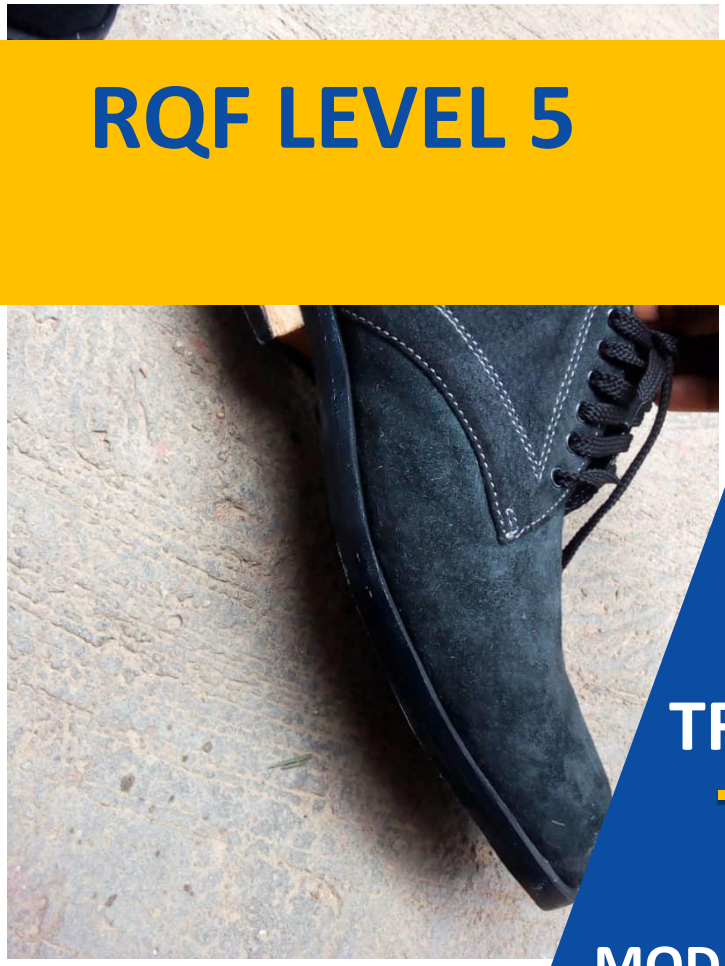
RTB | RWANDA TVET BOARD

RQF LEVEL 5



TRADE: leather works

MODULE CODE: : LTWSP501

TEACHER'S GUIDE

Module name: SOLE AND BOTTOM PREPARATION AND ATTACHMENT

Table of content

Acronyms

LTW: Leather works

SP: Sole and bottom preparation and attachment

RTB: Rwanda tvet board

LTWSP: Leather works Sole and bottom preparation and attachment

Introduction

This module sole and bottom preparation and attachment provides learner with skills, knowledge and required attitudes to prepare bottoms and soles by providing different possible solutions such as cutting the bottom/ sole, attaching sole and the bottom as well as applying advanced constructions methods as direct attach, vulcanized, fly knit, 3D printed for men and women closed shoes

Learning units describe the essential outcomes of a competence. Performance criteria describe the required performance needed to demonstrate the achievement of the learning unit

This module sole and bottom preparation and attachment has three learning units like Prepare sole components, attach upper part of shoe with sole, Decorate moccasin and pieced ladies' shoes.

And also, this module it is so easy to fix a sole today, that the shoe maker mostly forgets how much knowledge is behind this product.

To get good result in connecting sole and upper we have to think about some important steps, and think that the highest bandage possible is necessary at the ball of the shoe, because it's the most moved part on the shoe while walking

Module Code and Title: LTWSP501 SOLE AND BOTTOM PREPARATION AND ATTACHMENT

Learning Units:

1: Prepare sole components

2: Attach upper part of shoe with sole

3: Decorate moccasin and pieced ladies shoes

Learning Unit 1: PREPARE SOLE COMPONENTS

Picture/s reflecting the Learning unit 1

STRUCTURE OF LEARNING UNIT 1

Learning outcomes:

1.1: Identify bottoms and soles

1.2: Perform cutting of the bottom/sole

1.3: Perform the preparation of sole components

Learning outcome 1: Identify bottoms and soles

 **Duration: 10 hrs.**

 Learning out come 1 objectives :

By the end of the learning outcome, the trainees will be able to:

This learning outcome provides learner with skills, knowledge and required attitudes to prepare bottoms and soles by providing different types of sole and bottom.

 **Resources**

Equipment	Tools	Materials
- grinding stone machine - roughing machine	Eyeleting tool, Revolving - Punch, Hand creasing machine with tools, Scissors, - Stitching awl, Stitch maker, Spring divider,	- Dye - Neutral polish -Thread trimmer - Wooden -Leather - meter

	- mallet, Hand clicking knife	-rubber -super glue

Advance preparation:

. Types of bottoms

. Types of soles and heels

. Challenges we have faced with this learning outcome is the lack of materials and equipment

Indicative content 1.1: **Identify bottoms and soles**

Summary for the trainer related to the indicative content (key notes using bullets such as ticks etc)

Learning outcome 1.1: IDENTIFY BOTTOMS AND SOLES

Meaning of sole: It is under surface of a person's foot or shoe.
Also, it is the part of undersurface of a person's foot between the toes and the instep.

- **Types of bottoms**

- Mon block
- Polyurethane Bottoms (PU)
- EVA Outsoles
- TRP Bottoms
- PVC Outsoles
- BPU
- ABS Outsoles

- **Types of soles and heels**

- **Rubber soles:** are made by organic or recycled rubber, there are flexible, water proof and long lasting.
    - They can with stand daily wear and tear and are ideal for daily wear, they can be designed to swit different shoe style.
- **Lugged sole (commando sole):** They are the kind of clunky sole you would find on your hiking or utility boots, they are made of rubber and provide greater traction and weather resistance**.**
- **Christy sole:** is a reliable light weight sole that provide greater traction and stability (no defined heel)
- **Comp soles**. Through designed for casual wear, comp soles delivers greater traction which staying light weight and water proof,
    - It is made of rubber and is usually found on moccasin and loafers.
- **Cork soles**: harvested from cork trees is a soft material that is compacted to create cork sole, also like leather.
- **Single leather soles**
- **Double leather soles**
- **Triple leather soles**
- **Dainite sole**
- **Ridgeway sole**
- **Combination soles**

- **Parts of sole**

It's had 3 (three)separate piece (part)

- **Insole:** it is a part of shoe that has direct contact with the bottom of your foot.
- **Middle sole:** it is a part of sole which is between the insole and out sole (under tapi)
- **Out sole**: is the portion that contact the ground when you walking,

Different materials for soles of shoes.

The combination of soles are made of two material**: Leather and Rubber.** The entire sole is leather but manufacture attach the rubber to the heel and the front.

Which types of sole is best for monsoon footwear?

Rubber soled foot wear is best monsoon foot wear, when walking over the damp surface, during the rain season they provide a better grip on different surfaces against muddy and slippery grounds, they are preventing falls.

Are plastic soles good?

Plastic soles are known for their durability, it is light on the feet and affordable

Which sole is comfortable?

Rubber sole is more comfortable, flexible and shock resistance on a hard surface.

What are bottom of your foot called

The bottom of foot is known as the sole. The added area on the bottom of the foot is known as the plantar aspect.

The top of your feet called: the top of your foot above the arch is known as the instep.

Sole Bonding.

It is so easy to fix a sole today, that the shoe maker mostly forget how much knowledge is behind this product.

To get good result in connecting sole and upper we have to think about some important steps, and think that the highest bandage possible is necessary at the ball of the shoe, because it's the most moved part on the shoe while walking

Sole bonding: it is the process of applying the adhesive to the contact surface of both the sole and the upper, and producing a bond between both surface under pressure.

- **Process of sole bonding**

Roughing: The best result for a clean sole upper connection can got by making the circumference of the prepressed shoe.

Apiece of sand paper is as good as real roughing machine, imported is only result.

Cementing: it a process of applying adhesive on soles.

of course, the adhesive has to be liquid so that clings on fibber of the leather and get a good contact to soles material,

Drying: It a process of when you finished applying adhesive to a sole and waiting a moment around (3-5) minutes to became dry

Activating: it is a process of warming a sole on fire, the surface temperature should be around 70^{0c} – 80^{0c} but don't heat the whole sole in this temperature, because the press time would be to longer and the sole might lose it shape.

Sole laying: it is a process of binding a sole on upper part of shoes (start to set the soles at the front and continue up to ball, the turn the shoe and start bring the heel into the right position, the whole operation wouldn't take you more than 10second, because need a temperature for the bond).

Pressing: it is a process using a hammer to bind a sole with upper part of the shoe. (for neoprene or tough bond) adhesive it is only necessary to have it's activated if it has dried for too long and you can fix the part with only hammer

Apply adhesive: it is a process of to adhesive into remaining gap between a sole and upper part of shoe.

Why different types of shoes need different types of sole

Sole of shoe are made from different materials because different types of shoes need different sole, and also, they perform different function.

