

AMADE Facilities: Advances in the Manufacturing of Composite Panels with Infusion and Hot Plates Systems.

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Girona, 14th July 2023

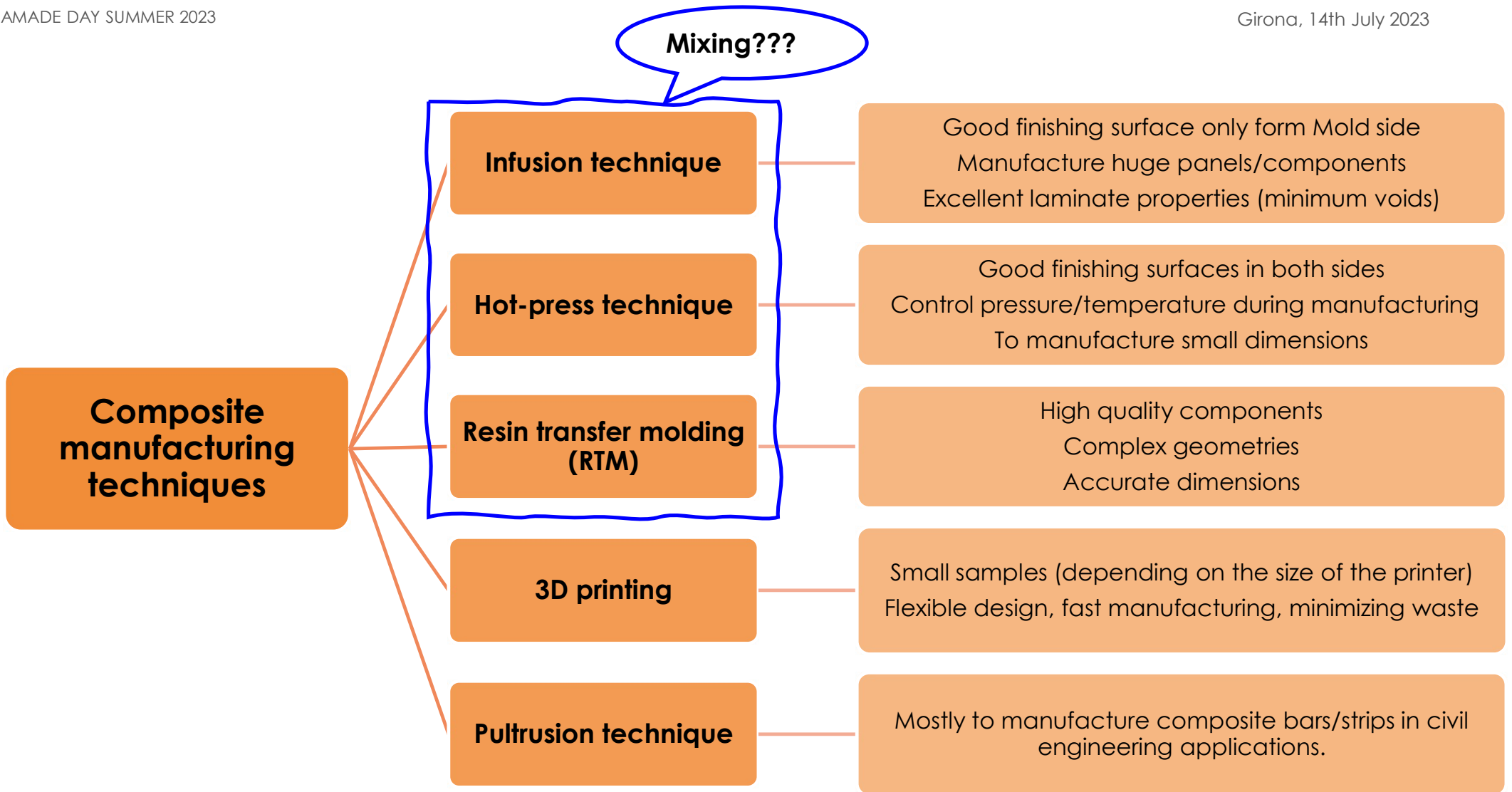


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Introduction



AMADE facilities for panel manufacturing composite panels

