

# Lecture 15 : Clinical and Laboratory Steps of fabrication of metal framework RPDS

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DENT 362  
REMOVABLE PROSTHODONTICS II  
Removable Partial Denture Construction

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# Overview of Clinical and Laboratory Procedures in Construction of Definitive Metal Framework RPDs

• Clinical	• Laboratory
<ul style="list-style-type: none"> <li>History, examination, diagnosis, Preliminary impressions</li> </ul>	<ul style="list-style-type: none"> <li><b>Primary cast</b> <ul style="list-style-type: none"> <li>Surveying</li> <li>Initial design</li> <li>Fabrication of Special Tray</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>Tooth preparation</li> <li>Secondary impression</li> </ul>	<ul style="list-style-type: none"> <li><b>Secondary cast</b> <ul style="list-style-type: none"> <li>block out</li> <li>duplication</li> </ul> </li> <li><b>Refractory cast,</b> <ul style="list-style-type: none"> <li>Design transfer</li> <li>wax up</li> <li>Casting of metal framework</li> <li>Finishing and polishing</li> <li>Wax rims on the metal framework</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>Trial insertion of metal framework, Jaw relation registration, teeth selection</li> </ul>	<ul style="list-style-type: none"> <li>Mounting onto articulator, teeth setting, wax up</li> </ul>
<ul style="list-style-type: none"> <li>Trial insertion of waxed up denture</li> </ul>	<ul style="list-style-type: none"> <li>Acrylic processing</li> </ul>
<ul style="list-style-type: none"> <li>Insertion</li> </ul>	
<ul style="list-style-type: none"> <li>Recall</li> </ul>	

## Lab 1 : Primary Cast Surveying



The survey process will allow you to analyze the contours of the potential abutment teeth and the residual ridges, as these surfaces will be contacted by the the removable partial denture.

### Steps of the surveying procedure :

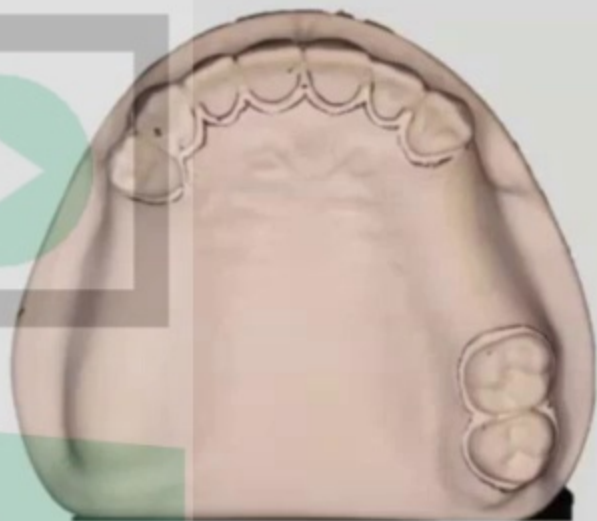
Step 1: Identifying the most favorable tilt

Step 2: Selecting the Path of insertion

Step 3: Drawing the survey lines ( Height of contour using a graphite marker)

Step 4 :Locating and marking measured undercuts using undercut gauge

Step 5: Tripoding the cast



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## Enamel reshaping - Rest seats



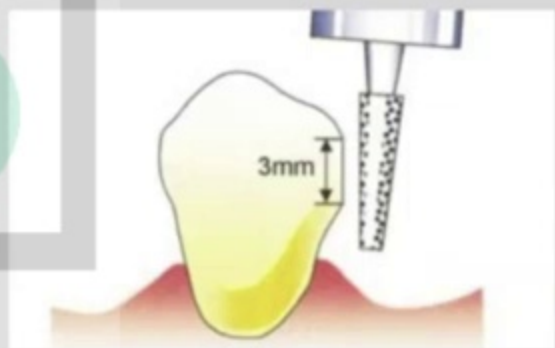
- Occlusal
- Cingulum
- Incisal



# Preparation of guide surfaces - 1



- Hand piece should be positioned so that guide surfaces are parallel to each other and to the planned path of insertion
- Should extend vertically for about 3 mm
- Should be kept as far from the gingival margin as possible



# Enamel reshaping – modification of unfavourable survey line

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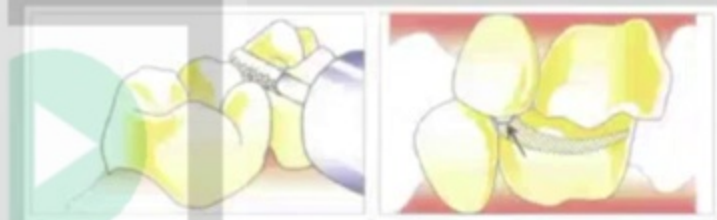


- 1: Unfavourable (high) survey line
- 2: Modified (lowered) survey line

## Enamel reshaping – Embrasure widening



- To provide space for clasp arms passing between teeth
- To allow sufficient bulk of embrasure minor connectors joining rests to the major connector

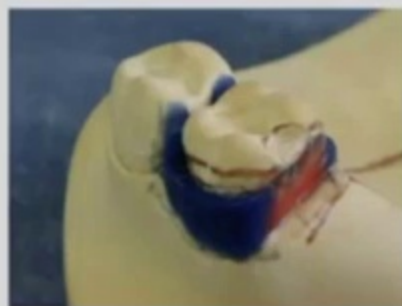




## Lab 2: Block out and Relief Procedures



Site	Material	Thickness
<b>Parallel Blockout</b>		
Proximal tooth surfaces to be used as guiding planes	Hard baseplate wax or blockout material	Only undercut remaining below contact of the surveyor blade with tooth surface
Beneath all minor connectors	Hard baseplate wax or blockout material	Only undercut remaining below contact of the surveyor blade with tooth surface
Tissue undercuts to be crossed by rigid connectors	Hard baseplate wax or blockout material	Only undercut remaining below contact of the surveyor blade with surface of the cast
Tissue undercuts to be crossed by the origin of bar clasps	Hard baseplate wax or blockout material	Only undercut remaining below contact of the surveyor blade with surface of the cast
Deep interproximal spaces to be covered by minor connectors or linguoplates	Hard baseplate wax or blockout material	Only undercut remaining below contact of the surveyor blade with surface of the cast
Beneath bar clasp arms to gingival crevice	Hard baseplate wax or blockout material	Only undercut area involved in attachment of the clasp arm to the minor connector



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