos de aprovação e reprovação os pesos de 70g a 80g, e <70g a >80g, respectivamente. Para o controle do funcionamento, tem um Arduino UNO, ao qual faz a comunicação e controle dos componentes eletrônicos contidos no projeto. A movimentação do conjunto de transporte bi-lateral do produto (Figura 3), será realizado por um motor de passo do modelo M42SP-12TK (Figura 5), e um sensor fim de curso (Figura 4) para detectar a posição final do motor, podendo assim, o motor realizar a inversão de sentido de rotação, e se encaminhar para a posição de descanso para o recebimento de um novo produto a ser inspecionado. Para que o operador tenha conhecimento e melhor visualização do que ocorre no módulo, foram adicionados dois *leds* (vermelho para produto reprovado e verde para produto aprovado), enriquecendo mais o sistema de controle do módulo, além do sistema supervisório.

**Figura 3. Simulação da movimentação   
do motor e do fuso**

Uma imagem contendo no interior, mesa, computador, luz

Descrição gerada automaticamente

Fonte: Autores (2022)

**Figura 4. Sensor Fim de Curso**

**Uma imagem contendo no interior, mesa, pequeno, caixa

Descrição gerada automaticamente**

Fonte: Autores (2022)

**Figura 5. Motor M42SP-12TK**

**Uma imagem contendo no interior, aparelho, máquina de costura, quarto

Descrição gerada automaticamente**

Fonte: Autores (2022)

**Requisitos do Projeto**

* Revisão geral da estrutura: para que seja verificado a necessidade de troca de peça que possa prejudicar o funcionamento do projeto, ou a adição de alguma peça que ajude a deixar a estrutura mais confiável;
* Troca do suporte da célula de carga: para que a base de sustentação do produto para a pesagem, seja fixada com mais segurança;
* Testes do funcionamento da inspeção: para que seja confirmado o correto funcionamento do módulo realizado semestre passado;
* Revisão no projeto do sistema supervisório realizado no semestre anterior;
* Pesquisa e verificação de disponibilidade de materiais compósitos na Fatec (ou com a professora Dr. Rita), para a fabricação de um suporte guia de posicionamento que será instalado ao final da rampa de rejeito;
* Projeto do suporte guia de posicionamento para a impressão 3D com o material Poliestireno de Alto Impacto (*High Impact Polystyrene* - HIPS, em inglês);
* Pesquisa e análise de como será a fabricação do suporte guia de posicionamento em material compósito, utilizado da peça molde impressa em HIPS;
* Analisar e desenvolver a integração do sistema supervisório no projeto desenvolvido no semestre anterior (2022-1);
* Testes do funcionamento geral da inspeção integrado com sistema supervisório.

**Tecnologias utilizadas para o desenvolvimento da solução**

Desde o início do desenvolvimento do projeto, a equipe tem pesquisado e implementado soluções que utilizassem de tecnologias ao qual são tratadas dentro de sala de aula, como:

* Programação de sistemas embarcados: pesquisas e estudo para entender a montagem e o funcionamento do arduino UNO, estudos da implementação do arduino no projeto, pesquisas por componentes mais adequados para a aplicação no projeto, pesquisa e estudo da linguagem C modificada para arduino, e pesquisa e estudo do código ao qual realizará todas ações necessárias no projeto;
* Desenho de Projetos: Estudo do *software* CATIA, estudos de interpretação de desenho, modelamento de peças 3D no *software*, montagem de conjuntos e subconjuntos no *software*, desenvolvimento de vista explodida e desenhos de conjunto no formato 2D (em perspectiva) para a facilitação na montagem e entendimento do projeto, estudo para que seja realizado o desenvolvimento do gêmeo digital do projeto;
* Manufatura aditiva: estudos e pesquisas para a compreensão completa do funcionamento da impressão 3D e suas especificações, modelamento das peças de uma forma adequada para a impressão, estudos e pesquisas dos melhores filamentos para a necessidade do projeto;
* Processos de fabricação: estudos e pesquisas para entender os processos de fabricação disponíveis para a manufatura do projeto, avaliação de quais processos de fabricação serão utilizados no processo, desenvolvimento das folhas de processo para o corte à laser do MDF, desenvolvimento dos desenhos na extensão correta para o corte à laser do MDF;
* Sistema Supervisório: estudo e pesquisa para a compreensão do funcionamento do software E3, pesquisa e análise da implementação do sistema supervisório no projeto, estudo do desenvolvimento do sistema supervisório para atender todas às necessidades do projeto, estudo e pesquisa para a integração do sistema com o projeto;
* Tecnologia dos Materiais: estudo e pesquisa para compreensão da fabricação de materiais compósitos, estudo da estrutura de materiais compósitos e materiais normalmente encontrado na indústria, pesquisa das especificidades dos materiais, pesquisa dos processos de fabricação adequados para cada material, estudo e pesquisa dos materiais adequados para o projeto.