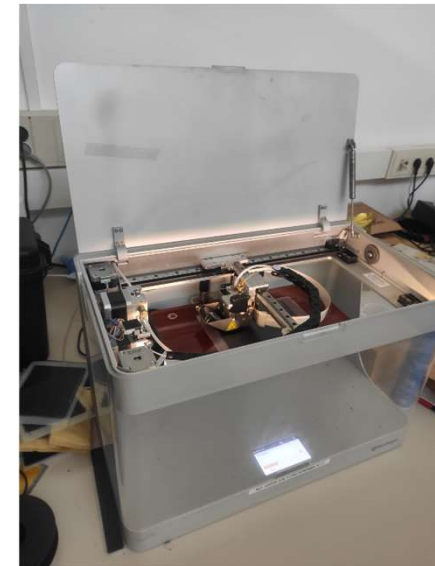
Infusion technique



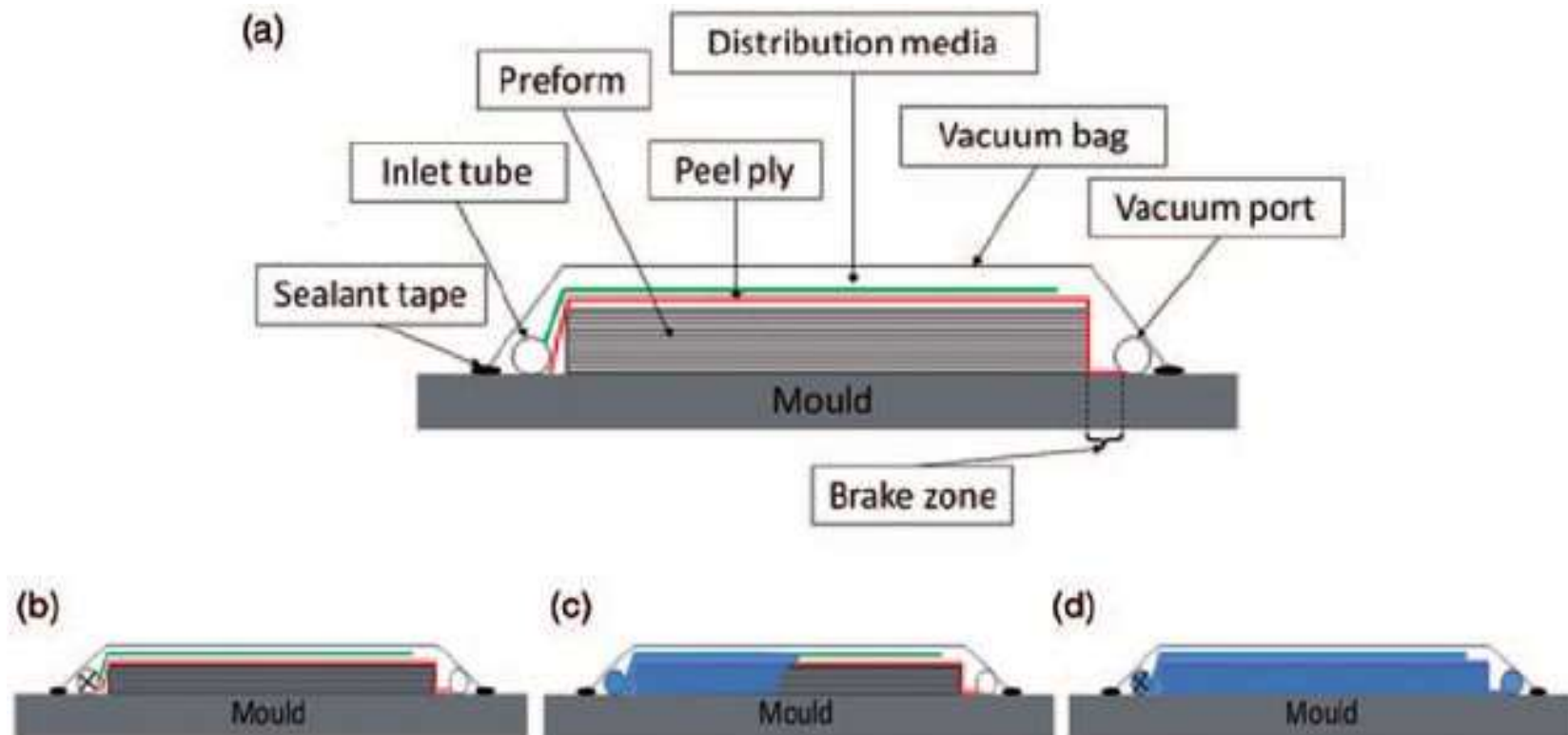
Hot-press technique



3D printing



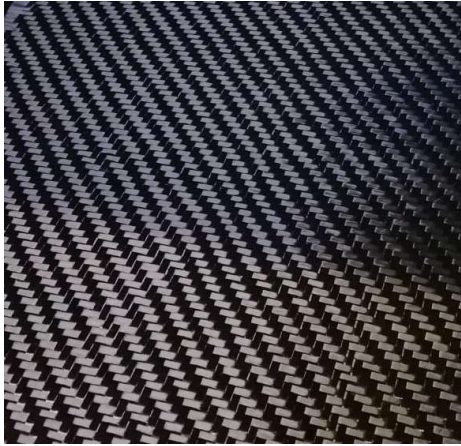
Stages in the resin infusion process:



(a) Lay up (b) Pre-filling (c) Filling (d) Post-filling.

Govignon et al. (2012)

Video of infusion process:



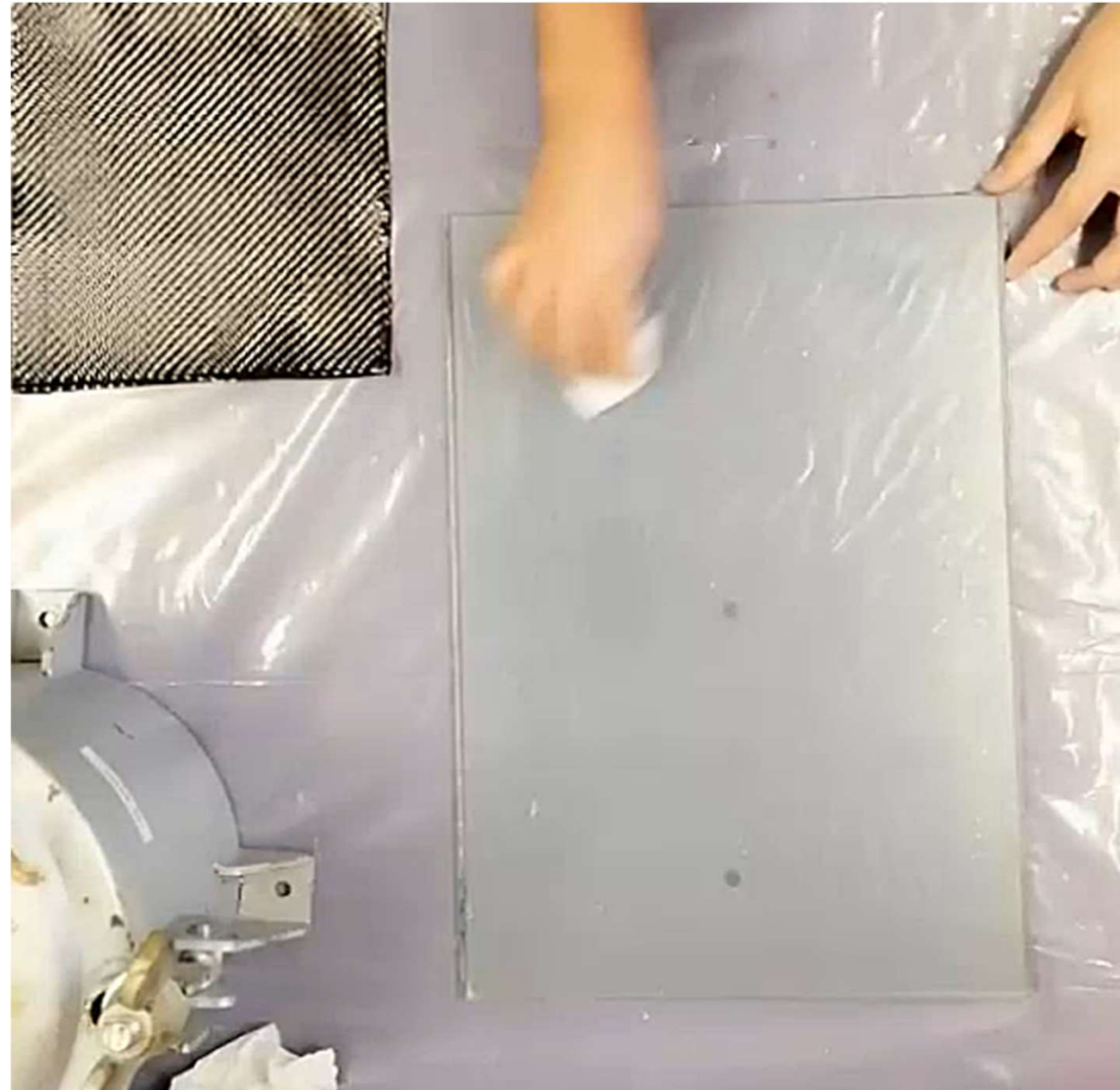
MD carbon fibers



UD glass fibers



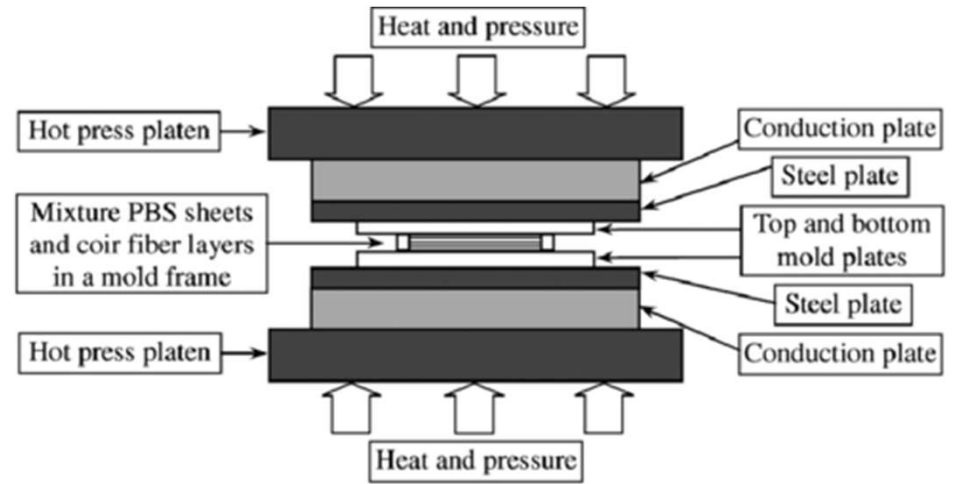
DCB specimen with UD carbon fibers