- **Different materials needed to make shoe sole**

  - Natural rubber
  - Leather
  - Polyurethane (like rubber or plastic used in middle sole)
  - Pac compound

- **Preparation of new sole of closed shoes.**

  - Choose the quality you need
  - Select the property size with the upper parts of shoe
  - Cleaning the upper part of sole
  - Measurement of the sole due to the size you want
  - Cutting the measurement of the sole

- **What can I put on the bottom of my shoes**

Your soles are used in many different

- Anti-slip pads
- Rubber sole repair or placement
- Heel guards for high heel
- Clear, vinyl sole sticker protectors
- Rubberized coating

- **How do you take a care of the sole of your foot**
  - Check them daily for cuts, sores, swelling and infected toe nails
  - Give them a good clearing in worm water, but avoid soaking them because it may dry them out.
  - Moisturize them every day with lotion, cream or petroleum jelly
  - Avoid wearing tight- fitting shoes
  - Skip the flip-flops and flats


Theoretical learning Activity

- ✓ Group discussion on types of bottoms
- ✓ Group discussion on types of soles and heels

Practical learning Activity

- ✓ Select the tools, materials and equipment used to prepare the sole

Points to Remember (Take home message)

- Learners should know the different types of bottoms - Learners should know the different types of soles - Learners should know the different types of heels

Learning out come 1 formative assessment

Written assessment

1. Identify at least three types of shoe sole you learn in this module
   Answer: Commando sole, Rubber sole, dainite sole, combination sole, leather sole
2. Choice the correct answer,
   In the process of making shoe sole we have the different types of sole, select those types:

- Monoblock
- Eva outsole
- BPU
- Rubber
- Single leather
- dainite

Answers: Monoblock, Eva outsole, BPU

Please mix different assessment tools for triangulation and relevancy of assessment

Practical assessment

- ✓ Task1: **Select the tools, materials and equipment used to prepare the sole**

References: Lambert, J. (1963). General Repair of Footwear and Leather Goods. Washington DC.

Learning outcome 1.2: Perform cutting of the bottom/sole

Duration: 5 hrs.

Learning out come 2 objectives :

By the end of the learning outcome, the trainees will be able to:

This learning outcome provides learner with skills, knowledge required for cutting techniques and the process of cutting a new insole.

Resources

Equipment	Tools	Materials
- Table - Cutting board	- Cutting knife - Ruler	- Overall - Paper - Tape measure

Advance preparation:

. Process of cutting new insole

. Challenges we have faced with this learning outcome is the lack of materials and equipment

Indicative content 1.2: Perform cutting of the Bottom/ sole

Summary for the trainer related to the indicative content (key notes using bullets such as ticks etc)

The first one every learner must know the meaning of cutting
Cutting: It is a process of dividing into two or more parts of leather/ something. Especially in the preparation of sole or cut is the process of dividing into two part of sole

And also cutting is the term used for cut/divide two or more parts of leather components, linings, foam and reinforcement materials using pattern for making leather goods.

- **Preparation of tools, materials at working area**

Few preparations are needed to be done before starting the cutting process, it required for effective and quality production.

- Switch on the main electrical board to switch on the entire machine at the factory
- Switch on the miniature circuit breaker followed by the machine power switch
- Gather all the tools required and ensure that they are good working condition
- Check and ensure that handles are not broken, blades of a knife are sharp, awl tip is pointed and not broken
- Level of oil and bar pressure meter is at optimal level or as maintained in manufacturing manual
- Aluminium and cutting die should be sharp not be damaged

- Wipe equipment and tools with dry cloth
- Ensure that there is no oil and water spillage
- Make sur that the working area is clean
- Check that the materials to be used are free from faults

Types of cutting

- Clicking cutting: is the second unit operation after assorting. In the process of leather goods making, cutting is one of the most important operations
- Hand cutting: it is the process of dividing into two or more different pieces by using hand (For example: to cut a shoe sole by using cutting knife). And is done usually in small leather goods industries using either card board patterns or metal template. So that hand cutting is done an inclined wooden table fitted with galvanized zinc sheet or Teflon sheet on its top.
- Machine cutting: it is the process of dividing into two or more different pieces by using machine (For example: to cut a shoe sole by using cutting machine). And is done in the case of bulk production

➢ **Before to cut a leather sole you must know the main parts of leather**

- Butt
- Neck
- Middle
- Shank
- Shoulder
- Belly

➢ **Consideration of cutting methods**

Components are cut from leather or other materials in sheet or roll form like:

- Using methods as diverse as manual cutting with knife
- Mechanical cutting with swing beam or bridge pressure utilizing metal dies
- Automated cutting tables incorporating knifes or fluids

➢ **Advantages of automatic cutting machines are:**

- Cleanness and uniformity of cut pieces
- Reduction in tooling costs (no need of cutting dies)
- Multi-head machines can carry out other tasks such as gimping, punching and stitch marking
- Skins can be scanned and stored to be cut later, helping production planning

- New models or samples can easily be re-engineered at low cast

➢ **Disadvantages of automatic cutting machines are:**

- Large machines take up considerable space
- High initial investment and running costs
- It is not possible to check the leather or slightly adjust placement of pattern before each cut
- There is a potential for high level of rejects or poorer quality foot wear.

➢ **How do we measure the size of shoe sole and upper part of shoe?**

a. Change centimeter into the size

If you want to change centimeter into the size of shoe sole and shoe, you take the centimeter of your foot then multiply by three and then plus one divided by two

Formula (size)= Length of your foot*three/two+one

Size= L*3/2+1

Here you may use ruler or meter (long tape measure or spring return tape measure)

Examples of British and French size of sole and shoe

Examples of British	**Examples of French**
42	8
43	9
44	10
45	11
46	12

Examples: 1. Calculate the size of foot which has a length of 28cm

Solution: Size= Length of your foot*three/two+one= 28*3/2+1= 43size

Examples: 2. Calculate the size of foot which has a length of 30cm

Solution: Size= Length of your foot*three/two+one= 30*3/2+1= 46size

b. Change inch into centimeter

you know that 1inch is equal to 2.54 centimeter

to get centimeter you take the number of shoe inch multiply by 2.54 centimeter.

Examples: 6.5 inch= 6.5*2.54= 16.51cm

6.75 inch= 6.75*2.54= 17.24cm

7.5 inch= 7.5*2.54=19.050cm

10.5 inch= 10.5*2.54=26.67cm

➢ **Process of cutting new insole**

- Step 1: Remove the old insole
- Step 2: Position the insole on the new sole
- Step 3: Trace the outline of the insole on the new insole
- Step 4: Cut the insole

- Step 5: Slide the cut sole into your shoe


Theoretical learning Activity

- ✓ Group discussion about cutting techniques
- ✓ definition of insole
- ✓ Process of cutting new insole


Practical learning Activity

- ✓ Practical work on process of cutting new insole


Points to Remember (Take home message)

- Cutting techniques
- Process of cutting new insole


Learning out come 2 formative assessment

Written assessment

1. Enumerate the techniques which is used when you prepare the shoe sole?

Answer: Manual and machine cutting

2. State any five (5) process of cutting a new insole

Answer:

Step 1: Remove the old insole

Step 2: Position the insole on the new sole

Step 3: Trace the outline of the insole on the new insole

Step 4: Cut the insole

Step 5: Slide the cut sole into your shoe

 **Please mix different assessment tools for triangulation and relevancy of assessment**

Practical assessment

- ✓ Task1: Discuss and the show the process of cutting new insole

References:

1. Rockett, H. G. (1919). The Modern Boot and Shoe Maker: A Complete Guide to Design and Manufacture Hand and Machine Repairing, Shopfitting and Stocking, Retailing: Book keeping and Management. Gresham Publishing Company

Learning outcome 1.3: Perform the preparation of sole components

 **Duration: 5 hrs.**

Learning out come 3 objectives :

By the end of the learning outcome, the trainees will be able to:

This learning outcome provides learner with skills for preparing sole components.

Resources

Equipment	Tools	Materials
- Table - Cutting board	- Cutting knife - Ruler	- Overall - Paper - Tape measure

Advance preparation:

. Preparing sole components

. Challenges we have faced with this learning outcome is the lack of materials and equipment

Indicative content 1.3: Perform the preparation of sole components

Summary for the trainer related to the indicative content (key notes using bullets such as ticks etc)

➢ **Shoe sole made of:**

- Natural rubber
- Polyurethane or polyvinyl chloride (PVC) compounds.
- EVA (ethylene-vinyl acetate)

The preparation method for the shoe sole Materials comprise : firstly, plastifying the Natural rubber on internal mixer to obtain plastified rubber then sequentially adding other raw Materials : feeding the mixture into the internal mixer to be internally mixed.

Theoretical learning Activity

✓ Discuss about the components of shoe sole

Practical learning Activity

✓ **Practical work on preparation of sole components** (Example: Trainees in pair perform ……)

Points to Remember (Take home message)

- To differentiate natural rubber from polyurethane or polyvinyl chlorine (PVC)
- Components used for making shoe sole

Learning out come 3 formative assessment

Written assessment

- ✓ True or false questions

1. Shoe sole can be made of

- Natural rubber? **True**
- Artificial rubber? **False**
- PVC? **True**
- Welt? **False**

- ✓ Multiple choice the correct answer,

In the process of making shoe sole we need the different materials:

- Leather
- Caoutchouc
- Wood
- Sub leather
- Thread

Answers: Leather, wood

 **Please mix different assessment tools for triangulation and relevancy of assessment**

Practical assessment

- ✓ Task1: preparation of sole component

References:

1. DeMello, M. (2009). Feet and Footwear a Cultural Encyclopedia. Library of Congress Cataloging.

2. Lambert, J. (1963). General Repair of Footwear and Leather Goods. Washington DC.

Learning Unit 2: ATTACH UPPER PART OF SHOE WITH SOLE

Picture/s reflecting the Learning unit 2

STRUCTURE OF LEARNING UNIT 2

Learning outcomes:
2.1: Place the shoe to be soled on the shoe stand
2.2: Apply adhesive to upper components and sole
2.3. Attach the lasted upper with sole
2.4. Stitch the sole depending on the sample model

Learning unit 2: ATTACH UPPER PART OF SHOE WITH SOLE

Learning outcome 2.1: Place the shoe to be soled on the shoe stand

Duration: 10 hrs.

Learning out come 1 objectives :

By the end of the learning outcome, the trainees will be able to:

After learning this learning outcome, the learners should know the techniques of roughing and they know how to fix shank into the shoe insole.