**Critérios de Sucesso**

Os critérios de sucesso deste projeto, são:

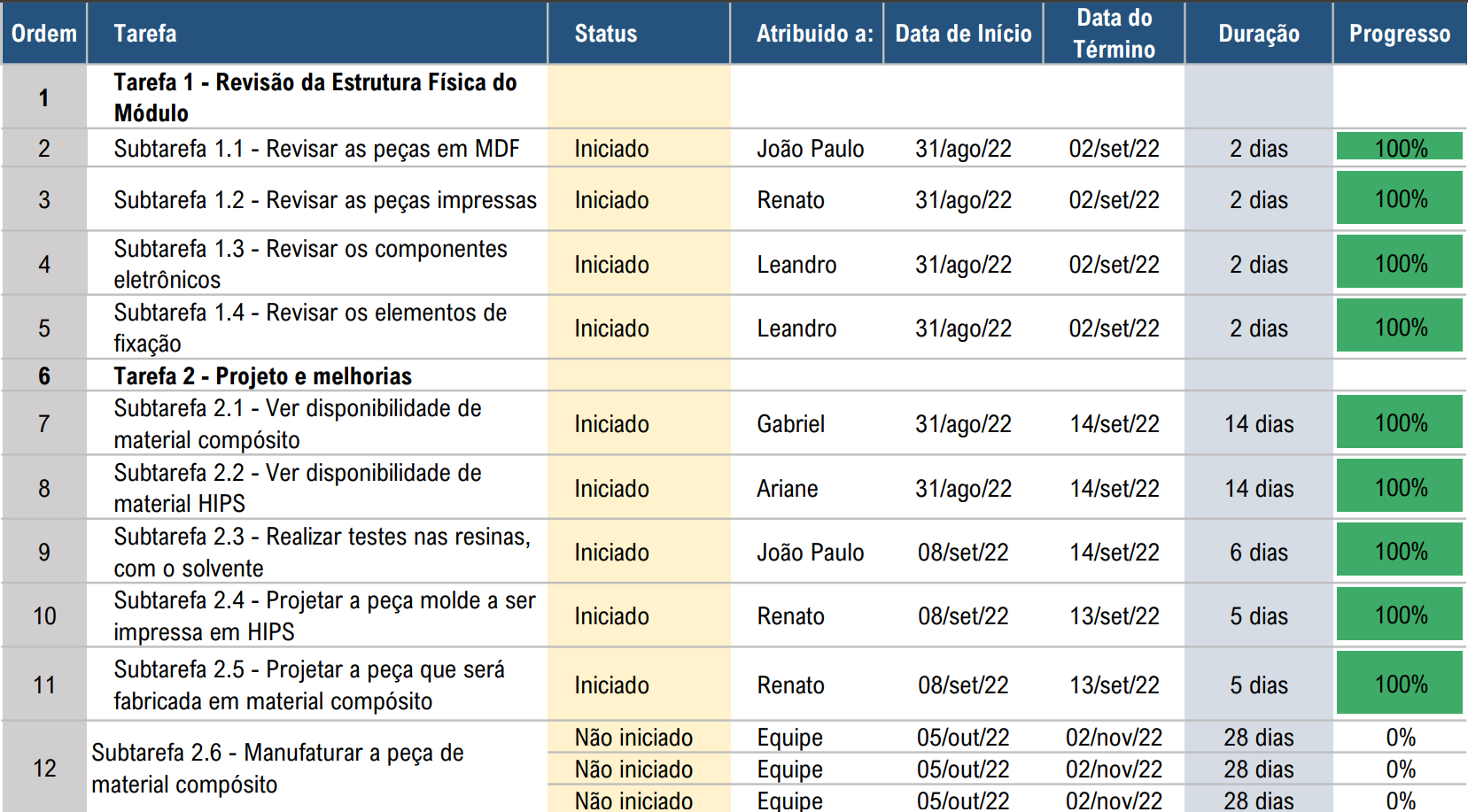
* Funcionamento adequado da inspeção dos produtos, com o encaminhamento correto dos produtos aprovados e reprovados para as respectivas rampas;
* Integração do sistema supervisório, e o controle e funcionamento correto.

