



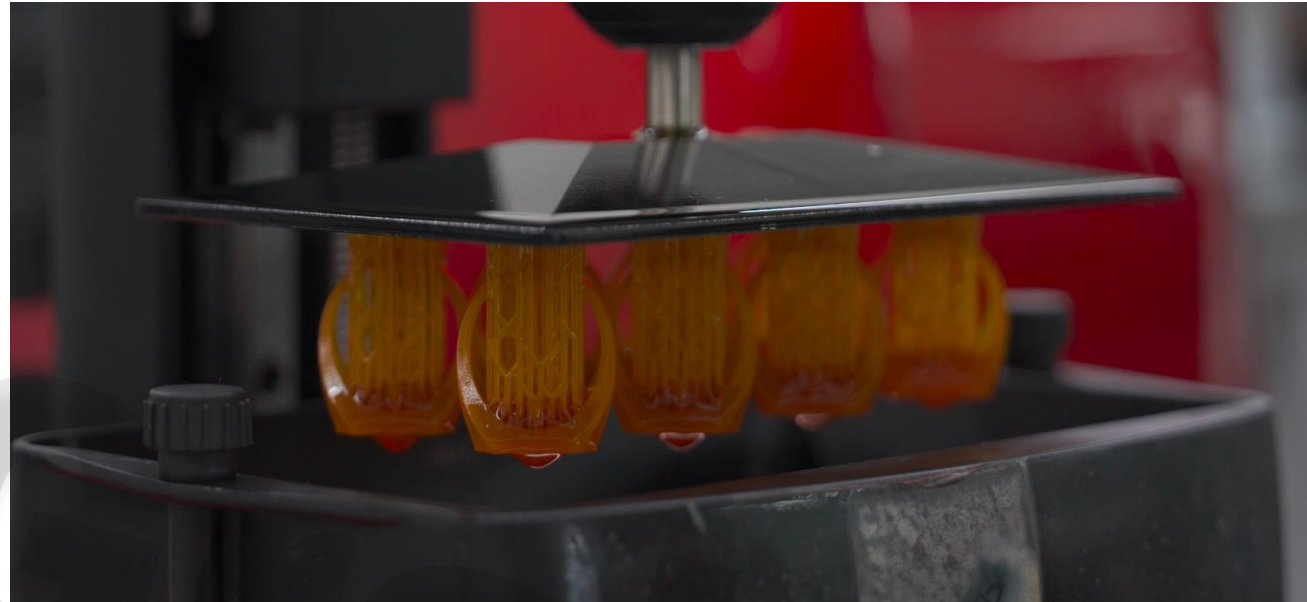
Process of Jewelry Casting

Modeling



You need to create your model by 3d modeling software like rhino/selfcad/blender. Then export the model as stl or obj file. Prepare this file for 3d printing.

Printing



Slice by 3d printing software like chitubox/lychee. Then start 3d printing.

Preparation

1. Put the prints into IPA a few mins, and slightly shake the prints to clean away the resin

2. Post cure the clean prints if it's surface not hard enough

Build wax tree



1.1 Remove unnecessary support before plant wax tree and rewash again.

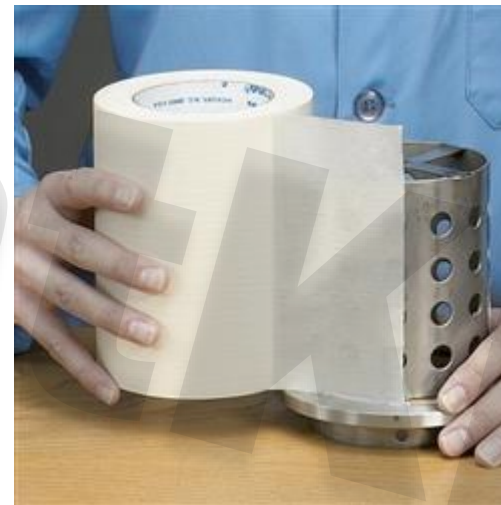
1.2 After cleaning, make sprue with each prints and build into a tree.

Notice: Simple prints should be on top while complex prints at downward to improve the casting result.

Set up Flask

2.1 Wrap up the flask with packing tape, leave the top about 2-3mm longer than flask.

2. Put the wax tree into flask, keep the tree straight in the middle, the interspace between the flask and tree at least 5mm



Mixing gypsum

3.1 Use ratio powder and water 1kg: 350~400ml (20~28°C pure water)

3.2 Firstly pour half of water into vacuum mixer then pour gypsum powder, and the rest of the water, should be mixed completely at once.