Resources

Equipment	Tools	Materials
- Table - Roughing machine	- Cutting knife - Ruler - small hammer	- Sole - Shank - Welt - Glue - Roughing paper

	- Anvil	

Advance preparation:

. Perform welt and how to fix it

. Challenges we have faced with this learning outcome is the lack of materials and equipment

Indicative content 2.1: Place the shoe to be soled on the shoe stand

Summary for the trainer related to the indicative content (key notes using bullets such as ticks etc)

All parts or sections of the shoe above the sole that are stitched or otherwise joined together

- **To attach sole of shoes**

Step 1: how to reattach shoe sole

- Pull all separated sole away from the bottom of the shoe
- Clean the top of the shoe and sole
- Apply a thin bead of glue along the top edge of the sole and across the interior surface of the sole
- Wait a few moments (3-5) minutes for adhesive/glue to be dried
- Push the sole back to its original position on the bottom of the shoe

Step 2: how to attach a new sole on shoe

- Clean the top of the shoe and sole
- Apply a thin bead of glue along the top edge of the sole and across the interior surface of the sole
- Wait a few moments (3-5) minutes for adhesive/glue to be dried

- Activating that sole around the range 70^{0c} – 80^{0c} but don't heat the whole sole in this temperature
- Push the sole back to its original position on the bottom of the shoe

➢ **parts of shoe above the sole called**

shoe upper: the entire part of shoe that covers the foot, the upper parts of a shoe consists of all parts or sections of the shoe above the sole, these are attached by stitches or more likely molded to become a single unit then the insole and outsole are attached

Discribution of the parts of shoe
There are the most basic parts of shoe
A shoe consists of heel, toecap, insole and outsole that covers the foot.
But other secondary parts make up the rest of the shoe
Anatomy too: they include upper, eyelets, quarter, vamp, lining, tongue, topline and top edge.

How do we fix a shoe sole separation?
Generously apply glue on both side/surface of the separated shoe, wait for about 3-5 minutes to allow the glue to set before reconnecting the sole
When the glue applicable is done, press and hold the sole and the sole and sole separated surface together in order for the glue to dry.

➢ **Roughing techniques**

Roughing: is the process of reducing the smoothing surface on the sole.
Also, it is ways to make your shoes slip-resistance is to stuff the soles with sand paper, nail file, or something else with a rough surface such as brick, gravel or rock. Simply rub the rough items on the sole of your shoe until small grooves appear

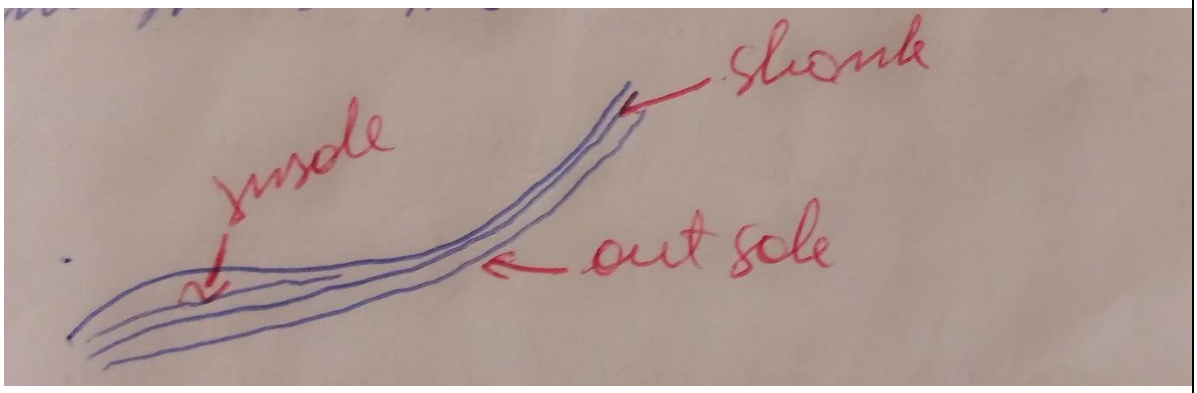
➢ **Methods of roughing**
- Shoe machine roughing
- Manual shoe roughing

The sole is roughed just short of where the sole ends at the seats. After sole attaching the heel of shoe.
In roughing of the shoe sole we need to use those above methods, so far, the shoe machine roughing as regular machine and manual machine shoe roughing by using knife.

➢ **Attach shank**

Shank: it is relatively stiff and firm components generally made with metal or wood. It is placed in between waist of the shoe.
It prevents the fixing of the waist during walking, the shank must not visible on the finished shoe.

that a shank



The shank is not required for a shoe which has a wedge unit sole

- **Function of shank**

As we introduce heel, it forces the insole to form a bridge between heel breast and the joint.
As you know that insole is the foundation of the shoe as such this bridge must be support to prevent it from collapsing.
Role of shank also act as a filler in the narrow waist strip between the lasted margins
Shank avoid sole to be bend while you are walking

- **Materials used for making shank**

There are various used for making shank, most of shank now-a-day are made from metal.
Beside this wood or plastic are also the materials which are often used for a shank.
Metal: the most common metals used is carbon steel which contain 0.5% to 0.55% of carbon
Other components are: silicon, manganese, Sulphur and phosphorus

➢ **Methods of attaching shank**

There are various methods for attaching shank with insole

- Staple attaching: it is oldest methods of shank attachment, the staple is narrower than the full width of the shank should not remove, to day staple attaching is not most used because the most shoe maker they use sole from market.
- Rivet attaching: this method may be described as "pre-shanked insole" where as shank is attached by a rivet at each end and must be attached before lasting.
- Tack attaching: this method may be followed by India specially in hand made sector. After lasting the shank is positioned on the waist of bottom part and it is attached with tacks. The correct length and thickness of the tack must ensure the good attachment and avoid any further movement of shank.
- Adhesive attaching: in this method the shanks are attached onto the insole with the help of hot melt adhesives.
- Buried attaching: in blended insole the shank is positioned in between insole and shank board which is known as buried shank. This is attached prior to the lasting and secure with rivet or eyelets on the steel shank.

➢ **Methods/techniques of fixing welt**

Welt of shoe: refers to a strip of leather that is sewn around the perimeter of the upper part of shoe onto the sole.

The outer sole is then sewn to the welt, as opposing to being attached directly to the upper like the black stitch method.

How are the welt of shoes made

A strip of leather called he welt is sewn onto the shoe through the rib and upper and all the surplus materials is trimmed off the seam.

The sole is then attached to the welt and two are stitched together, after this, the heel is attached which completes the making of shoe.

Theoretical learning Activity

✓ **Individual activity: define shank and show how it is fixed into the insole**

Practical learning Activity

- ✓ **Practical work on preparation and perform welt**

Points to Remember (Take home message)

- Meaning of shank - Perform welt on the sole

Learning out come 1 formative assessment

Written assessment

- ✓ Answer by True or false questions

Techniques used to fix welt are:

- Gluing techniques **True**
- Roughing techniques **True**
- Fixing welt techniques **True**
- Hammering techniques **False**
- Clacking techniques **False**

Define the following term: Shank

Answer: Shank: it is relatively stiff and firm components generally made with metal or wood. It is placed in between waist of the shoe.

It prevents the fixing of the waist during walking, the shank must not visible on the finished shoe.

Please mix different assessment tools for triangulation and relevancy of assessment

Practical assessment

- ✓ Task1: Preparation of the bottom of lasted shoe

References: S.Gonettileke, R. (2012). The Science of the Footwear. Taylor &Francis Group.

Learning outcome 2.2: Apply adhesive to upper components and sole

Duration: 10 hrs.

Learning out come 2 objectives :

By the end of the learning outcome, the trainees will be able to:

After learning this learning outcome, the learners should know how to use adhesive in shoes making and the types adhesives need for achieving this activity of making shoe.

Resources

Equipment	Tools	Materials
- Table - Roughing machine	- Cutting knife - Ruler - small hammer	- Special glue - Hot glue - Upper parts - Soles - Alteco super glue

	- Anvil	- Brush

Advance preparation:

. Selection of adhesive for upper materials based on job specifications and product materials compatibility

. Challenges we have faced with this learning outcome is the lack of materials and equipment

Indicative content 2.2: Apply adhesive to upper components and sole

Summary for the trainer related to the indicative content (key notes using bullets such as ticks etc)

Adhesives: it is a sticky substance that is used for joining things together usually permanently.

Uses of adhesives
The adhesives are sealants are mainly used to bond the following substances: metals, plastics (thermosets and thermoplastics), composites, foams, elastomers, wood, and wood products, glass and ceramic and sandwich and honeycomb structure.

What are adhesives in sciences
An adhesive is a substance used to bond two materials together some common formats include one- and two-part reactive adhesives, hot melt and reactive, hot melt adhesives and solvent and water-based adhesives.

- **Types of adhesives and how to use them**

  - **Epoxy adhesive:** epoxies are a type of structural adhesives
  - **Polyurethane adhesives:** polyurethanes are polymer-based adhesives used for constructions requiring high strength bonding and permanent elasticity
    Epoxy adhesive is a synthetic mixture of or polymer and a harder used to attach or join a variety of the some or different surface
    Epoxy adhesive is a thermosetting made up of a resin or polymer and hardener that is used to adhere or join a range of surface together with a strong, permanent and robust bond that can tolerate extreme stress and weather condition.
  - **Liquid adhesive:** a fluid preparation of glue (as animal glue with a chemical liquefier in water)
    Liquid adhesives sometimes referred to as whites' glues are water-based glues that are used in a wide variety of application
  - **Hot melt adhesives:** are quick to bond, high performing and easy to across a wide range of applications, hot melt adhesives offer fast bond strength and do not require drying
  - **Contact and reactive adhesive**

- **What are two basic types of adhesives**

There are two basic types of adhesives that harden by drying
  - Solvent based adhesives
  - Polymer dispersion adhesives

Also known as emulsion adhesives. Solvent based adhesives are a mixture of ingredients (typically polymer) dissolved in a solvent

- **Water (H2O) is a good adhesive**

Water is very adhesives: it stitches well to a variety of different substances. Water sticks to other things for the same reason it sticks to it self -because it is polar so it is attracted to substances that have a charge. Hygiene bonds make water sticky

- **How do you remove adhesive from leather components like sole/bottom of shoe?**

Vegetable or canola oil can wonder as can peanut butter or mayonnaise, spread it on, let it soak into the residue for about on hour, then wipe it away.
For a tougher clean, try rubbing alcohol or vodka, let it fully permeate the unwanted residue, then rub a way completely with a leather.