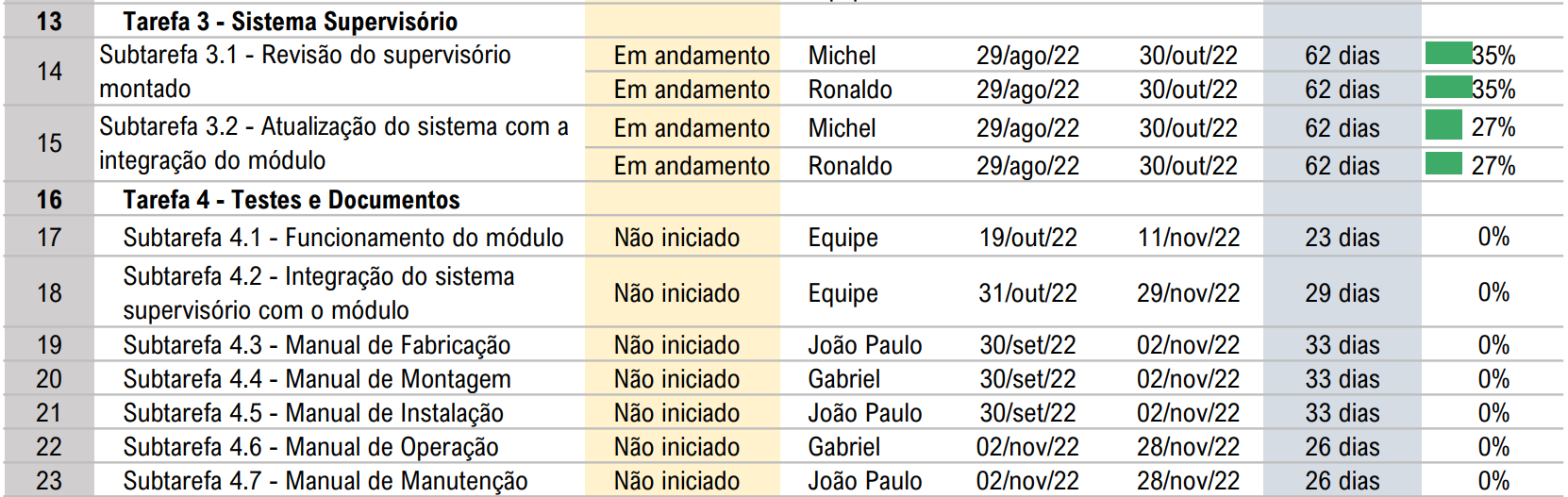
**Estrutura Analítica do Projeto**

Diagrama

Descrição gerada automaticamente

**Cronograma – Parte 1**





**Cronograma – Parte 2**

**Estrutura de Custos**

**Tabela 1. Estrutura de Custos**



Fonte: Autores (2022)

**Desenvolvimento do Projeto**

Para que a continuação do desenvolvimento do projeto seja realizada, e para cumprir os requisitos dos clientes, foram necessários os acréscimos de alguns itens no módulo (considerando que a equipe propôs algumas melhorias para que fosse possível o aprendizado de todos em áreas que não tivemos contato presencial nos semestres concernentes à pandemia), como:

* Peça manufaturada de materiais compósitos;
* CLP para controle de dispositivos e componentes acrescentados ao módulo.

Nos tópicos a seguir, essas modificações citadas acima serão descritas e explicadas com mais detalhes, além das atualizações da evolução e desenvolvimento do sistema supervisório iniciado no 1º semestre de 2022.

