4. CONCLUSIONS

As conclusion of this work, we evidenced that solvent vapour attack or smoothing process might reduce the overall roughness in 70% . In addition, it was also observed the absorption of solvent inside the specimen and the accumulation of this solvent has grown in each time that the object was exposed to vapour attack.

It was also seen that even though part of absorbed solvent vaporised during a drying phase, the mass decay tend to be logarithm and leads to an stagnation point.

Along this work, it was also found that the dimensional distortion has no relevant variation even though the straightness of small geometries might be jeopardized. In addition, long exposure time were evidenced to result in severe distortion of objects, stiffness and hardness decrease.

By the end, it was also evidenced that the vapour attack with 10 min of exposure per pass penetrated around 1 mm inside the object and fused either layers and filaments in a surface shell. It might indicated an improvement of mechanical strength and reduction of anisotropic behaviour of components.

In spite of this results, this work is found in a preliminary stage and further studies must be done in the future in order to better understand the benefits and disadvantages of such process.

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