- **Remove adhesives from the leather by using alcohol**

Rubbing alcohol
Rubbing alcohol is effective in dissolving most adhesives. Just put a small amount on a Catton ball, place it over, the residue for a new second, then proceed to rub it off be aware that rubbing alcohol can dry out the skin.

- **Different between glues and adhesives**

Glues are delivered from natural source (plant and animal by products), whiles adhesives are synthetics.
But in every day usage, those words are practically synonymous.

- **Advantages of adhesives**
  - Adhesives bond dissimilar and hard to bond materials
  - Adhesives and tapes provide a barrier to reduce or prevent bimetallic corrosion that often occurs between types of metal
  - Adhesive can bond hard to bond materials such as low surface energy plastic, oily metal and silicon rubber
  - Adhesives are used to join upper parts of shoes with sole/bottom
  - Adhesives are used to join two or more pieces of leather when you are going to make a shoe like moccasin and other types of shoes

- **Disadvantages of adhesives**
  - Adhesives curing time
  - Resistance to temperature
  - Adhesives are polymer based on materials and have an average resistance to high temperature
  - Ageing
  - Surface preparation
  - Safety and environment
  - Poor resistance to elevated temperature
  - Fair to poor resistance to chemicals
- **Classification of adhesives**

Adhesives may be classified as either **organic or inorganic materials**

- **What can we use instead of glue?**

Good things to keep on hand for adhesive making
  - Flour
  - Alum
  - Salt
  - Glycerin
  - Gun Arabic
  - Clave oil
  - Gelatin

- **Three (3) different types of adhesives that can be used in shoes making/ leather works**

The main types of adhesives used in shoes making/leather works include:
  - Glue
  - Contact adhesives
  - White adhesives

- **Adhesives application procedures**
  - Cementing techniques
  - Drying process

Adhesives also known as glue, cement, mucilage or paste is any non-metallic substance applied to one or both surface of two separated items that binds them together and resists their separated

Adhesives process
Adhesives bonding is the process of joining two surfaces together, usually with the creation of a smooth bond.
This may involve the use of glue, epoxy, or one of wide range of plastic agents which bond either through the evaporation of a solvent or through curing via heat, time, or pressure

Theoretical learning Activity

- ✓ **Individual activity:** Discuss about on types of adhesives used shoes making


Practical learning Activity

- ✓ Group discussion adhesives application procedures


Points to Remember (Take home message)

- Types of adhesives used in shoes making
- Adhesives application procedures


Learning out come 1 formative assessment

Written assessment

1. Identify any two (2) types of adhesives used in shoes making
   Answer: Contact adhesive and White adhesive
2. What are the adhesives application procedures?

Answer: Cementing techniques and Drying process

Please mix different assessment tools for triangulation and relevancy of assessment

Practical assessment

- ✓ Task1: Practical show how the adhesives application procedures followed

References: S. Gonettileke, R. (2012). The Science of the Footwear. Taylor &Francis Group.

Learning outcome 2.3. Attach the lasted upper with sole

Duration: 10 hrs.

Learning out come 3 objectives :

By the end of the learning outcome, the trainees will be able to:

After learning this learning outcome, the learners should know how to press and attach shoes sole on upper part of shoes by using hand and machine where it needed.

Resources

Equipment	Tools	Materials
- Post bed sewing machine, Flat bed sewing machine, Cylinder bed type	- Thread trimmer - Scissors - Stitching awl - Stitch maker - Spring divider	- Special glue - Hot glue - Upper parts - Soles - Alteco super glue

- Sewing machine, Computerized sewing machine, Zig Zag machine, - Embroidery machine, Sample leather pieces, eyeleting tool, Revolving - Punch, Hand creasing machine with tool	- Steel rule	- Brush - Dye - Neutral polish

Advance preparation:

. Selection of adhesive for upper materials based on job specifications and product materials compatibility

. Challenges we have faced with this learning outcome is the lack of materials and equipment

Indicative content 2.3. Attach the lasted upper with sole

Summary for the trainer related to the indicative content (key notes using bullets such as ticks etc)

- **Bottoming operation**

Shoe Bottom: is the lowest point or part of shoe
Pressing: is the process of act of press exertion of pressures, it has pressed button.
Attaching and pressing process use pressing machine
The operation of outsole pressing and front-rear pressing can be accomplished simultaneously or respectively.

- **Methods of pressing**

The invention discloses a pressing method for an outsole in shoe manufacturing process.

The outsole is mother with a shoe last, when mounting the outsole, the head is mounted firstly, the other part is mounted towards the back step by step, the rear part is mounted finally and the edge, distance of four sides of the outsole are equal.
When mounted the sole, the outsole and edges at four sides should expose uniformly, when mounted the sole, the outsole and edges at four sides should be well pressed by hand step by step.

- **Before the process of pressing a sole on upper part of shoe you must know the process of making shoes**
  - Think on design you want to make
  - Gathering the tools, materials and equipment you use
  - Make a pattern
  - Copy that pattern on the leather
  - Cut those leather pieces
  - Stitch those leather pieces
  - Make lasting by hand or machine
  - Prepare the sole
  - Attach the sole on upper part of shoe
  - Press that sole on upper part of shoe by using hammer
  - Make shoe finishing

- **SOLE PRESSING**

  The main purpose of these operations is to activate and press the sole and the shoe bottom together so that they may not come apart in wear. A variety of machines have been made for sole and shoe bottom activation, the choice of the machine is mainly made on the output required and the price. For example, some flash heat activators have setting for temperature and cycle time. Some cheaper models have no setting; therefore, rely on the operator's skills. Modern sole presses are all equipped with a variety of pads to allow for various heel heights and adjustable pressure for the wide range of soling materials.

- **Heat Reactivating before Sole Pressing**

After the sole and the upper have been prepared for sole adhesion, compatible adhesive is applied to both the upper and the sole. The adhesive film is given enough time for drying. Then the upper and the sole are heat reactivated so that the adhesive film gets activated enough for proper bonding. Heat reactivators are of flash heat types, eject types and black heat types.

- **Flash heat type** has two heating levels. When not in use the elements give off a fraction of the full heat. A claimed advantage is that an even shoe bottom is produced because only the cemented surface is heated the sole does not soften unduly.
- **Different coloured soling respond differently to flash activation.** Light colour takes longer than dark colours to reach the same

surface temperature. The light colours must be for longer period or they must be placed nearer the heating elements.

- **Black heat type** of heater consisted of a heating element controlled by simmer stat type of temperature control. Slow heat builds, heating through the sole. This heating softens some soling materials, causing >print through= which is visible after sole pressing. Thermoplastic soles may melt when in contact with the metal grid.

➢ **Starting Work**

The heat reactivator cabinet must be at the normal operating temperature before starting work. On > flash = heat types, this can be achieved quickly by turning on to full power once or twice. The heating elements should periodically be checked.

➢ **Sole Preparation temperature of 75-90 degree Celsius**, is required to reactivate the adhesive film (depends on the adhesive, consult your adhesive supplier).

• Check the temperature by using special temperature indicating crayons. A small amount of crayon wax is placed on the adhesive film to the forepart and seat of the soles before reactivation to check the temperature.

• Adjust the heating elements or tray position accordingly if the cemented sole surface is either too hot or not hot enough.

• Also, adjust the heating elements or the tray angle for various heel heights and sole thickness.

• Timing device on the reactivator acts as an extra method of temperature control.

• Adjust the timing for various colours of sole because in most activators light coloured soling materials need much longer heat reactivation than darker materials to reach the same surface temperature.

• Certain soling materials may soften excessively under heat reactivation. Reduce the heat applied to the sole and heat reactivates the cemented upper, (follow the instruction of the adhesive supplier).

➢ **Sole Pressing**

Sole attaching presses are of two main types, Traditional type of presses and Enveloping bag presses.

Tradition Type of Presses

In the traditional type of presses, the lasted upper is held in position by two jacks, one at the forepart and the other at the back of the last, while pressure, either hydraulic or pneumatic, is applied to the sole. In simplest machines, the pressure is applied mechanically. The pad box can be of rubber, rubber lamels, water or air bags. There can a back support for high heels.

Enveloping Bag Presses

In this type of press, the lasted upper with sole spotted in position is either partially or totally enclosed in a rubber bag so that pressure is applied from several directions at once. This is advantageous not only for walled soles but for veldt or stitch down constructions where consolidation of the veldt/flange sole bond is important.

- **Setting Up the Press**

  - Position a shoe having sole spotted on the pad box and make adjustments according to contour of the sole bottom. This may involve re-setting the angle of the box, changing the rubber blocks or profiles and inserting waist wedges, depending on the type of press.
  - Position the toe and heel jacks independently for the last size and adjust for height.
  - Bring the press to its clamped position and then apply pressure to find whether sole distortion occurs.
    Any serious distortion of the sole must be reduced as far as possible by reducing the pressure to the acceptable minimum. Serious distortion prevents an adhesive bond. Bonding pressures of about 5 kg/cm2 is usual. Satisfactory flat bonds can often be achieved at half this pressure. Actual pressures applied depends on

- **Lasting operations**

the type of sole, being lowest for soft materials such as TPR and highest for hard materials such as leather.
Lasting Operations

- Spot the sole and press it immediately after heat reactivation.
- Keep the shoe under pressure for 13 seconds or longer.

