

Blockout, Spruing, Casting and finishing of metal Framework

Steps of Framework Construction

- 1-Preparation of master cast
- 2-Duplication
- 3-Wax pattern & Spruing
- 4-Investing& burn-out
- 5-Casting
- 6-Finishing & Polishing
- 7-Fitting the framework to the master cast



Blockout of the Master Cast

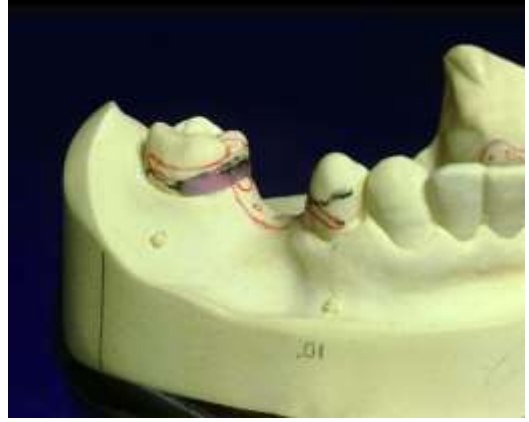
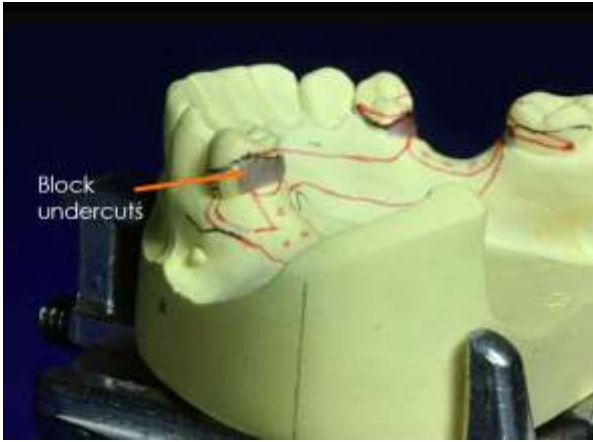
- Purpose:

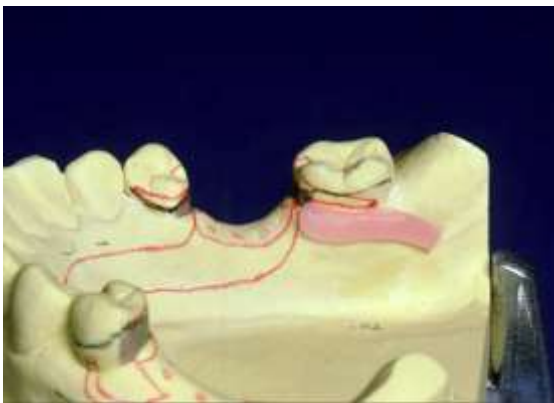
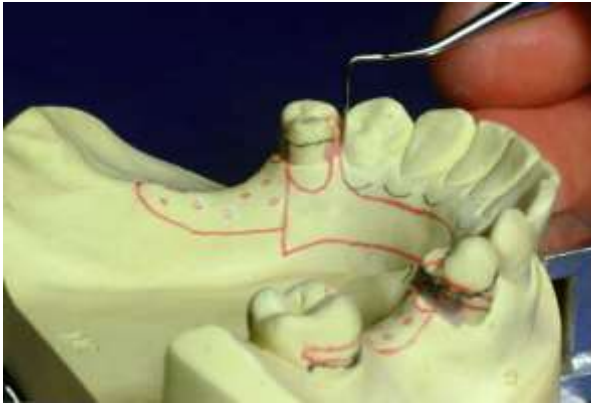
Casts are blocked out to eliminate undercut areas on the master cast that would be crossed by rigid parts of the partial denture framework.

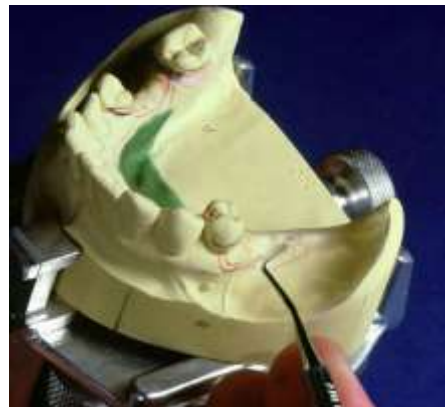
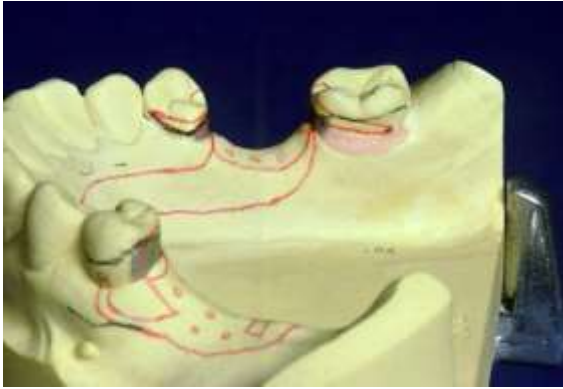
Additional areas to be blocked out, waxed or relieved are:

- Beneath connectors to avoid soft tissue impingement.
- Areas to provide for the future addition of acrylic resin denture base material.
- Placement of ledges on which clasp arms are to be placed.