1. **Molde HIPS e peça de materiais compósitos**

**Testes dos materiais**

Com o interesse da equipe em aprender sobre materiais compósitos e como são manufaturados, foram realizadas algumas discussões com o professor Dr. Alfred e com a professora Dra. Rita (ao qual são professores responsáveis pelas matérias que envolvem esse assunto), para verificar a possibilidade de integração das duas matérias (Materiais Avançados e Inovação e Fabricação Digital) para a realização de pesquisas e desenvolvimento da peça de materiais compósitos utilizando de um molde, fabricado de filamento HIPS (Figura 6), ao qual é um material que o professor Alfred tinha interesse em testar a impressão e o processo de dissolução (com o solvente D’Limoneno – Figura 7) de uma peça impressa neste filamento.

**Figura 6. Filamento HIPS**

Uma imagem contendo no interior, mesa, itens, balcão

Descrição gerada automaticamente

Fonte: Autores (2022)

**Figura 7. Solvente D’Limoneno**

Uma imagem contendo no interior, mesa, pia, pequeno

Descrição gerada automaticamente

Fonte: Autores (2022)

Os materiais escolhidos para a fabricação da peça a ser moldada de materiais compósitos, foi Epoxi e fibra de carbono, ao qual eram materiais disponibilizados pela professora Rita. Considerando que eram pequenas, as quantidades dos materiais, a equipe realizou alguns testes com peças de HIPS impressas pelo professor Alfred, para analisar como as peças reagiriam com o solvente. A peça foi adicionada em um recipiente, com o solvente cobrindo a peça, para que a dissolução da peça fosse completa. A peça ficou submersa no solvente por mais de 48 horas, e a peça não se dissolveu, ficou somente mais amolecida (Figura 8). E segundo o fabricante [4], as peças impressas em filamento HIPS, levam de 30 minutos a até no máximo 48 horas para serem dissolvidas completamente.

**Figura 8. Primeiro teste do HIPS**

Copo de plástico azul

Descrição gerada automaticamenteUma imagem contendo pedaço, coberto, comida, mesa

Descrição gerada automaticamente

Fonte: Autores (2022)

Após esse teste, a equipe entrou em contato com o fornecedor do solvente para relatar o ocorrido. A empresa fez os devidos testes com solventes e filamentos HIPS do mesmo lote, e foi constatado que o solvente estava ineficiente, estornando assim, o valor dos produtos. O professor Alfred realizou uma nova aquisição do solvente (Figura 9) e outros testes foram realizados. O solvente utilizado no teste anterior, foi retirado do recipiente e separado em uma garrafa própria para ele. Utilizando o mesmo recipiente para teste, a nova peça impressa de HIPS (Figura 10) foi inserida, e foi adicionado o novo solvente no recipiente, em uma quantidade que a peça ficasse submersa no produto (Figura 11). A peça ficou no solvente por aproximadamente 11 horas, sendo dissolvida completamente (Figura 12).

**Figura 9. Solvente D'Limoneno**

Garrafa de bebida na pia

Descrição gerada automaticamente com confiança média

Fonte: Autores (2022)

**Mão segurando embalagem de plástico

Descrição gerada automaticamente com confiança baixaFigura 10. Peça impressa em HIPS**

Fonte: Autores (2022)

**Figura 11. Peça submersa   
no D’Limoneno**

Uma imagem contendo xícara, mesa, no interior, café

Descrição gerada automaticamente

Fonte: Autores (2022)

**Figura 12. Peça completamente   
dissolvida**

Copo de plástico

Descrição gerada automaticamente

Fonte: Autores (2022)

Após os devidos testes com o filamento HIPS, a equipe separou 3 tipos de amostras de peças (Figura 13) produzidas com material compósito (fibra de carbono com epóxi, fibra de carbono com resina ortho e fibra de vidro com poliéster) para fazer os testes com o solvente, para certificar de que o solvente não irá prejudicar a peça que será manufaturada no molde de HIPS.

**Figura 13. Amostras de peças de   
materiais compósitos**

Uma imagem contendo quarto

Descrição gerada automaticamente

Fonte: Autores (2022)

Todas as amostras foram submetidas a ficar por no mínimo 12 horas submersas no solvente, e a amostra que apresentou resultados positivos, foi a amostra de fibra de carbono com epóxi (Figura 14), confirmando que estes materiais eram as melhores escolhas para a fabricação da peça para o projeto.