- **Pressure Distribution**

Destructive sole bond testing will reveal any weakness in the attachment due to uneven or insufficient pressure. Check the pressure distribution by Carbon paper method. In this method, a lasted upper and sole are prepared up but excluding cement. Carbon paper between two white paper sheets is placed between the sole and upper. After the pressure has been applied in the press, the sheet of white paper is examined for an even print.

- **Any Variability in the Lasted Margin Region must be Investigated**

Fit of Upper to Soles

- When sole units have a wall, check that the lasted upper is not bridging the wall at any point.
- Check soles with stuck-on rands in a similar way if the rand is high.
- The inner edge of the rand should be skived to avoid bridging effect.
- Avoid stretching the sole. Some soles can be stretched to fit when spotting but this can lead to narrowing of the waist of the sole, being risk of bridging this area. To reduce toe spring, have PVC sole somewhat smaller than the shoe. Spot and stretch the forepart of the sole first, then spot the waist and heel.
- Keep bottom filling materials or scrims within the lasted margin. Apart from the reduction in bonding area caused by an overlap, the additional bulk of filler will also produce localised high spots of pressure which may lead to areas of poor adhesion nearby.

- **Sole Design**

• The margin for cementing of a Unit Sole should be minimum of 10 mm;
• The margin should not be on too deep angle or too curved.
• The cavity under this margin should not extend too deeply in.

Different Types of Sole Pressing Machines

- ✓ **Upper and Sole Activation Technique**

- **Activator**

- Set the tilt tray in the activator so that the adhesive surface on the sole is level to the flash heating bars.
- Set the cycle timer.

- Set the shoe bottom temperature – this depends on the type of adhesive.
- Switch on the main supply 15 minutes before commencing work.

➢ **Sole and Upper Laying**

- Place the shoe on the shoe bottom heating tray and the sole onto the sole tray.
- Press the flash-activating button.
- Pick up the preheated shoe and the sole from the activator.
- Press the heel, waist, toe of the upper and the sole together and join it together with hands.

➢ **Sole Press**

- Check the forepart and waist pad boxes of the sole press.
- Select the correct pad for the last.
- Check the heel pad assembly.
- Set the toe pads.
- Check the distance from the edge of the toe. The last to the toe pad should be 35 mm.
- The distance between the heel pad and the top of the last should be approximately 25 mm.
- Set the pressure. This depends on the type of soling materials. For micro and thermo plastic rubber because of their softness the pressure required is approximately 200 PSI.
- Set the cycle timer. This also depends on the type of adhesive and the soling materials. To obtain the best results it must not be set under 15 seconds.
- (ix) Place the joined upper and sole as in the diagram positioned under the toe pad and the heel pad.
- Apply pressure evenly throughout the sole bottom. Thus the sole is evenly layed.

➢ **RECOMMENDED BONDING SYSTEMS FOR SHOE MATERIALS (PU is known as Polyurethane, Polychloroprene is also known as Neoprene).**

Upper Materials

Upper materials	**Preparation**	**Adhesive**
	Leather	
Grain leather (resin finished, aniline nubuck)	Rough or scour to remove any finished and grain layer	Polychloroprene or PU (depending on upon soling materials) (PU adhesives better on greasier leather)

Suede	Lightly rough or scour to tease up fibres flattened by lasting	Priming is recommended before cementing very absorbent leather

Performance of the task without damage to the component as per work quality standard

Theoretical learning Activity

- ✓ **Discuss about how to attaching and pressing process use pressing machine** (example: ask trainees to brainstorm about……. within groups)


Practical learning Activity

- ✓ **Practical work on the Attachment of the lasted upper with sole** (Example: Trainees in pair perform ……)


Points to Remember (Take home message)

- Meaning of pressing techniques
- To know how to attach the upper part of shoe with sole


Learning out come 3 formative assessment

Written assessment

1. List out the possible faults, causes and corrections occurring due to the wrong sole pressing.

Faults 1: Sole Gaping

Causes

(i)Sole or shoe bottom not fully covered with adhesive.

(ii) Sole not prepared as per the procedure.

(iii) Not enough activation.

(iv) Cycle time on press too short.

(v) Insufficient pressure on sole press.

(vi) Wrong adhesive used.

Corrections

(i) Make sure that the whole surface on the sole and the shoe are fully covered with adhesive.

Lasting Operations

(ii) Follow the sole preparation procedure.

(iii) Increase flash heat cycle time.

(iv) Increase cycle time on the press.

(i) Increase pressure on the sole press.

Faults 2 : **Sole Layed too Far Forward**

Causes

(i) Poor sole potting by the operator.
(ii) Operator not trained correctly.

Corrections

(i) Operator must take care while spotting the sole on to the shoe bottom. (ii) Operator must be given good training procedure.

Faults 3 : Sole Layed too Far Back

Causes

(i) Poor sole spotting by the operator.
(ii) Operator not trained correctly.

Corrections

(i) Operator must take care while spotting the sole on to the shoe bottom. (ii) Operator must be given good training procedure.

Faults 4: Sole Layed to One Side

Causes

(i) Poor sole spotting by the operator.
(ii) Operator not trained correctly.

Corrections

(i) Operator must take care while spotting the sole on to the shoe bottom. (ii) Operator must be given good training procedure.

Faults 5 : Damaged Upper

Causes

Operator not positioning the shoe onto the sole press directly under the heel pad. Corrections Make sure the shoe is positioned directly under the heel pad before pressing the sole pressure activation buttons.

Please mix different assessment tools for triangulation and relevancy of assessment

Practical assessment

- ✓ Task1: Practical work on the Attachment of the lasted upper with sole

References:

Rockett, H. G. (1919). The Modern Boot and Shoe Maker: A Complete Guide to Design and Manufacture Hand and Machine Repairing, Shopfitting and Stocking, Retailing:

Book keeping and Management. Gresham Publishing Company.

Learning outcome 2.4. Stitch the sole depending on the sample model

Duration: 10 hrs.

Learning out come 4 objectives :

By the end of the learning outcome, the trainees will be able to:

After learning this learning outcome, the learners should know how the techniques of stitching and to know the tolerance allowed in shoes making/ leather works.

Resources

Equipment	Tools	Materials
- cylinder Sewing machine	- Measuring gauge - Scissor - Hand Needle	- Leather thickness - Gloves - Helmet, Safety shoe - Sample leather defects

Advance preparation:

. Identification of faults and take appropriate action for rectification

. Challenges we have faced with this learning outcome is the lack of materials and equipment

Indicative content 2.4: Stitch the sole depending on the sample model

Summary for the trainer related to the indicative content (key notes using bullets such as ticks etc)

Stitching: it is a process of sewing something like leather
Also, it is an activity of sewing individual threads in somethings. She/he will be trained to do embroidery and hand stitching

How stitching called

Sewing: is the craft of fastening or attaching objects using stitches made with a sewing needle and thread. Also, it is a craft of joining objects together with stitches using thread or yarn and a needle while **stitching** is the process of looping yarn or thread to join two objects together

- **Types of sewing machines**

  - **Running stitch:** the running stitch is the most basic of all sewing stitches
  - **Lock stich:** This form of stitch is performed by most comm single needle sewing machines
  - **Cover stitch:** for multiple needle sewing machines, the cover stitch is very popular types of stitch.
  - **Overlock**

PURPOSE OF SEWING MACHINE

Cylinder sewing machine

Mostly yes, but sometimes no, most of the stitching on shoe uppers is sewing one or some of the following purposes.

- Attaching the liming to the upper material
- Attaching one panel to another
- Attaching a decorative trimming/embellishment
- Adding strength to certain areas

All of this stitching could technically be done by hand but you'll find that it will be tricky to stitch through such stich materials and make it look neat not to mention it would take a very long time

- **Advantages of sewing machines**
    - Efficiency-machines generate more production with minor energy and within a limited time
    - Worker might be more dedicated to their work when they make use of machines.
    - Improvement in the quality and quantity of products.
    - Ensure high and large production rate.
    - There is a cut in production costs and labour salary
    - Workers improve their technical skills through training
    - Higher salaries resulting in better living standards for skilled operators

Disadvantages of sewing machine

- Machines are expensive to buy, maintain and repair
- Their maintenance or repair are costly it is very difficult to set up and operate without previous training
- Machine with or without uninterrupted use will get broken and worn-out.
- The pollution caused by machines increases, generating waste, augmenting power or oil use
- Health disorders can causer injuries if workers done use personal productive equipment effectively.
- Unemployment -machines replace non labour, as same time machines are more than workers.

1.4.1. Techniques of stitching (main types of stitches)

- Manual stitching (stitched by hand rather than by machine)
- Machine stitching.

Advantages of manual stitching

- Improve coordination (sewing by hand require both your fingers and your brain, and more importantly)
- Inexpensive
- Relaxing
- Quiet
- Highly portable
- Better control

- Better for Delicate fabrics

Disadvantages of manual stitching

- There is no way to make all hand stitches the same length and distance a part
- They can be slower than same other types of stitching (sewing machine)
- They can be more difficult to use
- They can cause Accident

Advantages of machine stitching

- Faster(there's no doubt that sewing by machine takes for less time than manual sewing)
- You will be able to consume your time wisely if you use sewing equipment rather than your, capacity.
- You will be able to save and earn money at the same time
- You will be able to relieve you stress through sewing clothes which will keep you away from having diseases.
- Sewing machine is more efficient to use than stitching with bare hands.