Beading

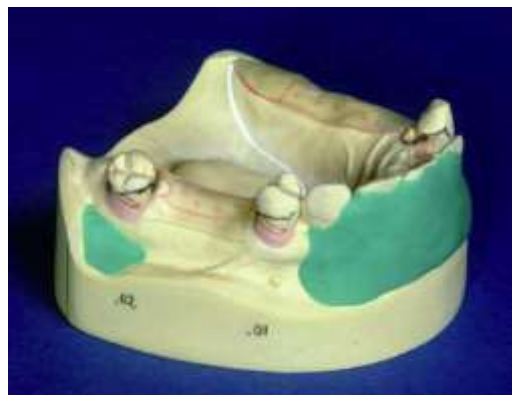
This is *not a blackout* but rather a *creation* of additional space for metal to contact the tissue.

Beading

Purpose:

To create additional metal material to contact the palate around the major connector to provide a snug fit, which helps prevent food particles from collecting beneath the framework.

This is also used to determine if the RPD has a good fit to the underlying tissue it contacts.



Duplication of the master cast

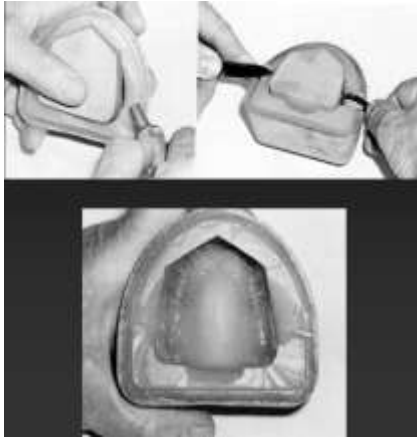
- Reversible hydrocolloid is used to make the mold for duplication.

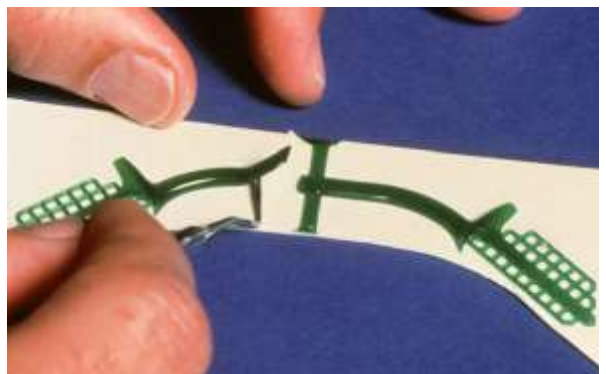
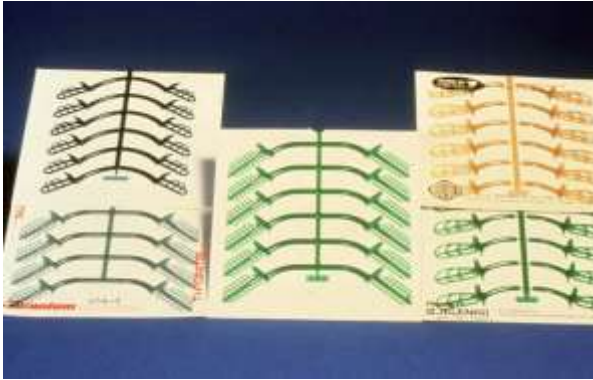


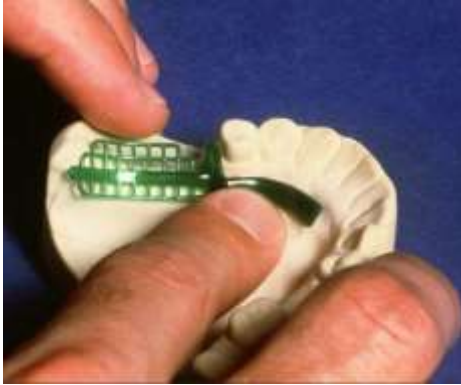
Fabrication of refractory cast

- Block out master cast
- Duplication of blocked-out master cast
- Pour cast in investment material
- Wax-up the RPD framework on refractory cast















the sprue channel is the opening leading from the crucible to the cavity in which the framework is to be cast.

Sprues have the purpose of leading the molten metal from the crucible into the mold cavity.

For this purpose, the sprue should be large enough to accommodate the entering stream and of the proper shape to lead the metal into the mold cavity as quickly as possible, but with the least amount of turbulence.

The sprues have the further purpose of providing a reservoir of molten metal from which the casting may draw during solidification, thus preventing porosity caused by shrinkage.





Investment expands during
burnout ???