**Figura 14. Amostra de epóxi com fibra   
de carbono no solvente**

Uma imagem contendo no interior, pequeno

Descrição gerada automaticamente

Fonte: Autores (2022)

**Figura 15. Amostra de epóxi com   
fibra de carbono**

Mão de pessoa

Descrição gerada automaticamente com confiança média

Fonte: Autores (2022)

**Manufatura do molde**

Inicialmente, o primeiro molde (Figura 16) foi projetado para a fabricação de uma peça extensora da rampa de rejeitos (Figura 17), mas pela limitação de materiais para a confecção do molde, da peça, e para a dissolução após a peça de materiais compósito estar curada, o molde foi reprojetado (Figura 18) para a fabricação da base de medição do módulo, substituindo a peça já existente no projeto, fabricada de MDF (Figura 19).

**Figura 16. Primeiro molde**

Tela de um aparelho celular

Descrição gerada automaticamente com confiança média

Fonte: Autores (2022)

**Figura 17. Peça extensora da rampa de rejeito**

Uma imagem contendo Ícone

Descrição gerada automaticamente

Fonte: Autores (2022)

**Figura 18. Molde reprojetado**

Tela de um aparelho celular

Descrição gerada automaticamente com confiança médiaTela de um aparelho celular

Descrição gerada automaticamente com confiança média

Fonte: Autores (2022)

**Figura 19. Base de medição   
já existente**

Cadeira de rodas

Descrição gerada automaticamente com confiança baixa

Fonte: Autores (2022)

O molde foi impresso na impressora da instituição, ao qual se encontra na sala de Modelagem (*LabMaker*). Ao total, a peça demorou 11 horas e 53 minutos para ser impressa totalmente (Figuras 20 e 21).

**Figura 20. Peça sendo impressa**

Uma imagem contendo no interior, mesa, pequeno, aberto

Descrição gerada automaticamente

Fonte: Autores (2022)

**Figura 21. Molde impresso**

Uma imagem contendo no interior, pequeno, quarto, forno

Descrição gerada automaticamente

Fonte: Autores (2022)

**Peça de material compósito**

Com o molde já impresso, a equipe iniciou a preparação para a manufatura da peça de material compósito. A professora Rita disponibilizou para a equipe uma fibra de carbono pré-impregnada, ao qual foi necessário cortar a fibra em pedaços de 5 cm (Figura 22), para que fosse possível sua reutilização na fabricação da peça do projeto.

**Figura 22. Fibra de carbono cortada**

Homem em cima de mesa

Descrição gerada automaticamente com confiança médiaMão segurando embalagem de plástico

Descrição gerada automaticamente com confiança média

Fonte: Autores (2022)

Mesmo com o uso de um molde de HIPS e após a fabricação e cura da peça de compósito, o molde será dissolvido, a equipe, juntamente com a professora Rita, achou por bem passar desmoldante (Figura 23) no molde para garantir que a peça seja retirada sem dificuldade, por se tratar de um desenvolvimento didático para a equipe, e pelo fato de o filamento HIPS estar sendo utilizado para a fabricação de um molde não utilizado antes na manufatura de uma peça de material compósito curado em forno.

**Figura 23. Aplicação do desmoldante   
no molde**

Comida em cima de mesa de madeira

Descrição gerada automaticamente com confiança média

Fonte: Autores (2022)

Foi utilizado primeiro o desmoldante PVA verde (Figura 24) no molde, aplicando duas vezes.