Disadvantages of machine stitching

- Cost
- Learning curve (is very different from sewing by hand and it take time and practical to master the skills needed)
- Size (S.M. are much large than their traditional counterpart)
- Safety (safe to use and have safety features intended to prevent injury)

Types of stitching

- Straight stitch
- back stitch
- chain stitch
- sigzag stitch

5 Basic stitches Methods(model)

Cross-stitch: it is commonly used for decoration purposes; the cross stitch is X- shaped and arrayed like tiles.

1.4.2. Apply the allowed tolerance

Definition: Allowance is a work or decoration done in leather, an article or articles made of leather

Leather work also known as leather craft is the practice of making leather into practical objects or art work, using molding, dyeing, curving, stamping and fabrication techniques, (shaping techniques, coloring technique)

Differences between allowance and tolerance

An allowance, which is planned deviation from an ideal, is contrasted with a tolerance.
Allowance is basically the size difference between component that work together
Tolerance is for the parts that will insert into a hole.
Allowance is for the parts that have that hole

Basic of comparison	Allowance	Tolerance
Description	Allowance is the prescribed difference between the dimension of two moving part (hole and shaft) for any types of fit	It is the permissible variation in dimension of part (hole or shaft)
Definition	It is intentional different between the lower limit of hole and higher limit of shaft	It is different between lower and higher limit of a dimension of a part
Dimension	Allowance is to be provided on the dimension of moving part to obtain required types of fit	Tolerance is to be provided on Dimension of part as it is not possible to make a port of exact specified dimension.
value	Allowance may be positive (clearance)or negative(interference)	It has an absolute value without sign

Types of tolerance in shoe stitching

- Limit dimension
- Unilateral tolerances
- Bilateral tolerances

Here, tolerance is an acceptable amount of dimensional variations that will still allow on object to function correctly

- **Limit dimensions**: in limit dimensioning only the maximun and minimum dimensions are specified

When used with dimension lines, the higher limit is placed over the low limit, when used with a head line or the low limit precedes the high limit. Also limit dimensions a tolerancing method showing the maximum and minimum size value
The maximum dimension is placed above the minimum dimension when expressed in a single line, the lower limit precedes the upper limit.

- **Unilateral tolerance:** is a types of unequally disposed tolerance where variation from the true profile is only permitted in one direction.

With a number trailing the “U” Symbol either zero or equal to the tolerance amount.

Unilateral tolerance, the dimension of the parts is allowed to vary on one side only. It may either upper or lower of basic line

- **Bilateral tolerances:** Dimension is allowed to vary in both the dimension variance in both sides may or may not be same
  Is the term used when the tolerance zone from the target value or true profile in both directions allow equal variation on each side of the target.

Theoretical learning Activity

- ✓ **Group discussion on stitching techniques** (example: ask trainees to brainstorm about……. within groups)


Practical learning Activity

- ✓ **Practical work on application of the allowed tolerance** (Example: Trainees in pair perform ……)


Points to Remember (Take home message)

- To differentiate the Stitching techniques
- Allowanced needed for leather stitching


Learning out come 4 formative assessment

Written assessment

1. Identify any two (2) stitching techniques needed in shoes making
   Answer: Manual stitching and Machine stitching
2. Discuss about the types of tolerance in shoes making
   Answer:

Types of tolerance

1. Limit dimension
2. Unilateral tolerances
3. Bilateral tolerances

Here, tolerance is an acceptable amount of dimensional variations that will still allow on object to function correctly

- **Limit dimensions**: in limit dimensioning only the maximun and minimum dimensions are specified

When used with dimension lines, the higher limit is placed over the low limit, when used with a head line or the low limit precedes the high limit.

Also limit dimensions a tolerancing method showing the maximum and minimum size value

The maximum dimension is placed above the minimum dimension when expressed in a single line, the lower limit precedes the upper limit.

- **Unilateral tolerance:** is a type of unequally disposed tolerance where variation from the true profile is only permitted in one direction.

With a number trailing the "U" Symbol either zero or equal to the tolerance amount.

Unilateral tolerance, the dimension of the parts is allowed to vary on one side only. It may either upper or lower of basic line

- **Bilateral tolerances:** Dimension is allowed to vary in both the dimension variance in both sides may or may not be same
  Is the term used when the tolerance zone from the target value or true profile in both directions allow equal variation on each side of the target.

Please mix different assessment tools for triangulation and relevancy of assessment

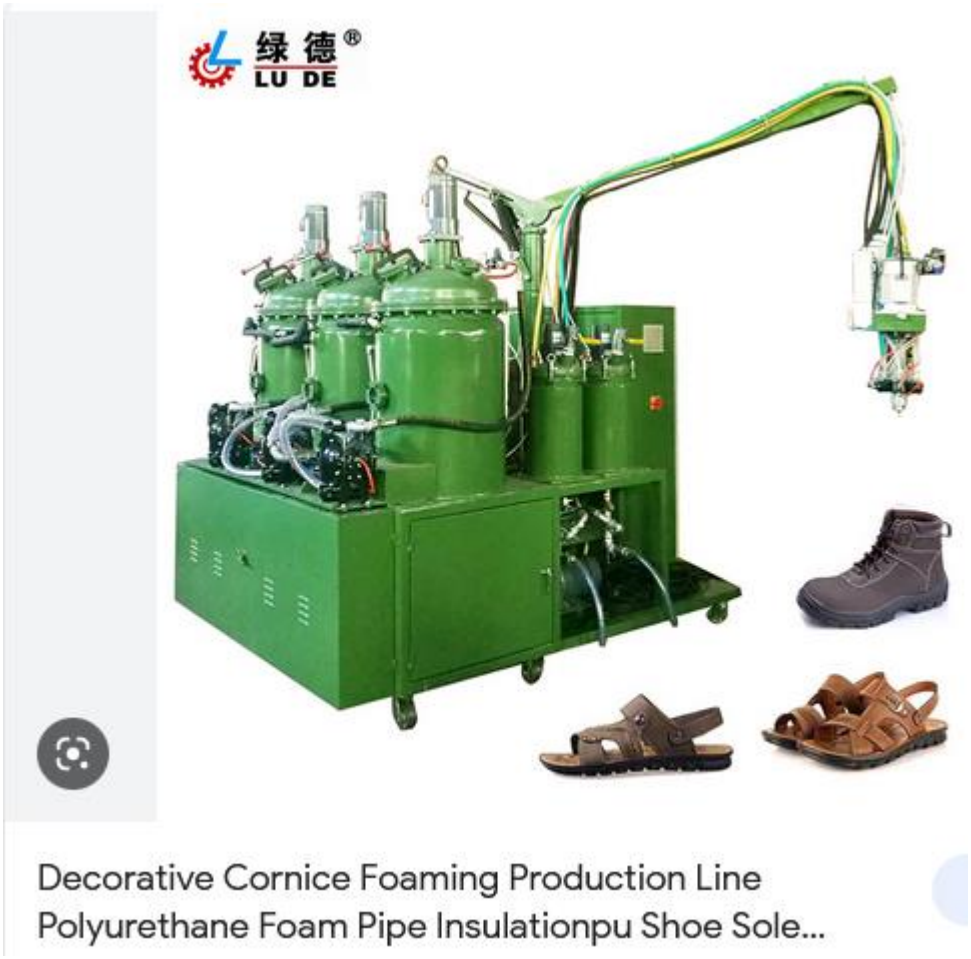
Practical assessment

- ✓ Task1: Practical work on application of the allowed tolerances

References: S.Gonettileke, R. (2012). The Science of the Footwear. Taylor &Francis Group.

Learning Unit 3: DECORATE MOCCASIN AND PIECED LADIES' SHOES

Picture/s reflecting the Learning unit 3



STRUCTURE OF LEARNING UNIT 3

Learning outcomes:

3.1: Identify decorating materials for moccasin and pieced ladies' shoes

3.2: Prepare decorating materials for moccasin ladies' shoes

3.3: Decorate leather moccasin and pieced ladies' shoes by applying appropriate design

Learning unit 3: Decorate moccasin and pieced ladies' shoes

Learning outcome 3.1: Identify decorating materials for moccasin and pieced ladies' shoes

 **Duration: 15 hrs.**

 Learning out come 1 objectives :

By the end of the learning outcome, the trainees will be able to:

After learning this learning outcome, the learners should know the tools, materials and equipment used in in shoe decorative like moccasin shoe.

 **Resources**

Equipment	Tools	Materials
- Decorative machine	**- hammer and pliers** **- Scissor** **- sharpening**	- Nails - Welt - Stiffeners - Insoles - Pens

		- Measuring tools

Advance preparation:

. What are the factors to consider before decoration of moccasin and pieced ladies' shoe

. Challenges we have faced with this learning outcome is the lack of materials and equipment

Indicative content 3.1: Identify decorating materials for moccasin and pieced ladies shoes

Summary for the trainer related to the indicative content (key notes using bullets such as ticks etc)

Decorative: is the act of making designs on leather for decoration and ornamentation by stitching, embossing, perforating, pointing, dyeing, etc.. Decoration is the means or process through which the appearance of an art work is enhanced or made more attractive

Reason why decoratively and finishing leather products are Discussed in this article

1. **To enhance the value of the leather products:** decorating leather items aid in increasing their aesehetic appeal and make more attractive
2. To attract high price (decorative of leather helps in adding market value to the product)
3. It makes the leather craft man earn a lot of income
4. To meat standards for export well decorated product help us works to meet exportation standards, they can be exported to other countries to earn foreign exchange.
5. To show respect for the customer: well decorated item in leather makes the client feel respected and honored when he comes to the shop to purchase the items.

6. It helps the leather crafts man to have a sustained market

Moccasins: are a simple types of foot wear made from one pieces of soft leather, often made from deer skin, it is essentially a slipper made out of leather,
Moccasins are a type of soft animal skin shoe that were worn by Indians in North America olso macossins are a type of shoe without a heel and mode from leather,
Traditionally, they didn't have any sale and instead were more from one single piece of materials

What are the different soft styles of moccasins?