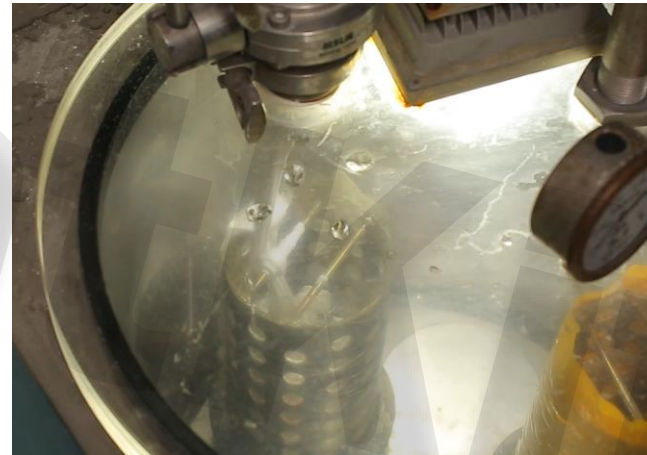
Notice: Recommend casting plaster powder, or specially made of resin casting use purpose.



Fill flask

4.1 This should be strictly controlled with 9 mins, fill flask by vacuum mixer, wait for no bubble about 20~30mins.

4.2 Set flask at room temperature for 3 hours, take off the packing paper once it's dried.

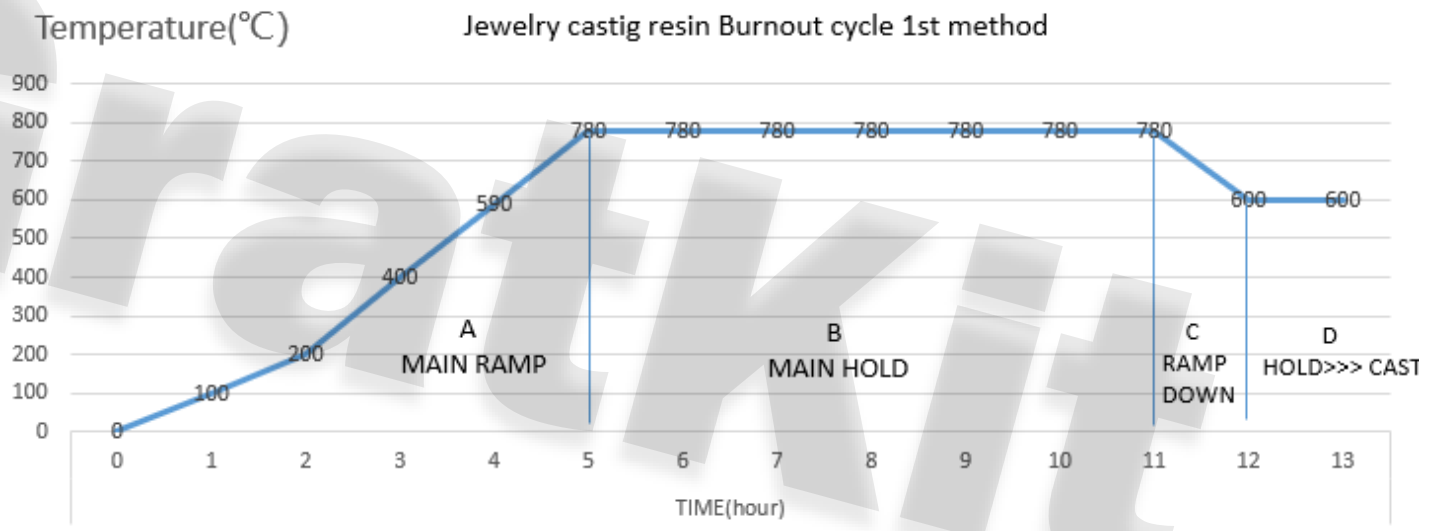


Method 1

Burnout cycle 1

A: Wax model start fall off, set the temperature 2 hours from 0~200°C, then 3 hours from 200 °C to 780 °C, ramp up speed should be adjusted according to number and volume of flask and thickness of jobs.

B: Keep at 780 °C for 6 hours to be gasified completely the holding time should be adjusted according to number and volume of flask and volume of flask and thickness of jobs.