**Figura 24. Desmoldante PVA verde**

![Gráfico, Gráfico de funil

Descrição gerada automaticamente](data:image/jpeg;base64,/9j/4AAQSkZJRgABAQEAYABgAAD/4RD0RXhpZgAATU0AKgAAAAgABAE7AAIAAAAOAAAISodpAAQAAAABAAAIWJydAAEAAAAcAAAQ0OocAAcAAAgMAAAAPgAAAAAc6gAAAAgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEFyaWFuZSBOb3ZhaXMAAAWQAwACAAAAFAAAEKaQBAACAAAAFAAAELqSkQACAAAAAzkxAACSkgACAAAAAzkxAADqHAAHAAAIDAAACJoAAAAAHOoAAAAIAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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lZW9mm23jC+p7n8a76OCnJ66I+UzLiXCYdOFJ88vLb7yDRdFFownuMNL/Co6LXrPgGAiK6mPTKoP5mvP4F5Fes+FrI2WhRBl2vJl2B9+n6Yr0JU40o8sT4qGKrY2u6tV/wDANmiiisjuCiiigAooooAKKKKAMbxPpY1PRpFVcyx/Onv7V5PMhRyD1HBr3EjNec+MvDrWdy19bLm3mOWAH+rb/A1vSnZ2Z5mOouUedHGNTCOKlcUw12HhMidFaPaygqeoIrOudA0+6yWgCMf4oztrTNGKiVOM17yNqGLxGHd6M3H0Zytx4P8A+fW5x7SD/Cs6fwxqMXKoso/2WrucU0iuWWBoy2Vj6ChxXmVHSTUvVHncmmXsQzJayAf7tVmRlJDKykdiMV6ZimNEjD5kU/UVzyyxfZkevT42qL+LSXydv8zzSivRWsrVutvF/wB8CoW0iwcktaRE/wC7WX9mz6M7o8aYb7VN/gcBRXdnRNP/AOfWP8qT+xdP/wCfWOl/ZtTujX/XPBfyS/D/ADOFNJXeDR9PHS0i/wC+amXTbNeRbQj/AIAKf9mz6siXGmE+zTb+48/VC3QE/QVMljdSECO3kbPopr0ARRr92NB9FFPUYrSOW95HFU42/wCfdH72cVF4e1CT/lkEH+02KvW/hNyc3M6geiDNdRS10QwFKO+p5Ffi3MKukLR9F/mZdt4esbfBZDKR3c8flWpHGkSBY0VV9FGBSilFdUacIL3UeBiMficU71pt/MctSoKYKnhQsyhRkk4FVI54xuzc8MaWdU1WOIj92p3OfYV6yoCqAowAMCsPwroo0nTFMq4uJRuf29BW9XFUldn0mFpezp67sKKKKzOoKKKKACiiigAooooAKiuYIrm3eGdA8bjDA96looA8r8TeGptJuGliVntWOVcD7vsa5xlr3SWJJo2jlUOjDBUjINcF4i8DPGzXWjAuvVrfuP8Ad/wrphV6M8XE4Jr36exwpFNK1PLG8MhjmRkcdVYYIqM4rpTPJcWR4pCKfikxTIsNxTGFSYpCKYrERHFJipCKTFO4rDCKbipCKbigQ0igU7bRigBKBTsUUANpaWikUhRThTVqxa2dxezLFZwvNIx+6gzUydi4xbdkIilmAAyT0FekeDvCv2RV1DUI/wB8RmJD/B7/AFp3hnwRHp+y71QLLcjlYwcrH/ia7HFclSpfRHu4TCcvvz3ACiiisD1AooooAKKKKACiiigAooooAKKKKACiiigDK1fw7p+tR4u4R5naVeGH41w2q/D7ULQl9NkW7j7I3yv/AIGvTqMVcZyRzVsLSq6yR4Rc211ZSbL23lgb0dCKi3D1r3ia3huIyk8SSIequoINc/feA9CvMlbZrdz/ABQOV/Tp+lbqsup5tTLZL4GeTBqU13F58MZVydO1IH0WeP8AqP8ACsifwF4ghzsgimA7xyjn88Vp7WLOOWDrR3ic4RRir9xoGs2zYm025HuE3D9KpS291F/rbeZP96MirUkczpzW6GEU3FIS/wDdb8jSASMcKjk+yk1VyOVjsUYp6Wl44+S1nb6RE1ah0PWJ/wDU6ZdN/wBsyKHJIahJvRFE0ma6C28C+IbvGbNYB/emkA/Qc1s2vwuumIN9qcaDuIY8n8zWbqwRvHB1pbROGyMZq7YaTf6o22wtJJefvAYUfj0r1HTfAmiaeQ5t2uZAc77ht36dP0roo4kiULGiqo6ADGKylXXQ76eWSfxux59pPw1kJWTV7gKO8UP9TXcafpVnpduIbGBIl74HJ+pq5RWEpuT1PVpYenSXuoBRRRUG4UUUUAFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFFFFABRRRQAYpMUtFACYz1pCisMMAfrTqKAsQ/ZYP+eMf/AHyKVbaFfuwoPooqWigVkIBgYAoxS0UDExRilooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigD/2Q==)

Fonte: Mercado Livre (2022)

Após a completa secagem do desmoldante, foi aplicada a cera desmoldante (Figura 25) para reforçar mais ainda a película de desmoldante, e para a obtenção de superfícies mais uniformes e sem falhas.