They are of two types

Soft-saled and hard soled
Soft-soled moccasins were and are found mainly but not exclusively in the east
Their upper and lower pieces are made of the some or similar materials, often they were constructed from a single piece of hinde

Materials do you need to make mocassins

Moccasins were usually made from the soft tanned hides of deer ,moose, elle or buffalo
Row hide was used for the bottoms of hard-soled macossines
Hides from the large animals were much thicker than buckle skin thicker hides were more difficult to sew, but produced sturdier longer lasting macossins.

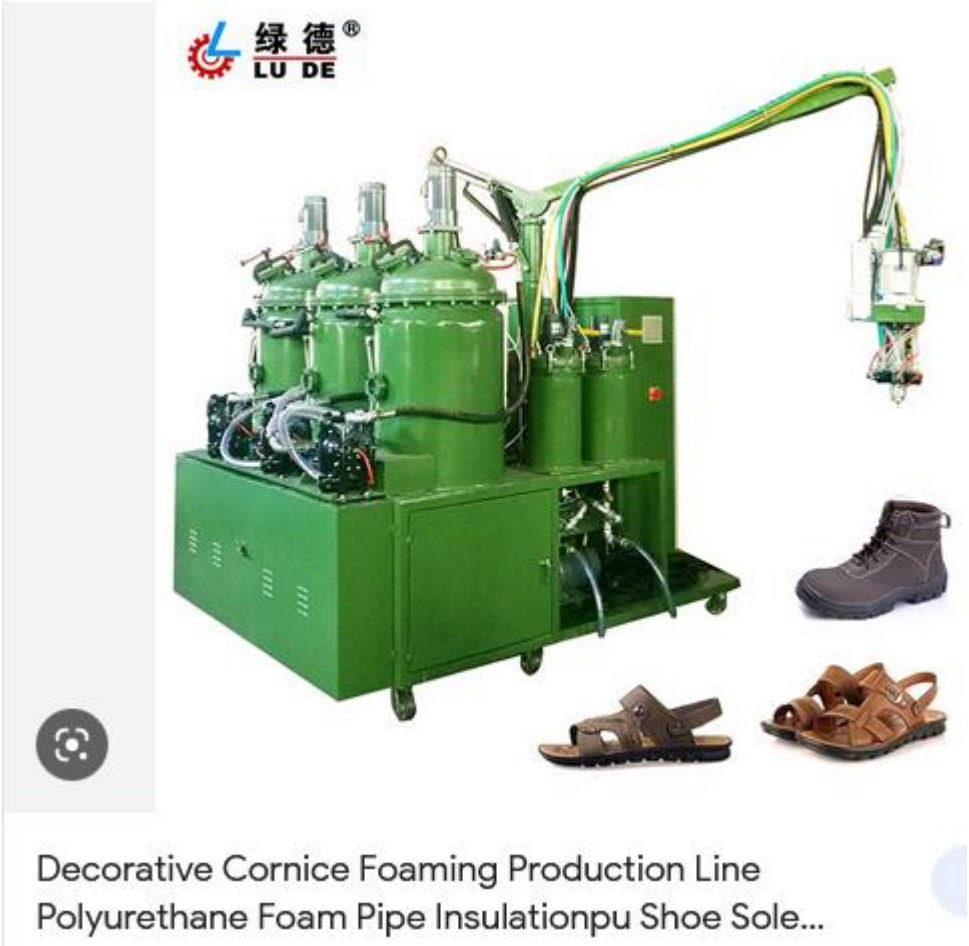
Tools used in shoe making decorative

Beginners Shoemaking Tools and Materials:The Definitive Guide 2019 Visit

Equipment used to decorate shoe

Alibaba · In stock

Pvc Shoe Accessories/shoe Decorati...



a. Factors to consider before decoration of macossin and pieced ladies shoes

1. **Dusting:** it is the action of making same thing clean by brushing or wiping away dirty and dust from the surface

Ex a table needs dusting

Dusting is importance as it reduces your risk of sickness and allergies

While most types of dust don't cause severe illnesses, they can induce mild allergies and sicknes

2. **Plastering**: is the job or activity of spreading plaster on walls or ceilings in order to make the surface smooth

Plastor: it is a substance that be comes hard as it dries and is used especially for spreading on walls and ceiling in order to give a smooth surface.

3. **Remove wall paper:** (how to remove wall paper) to the easy way newer wall papers are strippable, which means they can be easily removed without water or chemicals

If you know the wall paper you are trying to remove

- Take everything off the walls remove decorative
- Remove as much furniture as possible cover

- Place old towels along the vase boards spread

4. **Sanding**: it is a smooth or polish sand paper or mechanical sander

Olso it is involves applying on abrasive paper on a rotating roller to the surface (grain side) or reuse flesh side
This results in a uniform surface in the earlier time of leather production such wark was purely done manually

5. **Water beasting**: It is a process of cleaning or techniques of cleaning internal and external surfaces which lies entirely on the sheer force of water or it is the of special water pumps to amplify pressure which is them used to remove dirt grime coatings and other hand deposits from surface includind industrieal equipments
6. **Sealing**: is a curique blend of all natural essential oil and waxes including bees wax

This product will bring your leather back to life and keep it looking beautiful, Naturally.

Theoretical learning Activity

✓ What are the factors to be consider before decoration of moccasin and pieced ladies' shoes

Answer

- Plastering.
- Removing Wallpaper.
- Repairing Drywalls /
- Plasterboards.
- Sanding.
- Scraping.
- Sealing.
- Water blasting
- Dusting.

Practical learning Activity

- ✓ Selected the materials, tools and equipment used decorative shoe making

Points to Remember (Take home message)

- Tools, materials and equipment used in shoe decorative
- Factors to consider before decoration of moccasin and pieced ladies' shoes

Learning out come 1 formative assessment

Written assessment

- ➢ Define the following term: Decorative

Answer: Decorative is the act of making designs on leather for decoration and ornamentation by stitching, embossing, perforating, pointing, dyeing, etc..

Decorative is the means or process through which the appearance of an art work is enhanced or made more attractive

- ➢ **State the Reason why decoratively and finishing leather products are importance in shoe making**
  Answer:
  - decorating leather items aid in increasing their aesthetic appeal and make more attractive
  - To attract high price (decorative of leather helps in adding market value to the product)
  - It makes the leather craft man earn a lot of income

- To meet standards for export well decorated product help us works to meet exportation standards, they can be exported to other countries to earn foreign exchange.
- To show respect for the customer: well decorated item in leather makes the client feel respected and honored when he comes to the shop to purchase the items.
- It helps the leather crafts man to have a sustained market

 **Please mix different assessment tools for triangulation and relevancy of assessment**

Practical assessment

- ✓ Task1: **Selected the materials, tools and equipment used decorative shoe making**

References: R.Boer, C. (2007). Mass Customization and Footwear. British Library.

Learning outcome 3.2: Prepare decorating materials for moccasin ladies' shoes

 **Duration: 10 hrs.**

 Learning out come 1 objectives :

By the end of the learning outcome, the trainees will be able to:

After learning this learning outcome, the learners should know the tools, materials and equipment used in in shoe decorative like moccasin shoe.

 **Resources**

Equipment	Tools	Materials
- Decorative machine	- hammer and pliers - Scissor - sharpening	- Nails - Welt - Stiffeners - Insoles - Pens - Measuring tools

Advance preparation:

. What are the factors to consider before decoration of moccasin and pieced ladies' shoe

. Challenges we have faced with this learning outcome is the lack of materials and equipment

Indicative content **3.2: Prepare decorating materials for moccasin ladies shoes** Summary for the trainer related to the indicative content (key notes using bullets such as ticks etc)

Decorative: is the act of making designs on leather for decoration and ornamentation by stitching, embossing, perforating, pointing, dyeing, etc.. Decoration is the means or process through which the appearance of an art work is enhanced or made more attractive

Reason why decoratively and finishing leather products are Discussed in this article

- decorating leather items aid in increasing their aesehetic appeal and make more attractive
- To attract high price (decorative of leather helps in adding market value to the product)
- It makes the leather craft man earn a lot of income

- To meet standards for export well decorated product help us works to meet exportation standards, they can be exported to other countries to earn foreign exchange.
- To show respect for the customer: well decorated item in leather makes the client feel respected and honored when he comes to the shop to purchase the items.
- It helps the leather crafts man to have a sustained market

Moccasins: are a simple types of foot wear made from one pieces of soft leather, often made from deer skin, it is essentially a slipper made out of leather,
Moccasins are a type of soft animal skin shoe that were worn by Indians in North America also macossins are a type of shoe without a heel and mode from leather,
Traditionally, they didn't have any sale and instead were more from one single piece of materials

- **What are the different soft styles of moccasins?**

They are of two types

Soft-saled and hard soled
Soft-soled moccasins were and are found mainly but not exclusively in the east
Their upper and lower pieces are made of the same or similar materials, often they were constructed from a single piece of hinder

Materials do you need to make moccasins

Moccasins were usually made from the soft tanned hides of deer, moose, Elle or buffalo
Row hide was used for the bottoms of hard-soled moccasins
Hides from the large animals were much thicker than buckle skin thicker hides were more difficult to sew, but produced sturdier longer lasting moccasins.