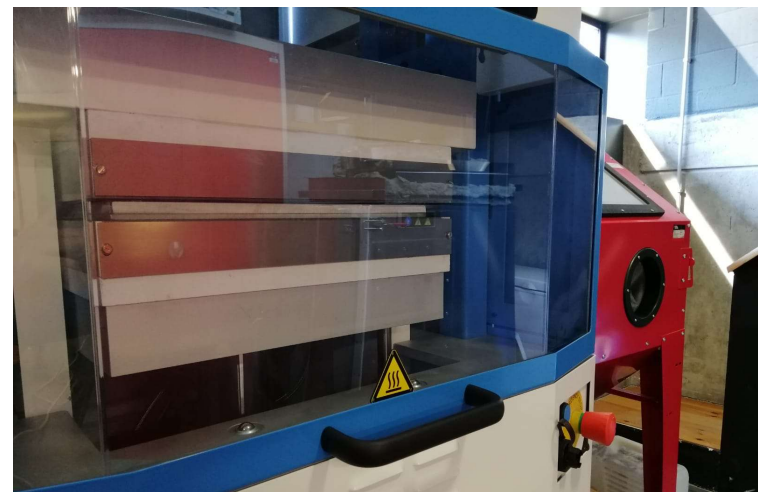
Hot-press technique:



UD prepreg carbon fibers



Tran Huu Nam et al. (2011)



Mixing Hot-press and infusion technique:

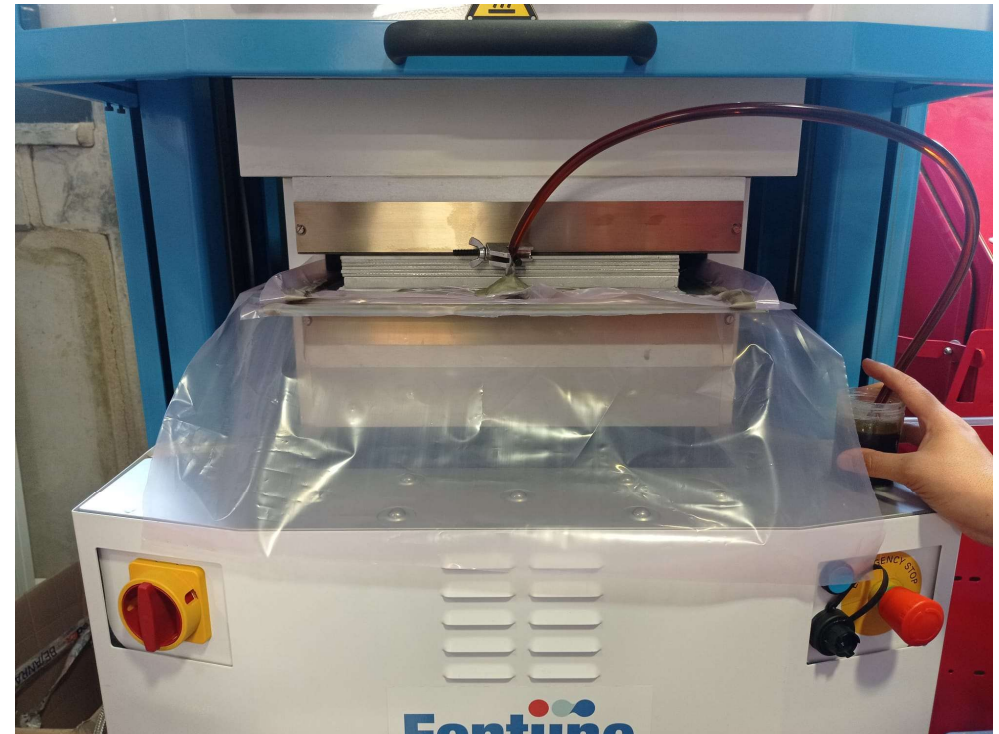
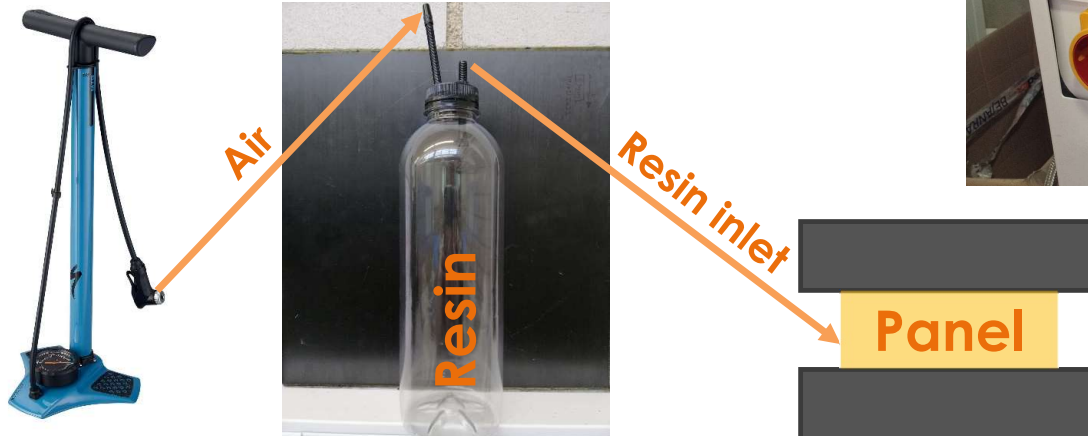
☑ To apply pressure, temperature while doing infusion.



The distribution media should be removed from the infusion system



To this end, we need to use the RTM concept to help/push the resin to flow in the absence of a distribution media.





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