**Figura 25. Cera desmoldante TecGlaze-N**

![Lata vermelha com letras brancas

Descrição gerada automaticamente com confiança média](data:image/jpeg;base64,/9j/4AAQSkZJRgABAQEAYABgAAD/4RD0RXhpZgAATU0AKgAAAAgABAE7AAIAAAAOAAAISodpAAQAAAABAAAIWJydAAEAAAAcAAAQ0OocAAcAAAgMAAAAPgAAAAAc6gAAAAgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEFyaWFuZSBOb3ZhaXMAAAWQAwACAAAAFAAAEKaQBAACAAAAFAAAELqSkQACAAAAAzYwAACSkgACAAAAAzYwAADqHAAHAAAIDAAACJoAAAAAHOoAAAAIAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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R+GRfOeeQ+IG24Yo344q/DrMb9Vb8Oa27j4YaY/wDx63dxB7HDj9axbr4aarASdPvIJx6NlD/Wnz147q5XOicapbH+PH+9xU63UTj5HU/Q1z0/hzxTZqVazmdR/cYSCqTtfwgLdadIrDnLQsv8qaxMl8URpo7MSDHWnbhmuKj1doV2vGVP/XQjH51Zi1h9p/fSKfcA1f1qHUo63O4daXNc5Dri4xJI2ex2VaXWELDbIhGOpOKpYmk+oGyTSg8cVlDVVbqUJ/3hUqahuJHGfTcKv21N9QNDI6E80tU/tI6lcn605bnceFb8qtVIvqFyzkdutANQ+Yf7rflR53safNHuBPSBgSQD061CJwQfSjz1Y/Kf0p8yC5Y3GjOarGdR1bFKk4Jxg5+lLmQrljPvRmojIcdD+VRpcBtwzkqafMguWScUgb5sHrURmJwMc9qDJt6/zpc8e4XJt1J71Xa4VRy6D/gQqL7dGOssY9y1L2sV1Au7qTNZj6xZpy1zGPx61F/wkOmhiDckkdQqVDr011Ga5PPNIW7Vz1x4os0kwgmk9MDFUn8VtkmO249Hasniqa6gdZvA70hkz2zXFS+K7jaceVEfWq51vUr/AOSGSaU/9MVJ/lWf1yPRCud08oRSXKqB6nFUZ9bsoM+ZdRg+i81zdv4X8TaiQY9OuSD/ABTtsH61s2fwr1efDX15a2o9EBkNL21WXwxJ5kV5/F1sq4hjkdvXoKyLjxXdzErAqR5OMYya721+FOlxgfbby5uT3AIQH8q6TTPCmi6QB9i0+FW/vsu5vzNLlrT3dhc6PHbbR/EevMPKtbmVT/HJlV/Wup0j4Uzsyya1dqi94oOSfxr1AAAYAxRVxw8d5akObM7StB07RoRHp9skfq+Msfqa0aKK6EktibhRRRTEFFFFABRRRQAUUUUAFFFFABRRRQAUUUUAFBAPUUUUAQyWVrNnzbaF89dyA1Qm8MaJP/rNMts+qptP6Vq0UnFPdBc5ybwHoMv3bZ4/9yVqpy/DnTGP7u4uY/8AgQP9K6+is3SpvoVzM4aX4aof9Tqbj03Rg1WPw3vVOY9RhP1jIr0KipeHpvoHOzzpvh7qaj5by3b/AL6FNPgXW0+5cQnHpI3+Fej0VP1amPnZ5q3hDxGg+RlP0mpjeGvEyjmNzj0mFem0UnhYBzs8wGieKAMGCYj08wGnJpHihfuwSAfVa9NopfVY92HOzzI6T4nPWCU/itIdF8Tt0gl/76Ar06ij6rHuw52eX/2F4p/54y/9/BTf+EZ8TPybdxnr+9FepUU/qse7DnZ5YfCvibIYQHI6ZmFMbwj4mfJNsuT/ANNhXq1FH1WHcOdnkTeBfEj5zaxc+s9SJ8PPEZUDNnGD6yE4/SvWaKFhaYc7PKV+FusyEebf2afRWOKtxfCectm41kD12Q/4mvS6Kr6vT7C5mcHF8KdOBBn1G7k45Awoq9D8MvDsePOinnx/fmbn8q66irVGC6BzMyLbwh4ftP8AUaRag+rR7j+ZrTjtoIBiCGOMeiKB/KpKKtRS2QrhRRRVCCiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKACiiigAooooAKKKKAP/Z)