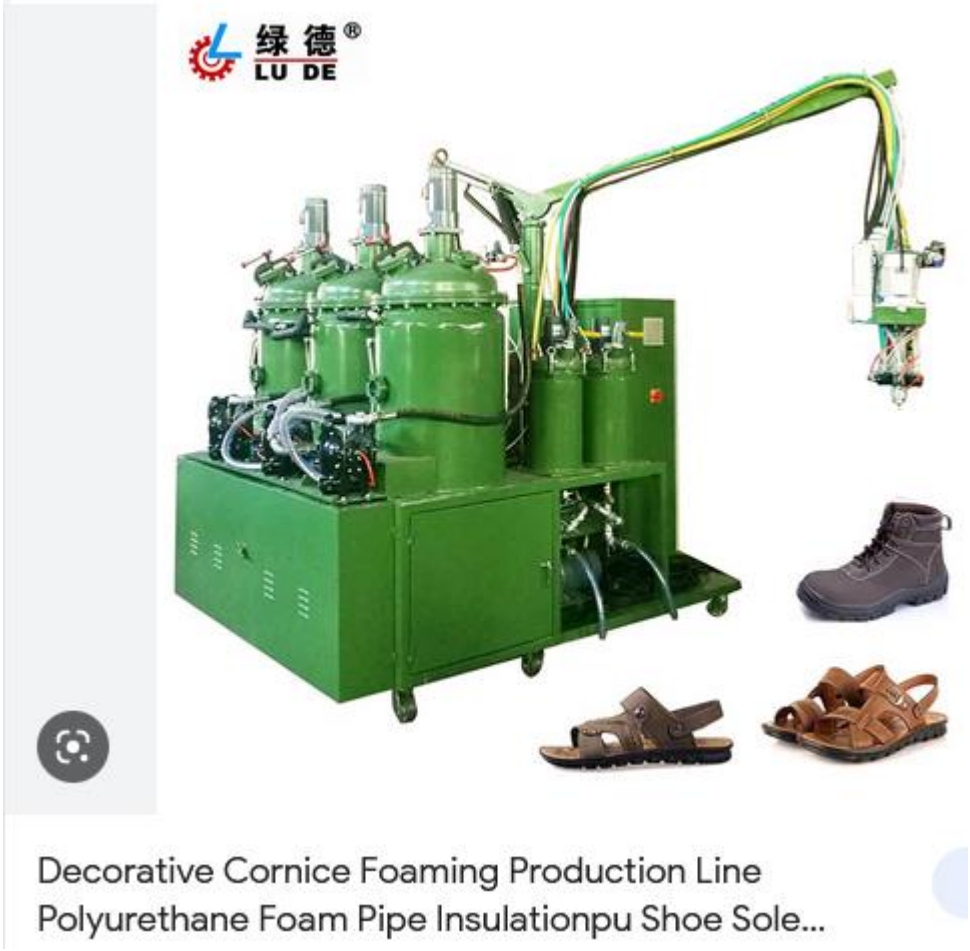
Tools used in shoe making decorative

Beginners Shoemaking Tools and Materials:The Definitive Guide 2019 Visit

Equipment used to decorate shoe

Alibaba · In stock

Pvc Shoe Accessories/shoe Decorati...



b. Factors to consider before decoration of macossin and pieced ladies' shoes

Dusting: it is the action of making same thing clean by brushing or wiping away dirty and dust from the surface
Ex a table needs dusting

- **Dusting** is importance as it reduces your risk of sickness and allergies

While most types of dust don't cause severe illnesses, they can induce mild allergies and sickness

- **Plastering**: is the job or activity of spreading plaster on walls or ceilings in order to make the surface smooth

Plaster: it is a substance that becomes hard as it dries and is used especially for spreading on walls and ceiling in order to give a smooth surface.

- **Remove wall paper:** (how to remove wall paper) to the easy way newer wall papers are strippable, which means they can be easily removed without water or chemicals

If you know the wall paper you are trying to remove

- ✓ Take everything off the walls remove decorative

- ✓ Remove as much furniture as possible cover
- ✓ Place old towels along the vase boards spread
- **Sanding**: it is a smooth or polish sand paper or mechanical sander Also, it is involves applying on abrasive paper on a rotating roller to the surface (grain side) or reuse flesh side
  This results in a uniform surface in the earlier time of leather production such work was purely done manually
- **Water beasting**: It is a process of cleaning or techniques of cleaning internal and external surfaces which lies entirely on the sheer force of water or it is the of special water pumps to amplify pressure which is them used to remove dirt grime coatings and other hand deposits from surface including industrial equipment
- **Sealing**: is a curique blend of all-natural essential oil and waxes including bees wax

This product will bring your leather back to life and keep it looking beautiful, Naturally.

Theoretical learning Activity

- ✓ What are the factors to be consider before decoration of moccasin and pieced ladies' shoes

  Answer

  - Plastering.
  - Removing Wallpaper.
  - Repairing Drywalls /
  - Plasterboards.
  - Sanding.
  - Scraping.
  - Sealing.
  - Water blasting
  - Dusting.

Practical learning Activity

- ✓ Selected the materials, tools and equipment used decorative shoe making

Points to Remember (Take home message)

- Tools, materials and equipment used in shoe decorative
- Factors to consider before decoration of moccasin and pieced ladies shoes

Learning out come 1 formative assessment

Written assessment

1. Define the following term: Decorative

Answer: Decorative is the act of making designs on leather for decoration and ornamentation by stitching, embossing, perforating, pointing, dyeing, etc.

Decorative is the means or process through which the appearance of an art work is enhanced or made more attractive

2. State the Reason why decoratively and finishing leather products are importance in shoe making

Answer:

- decorating leather items aid in increasing their aesthetic appeal and make more attractive
- To attract high price (decorative of leather helps in adding market value to the product)
- It makes the leather craft man earn a lot of income

- To meet standards for export well decorated product help us works to meet exportation standards, they can be exported to other countries to earn foreign exchange.
- To show respect for the customer: well decorated item in leather makes the client feel respected and honored when he comes to the shop to purchase the items.
- It helps the leather crafts man to have a sustained market

 **Please mix different assessment tools for triangulation and relevancy of assessment**

Practical assessment

- ✓ Task1: Selected the materials, tools and equipment used decorative shoe making

References:

1. Rocket, H. G. (1919). The Modern Boot and Shoe Maker: A Complete Guide to Design and Manufacture Hand and Machine Repairing, Shopfitting and Stocking, Retailing: Book keeping and Management. Gresham Publishing Company.

2. DeMello, M. (2009). Feet and Footwear a Cultural Encyclopaedias. Library of Congress Cataloging.

Learning outcome 3.3: Decorate leather moccasin and pieced ladies' shoes by applying appropriate design

 **Duration: 15 hrs.**

Learning out come 3 objectives :

By the end of the learning outcome, the trainees will be able to:

After learning this learning outcome, the learners should know the techniques which are used in shoe decorative and the methods of shoe decorative.

Resources

Equipment	Tools	Materials
- Decorative machine - computer	- hammer and pliers - Scissor - sharpening - Internet - Knife - Ruler	- Overall - Tape/Paper - Paint - Brush

Advance preparation:

. Identify the decorative techniques used in shoes making

. Challenges we have faced with this learning outcome is the lack of materials and equipment

Indicative content 3.3: Decorate leather moccasin and pieced ladies' shoes by applying appropriate design

Summary for the trainer related to the indicative content (key notes using bullets such as ticks etc.)

- **Decorative technique**

Style and decorations are incorporated into leather for visual appeal, explore examples of decorated leather and learn about decorative techniques used in leather such: as incision dyeing applying, tooling pointing, weaving, stomping,

Decorative: it is a process of serving to make something look more attractive decorative display of plants and flowers.

- **Technic of decorative**

- **Incision**: a make or decorating cut into a surface or process of cutting into some thing
- **Dyeing:** apply dye on the surface

- **Tooling:** to use the style tool to trace pattern and designs onto surface
- **Pointing:** is the action or skill of using paint either in picture or as decorate.

  Also, it is the process of applying point or another medium to a solid surface usually a concos pints or other forms of color are commonly applied to use a paint brush
  However, articles do use different tolls such as sponges, spray paint or even actives

- **Stamping:** bringdown (one's foot) heaving on the ground or on small thing on the ground
  Stamp: a small piece of paper with a picture or pattern or it that you stick onto a letter or package to pay for the cost of mailing it
  Weaving: craft or action of forming fabric by interlacing threads
- **Scorching/burning/ pyrograph**:

  is an act which creates very fine colored tableaus by means of real leather patches or it is to burn a surface of something as to change its color and texture.

- **methods for decorating shoes**

Painting and drawing on concos smedeers:
Concos sneaker's shoe is a very basic form of casual shoe or smealeer it is constructed very simple with and a rubber sale
Concos shoes can be purchased in high top or low top and are available in almost any color you could ask for.
Adding fabric Trims:
Trims: means decorate something, typically with contrasting items or pieces of materials

Theoretical learning Activity

1. Group discussion and presentation on decorating techniques of leather moccasin and pieced ladies' shoes by applying appropriate design

Answer

- Dyeing
- Incision
- Painting
- Tooling
- Weaving
- Applique
- Stamping
- Scorching/pyrography/burning


Practical learning Activity

✓ As technician in leather works, apply a design on upper part of shoe by hole punch


Points to Remember (Take home message)

- Decorative techniques of shoes
- Methods for Decorating Shoes

Learning out come 3 formative assessment

Written assessment

1. Define the following term: Decorative

Answer: Decorative is the act of making designs on leather for decoration and ornamentation by stitching, embossing, perforating, pointing, dyeing, etc..

Decorative is the means or process through which the appearance of an art work is enhanced or made more attractive

2. List any five (5) technics used in shoe decorative?
   Answer:
   - Dyeing
   - Incision
   - Painting
   - Tooling
   - Weaving
   - Applique
   - Stamping
   - Scorching/pyrography/burning
3. Enumerates any two (2) methods used for shoe decorative

   Answer:
   - Painting and Drawing on Canvas Sneakers
   - Adding Fabric Trims to Shoes
   - Embellishing Shoes with Adhesive Decorations

 **Please mix different assessment tools for triangulation and relevancy of assessment**

Practical assessment

- ✓ Task1: As technician in leather works, apply a design on upper part of shoe by hole punch

References: R. Boer, C. (2007). Mass Customization and Footwear. British Library.