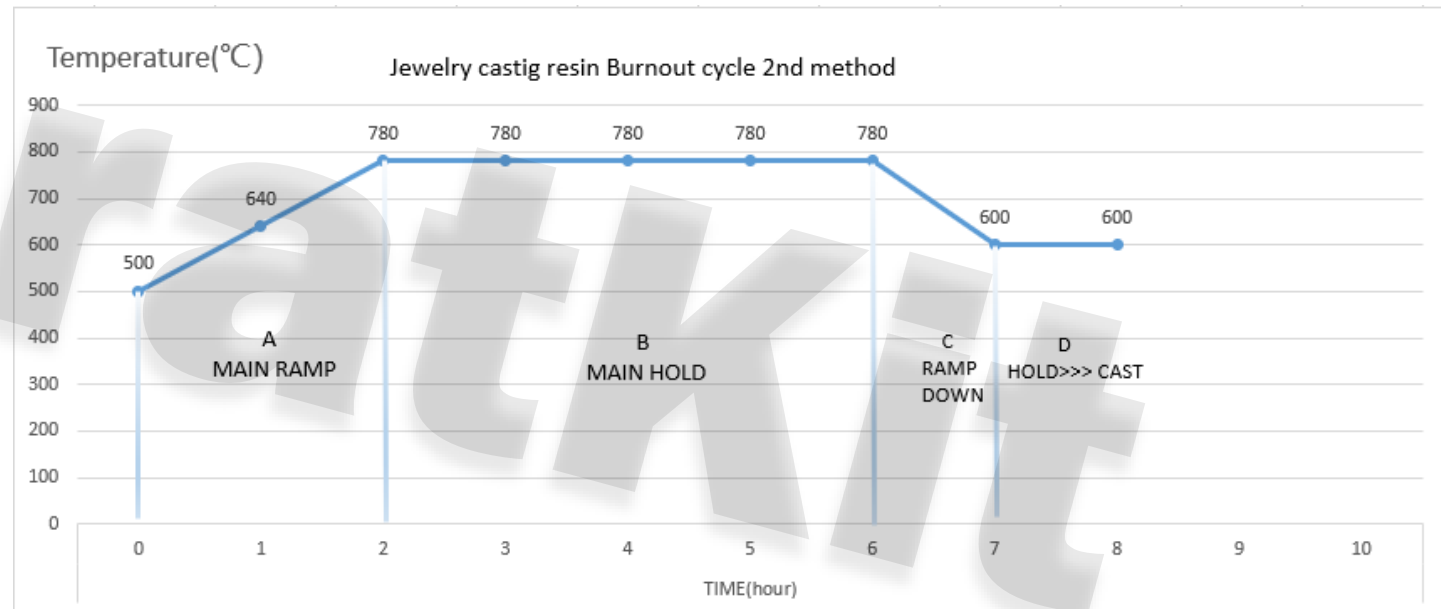
Method 2

Burnout cycle 2

A: Place flask in 500 °C and set 2 hours for 780 °C.
Continuous casting brings high efficiency.

B: Hold for 4 hours at 780 °C, adjust the duration according to number and volume of flask and thickness of jobs.

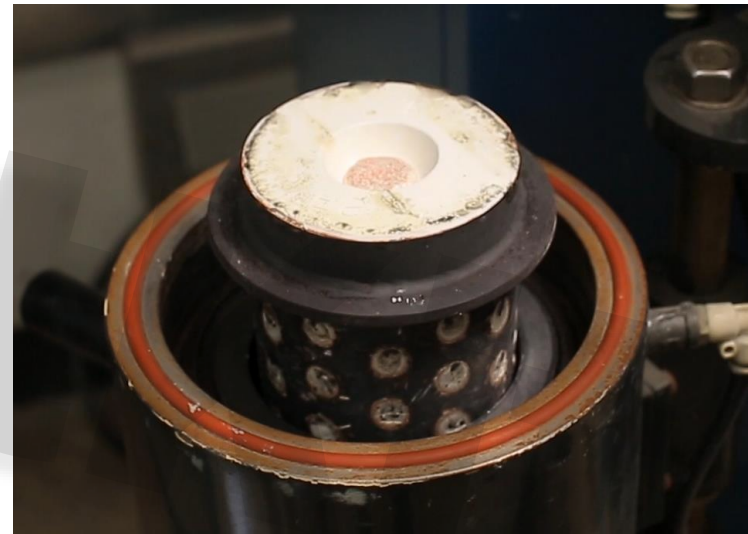
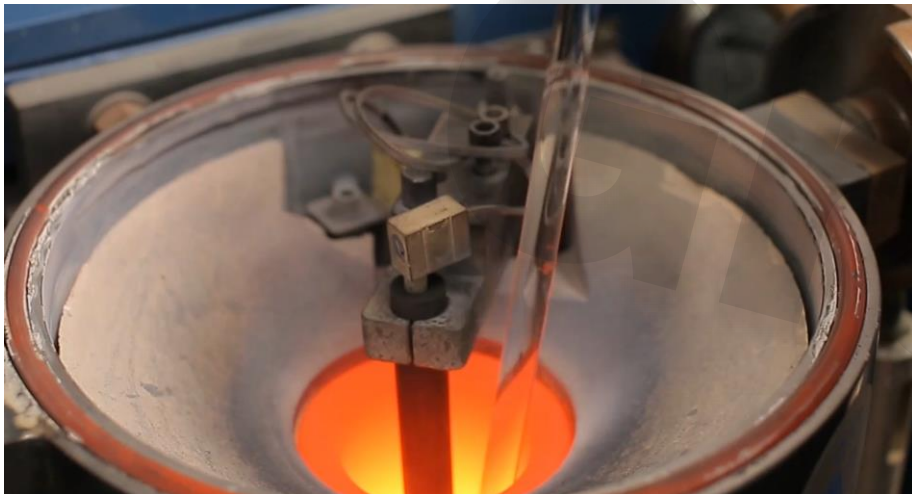
Note: Gypsum must suitable for plaster.



Casting

6.1 Ramp down to casting required temperature, and keep for half an hour.

6.2 Use a casting machine to melt meta land then casting, natural cooling for 5 - 10 minutes.



Cooling and
cleaning

Using water to cooling flask, and clean
with high press cleaning machine



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