Fonte: Autores (2022)

Após a secagem completa dos dois tipos de desmoldantes aplicados, a mistura de resina epóxi e fibra de carbono, foram adicionados ao molde (Figura 26), sendo no total de 54cm³ de material compósito utilizado.

**Figura 26. Molde com o   
material compósito**

Cachorro em cima de uma superfície de madeira

Descrição gerada automaticamente com confiança baixa

Fonte: Autores (2022)

Para que a peça fosse curada de uma forma consistente, e pela ausência de um forno na instituição que pudesse ser utilizado pelos alunos, foi necessário o fechamento do molde com parafusos e porcas (Figura 27), para garantia de que a peça estaria “prensada” de uma forma correta e que pudesse ser curada em temperatura ambiente.

**Figura 27. Molde fechado com   
parafusos**

Uma imagem contendo no interior, coberto, sujo, mesa

Descrição gerada automaticamente

Fonte: Autores (2022)

1. **Controlador Lógico Programável**

Inicialmente no desenvolvimento da programação e montagem do CLP no módulo de inspeção, foi determinado pela equipe, a montagem e programação dos sensores para detecção dos produtos e acionamento da torre de *led* e *buzzer*, que foi adicionado como sinal luminoso e sonoro (Figura 28). Todas essas mudanças, foram para que a equipe tivesse contato com a programação CLP e de sensores, considerando a deficiência causada pelas aulas remotas durante a pandemia do COVID-19.

**Figura 28. CLP e componentes adicionados**

Uma imagem contendo no interior, mesa, escritório, computador

Descrição gerada automaticamente

Fonte: Autores (2022)

Como a programação e montagem realizada pela equipe foi simples, e o objetivo de a equipe poder programar e trabalhar com CLP foi alcançada, foi sugerido por um dos clientes, que fosse retirados sensores do módulo, e a programação de contagem dos produtos fosse realizado diretamente com o arduíno do módulo e com o CLP.

**Resultados**

**Molde HIPS e peça de material compósito**

O molde de HIPS e a peça a ser moldada de fibra de carbono com resina epóxi, ficou em processo de secagem e cura por volta de 2 dias. Após sua completa secagem, a equipe retirou os parafusos que fechavam o molde, e colocou o molde com a peça dentro de um pote com o solvente D’Limoneno, para que o filamento HIPS fosse derretido e só ficasse a peça de material compósito ao final do processo de derretimento.

A peça ficou por volta de 72 horas submersa no solvente e não houve seu completo derretimento, pois o solvente saturou e dificultou o derretimento total do filamento (Figura 29). Para que o processo de retirada da peça fosse finalizado dentro do prazo estipulado no cronograma, a equipe retirou o restante de filamento manualmente, e a peça de material compósito ficou em perfeito estado (Figura 30).

**Figura 29. Molde parcialmente dissolvido**

Uma imagem contendo no interior, mesa, comida, bolo

Descrição gerada automaticamente

Fonte: Autores (2022)

**Figura 30. Peça de material compósito**

Em preto e branco

Descrição gerada automaticamente com confiança média

Fonte: Autores (2022)

**CLP**

**Conclusão**

**Referências Bibliográficas**

[1] Maccari, D. Formação de Células de Manufatura através da Metodologia

Branch and Bound [tese]. Florianópolis: Universidade Federal de Santa Catarina; 1999.

[2] Moura, R., Codeva Online. Você Sabe o que São Células de Manufatura?. São Paulo (SP), 2017.

[3] Moura, R., Explicação Rápida. Tipos de Células de Manufatura no Lean Manufacturing. São Paulo (SP), 2017.

[4] 3DLAB Soluções em Impressão 3D. Solvente para HIPS – D’Limoneno 500ml [internet]. Disponível em: <https://3dlab.com.br/produto/solvente-para-hips-dlimoneno-500ml/>.