Partial Denture

Surveying procedure

M.Sc Maha ALmahuna

Lecture 3

Surveying:

Is the determination of the relative parallism of two or more surfaces of the teeth or other parts of the cast of the dental arch.

Survey:

Is the procedure of locating and determination the contour and position of the abutment teeth and localized structure before designing a removable partial.

Purpose of surveying

1. To identify the modifications of oral structures that are necessary to fabricate a removable partial denture that will have a successful prognosis. (modification of tooth surface)
2. To accommodate placement of the component parts of the partial denture in their designated ideal position on abutment teeth.
3. To develop the design and construction of a partial denture.
4. To parallel internal rests and intra coronal retainers
5. To machine internal rests.
6. To make the guiding plane surfaces of abutment restorations parallel.
7. Re contouring abutment teeth on the diagnostic cast.
8. Contouring wax patterns
9. Measuring a specific depth of undercut

Objectives of surveying

1. To design a R.P.D such that its rigid flexible components are appropriately positioned to obtain good retention
2. To determine the path of insertion
3. To mark the height of contour of the tooth (survey lines)
4. To mark the undesirable under cuts into which the prosthesis should not extend.

Height of contour : circle line in tooth at greatest circumferences at selective position

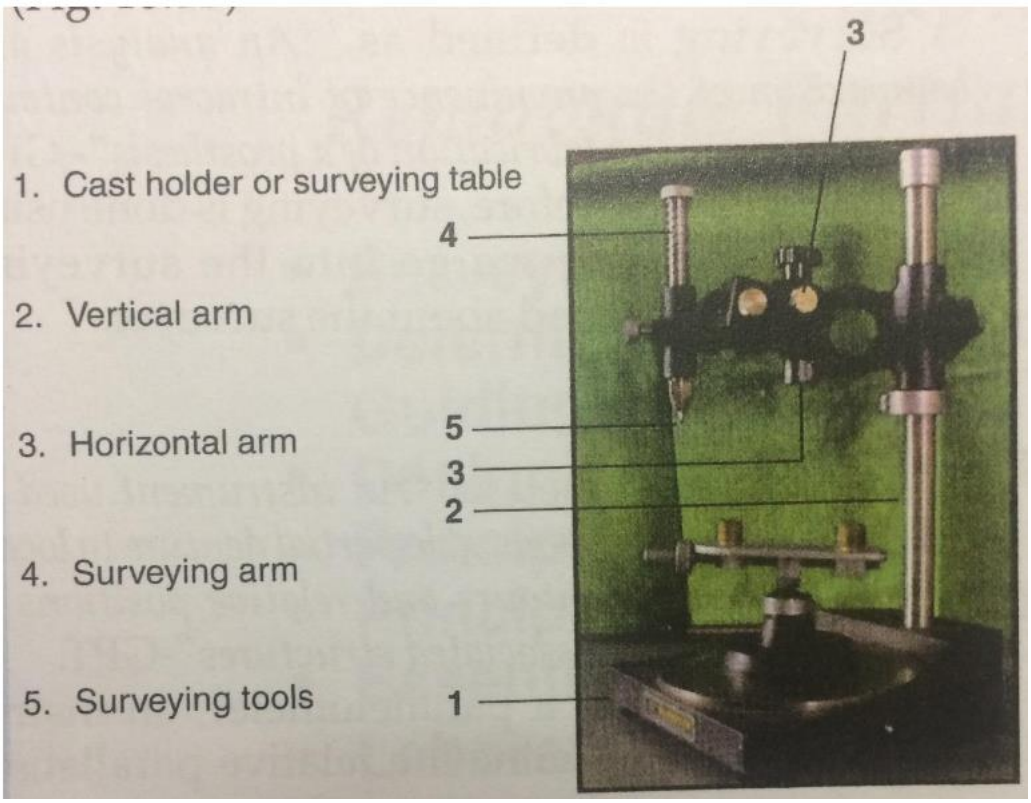
Under cut area : portion in the tooth according to location , in lingual side between height of contour gingival margin, while in labial side at incisal edge.

Survey line: line which draw on the cast by servitor are making the greatest prominence of restoration this line is draw on height of contour of the tooth.

Guiding plane : Surfaces are parallel to path of placement they may or may not face each other

Parts of surveyor:

1- Surveying plat form
2- Cast holder (surveying table)
3- Vertical arm
4- Horizontal arm



Surveying tools

- Analyzing rod
- Carbon marker
- Under cut gauge
- Wax trimmers

Parts of surveyor :

1. Surveyor platform

It’s a metal plate parallel to the floor where a cast holder can be placed, it forms the base

2. Cast holder (surveying table)

It’s a stand placed over the surveying platform this stand has a base and table to place a cast.

 The cast can be locked in any position on the table with the help of a locking device the table is attached to the base with the help of a ball and socket joint.

 This joint also help to tilt position and lock the surveying table in any required position.

3. Vertical arm

It’s arises vertically from the surveying platform it supports the superstructure (horizontal arm and the surveying arm)

4. Horizontal arm

It’s extends horizontally from the top of the vertical arm.

 Surveying tools:

These tool attached to the mandrel of the surveyor are used for surveying . they are different types ex: analyzing rod, carbon marker, wax trimmer, and undercut gauges.

- Analyzing rod

Is a rigid metal rod used for diagnostic purposes in the selection of the path of placement used to determine the undercut areas prior to scribing the height of contour with the carbon marker.

- Carbon marker:

Is used for the actual marking of the surveyor lines on the cast

- Undercut gauge

Are used to measured the extent of the undercuts on the abutment teeth that are being used for clasp retention.

Wax trimmers:

Is used to trim excess that may be inserted into those undercut areas which are to be obtain the proper form of the wax pattern

 All of the area below height of contour is under cut in which clasp tip must lie in order to provide retention for R.P.D.

 Other undercut are undesirable (must be eliminated or blocked out).