

Paper code and Title: H04FO Front Office and Housekeeping

Module Code and Name: H04FO24 Laundry Services

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LAUNDRY SERVICES

1. INTRODUCTION

In a hotel, a lot of dirty linen accumulates in the various units and departments. It is essential to ensure a continuous supply of linen, which is well laundered, so that operations can be carried out smoothly and efficiently. Linen is an expensive item and so how it will be laundered requires serious consideration. Staff involved in handling linen should have some knowledge of the laundry process.

2. LEARNING OBJECTIVES

After learning this module you should be able to

1. Understand the laundry and its type
2. Demonstrate the working of laundry equipments
3. Stages of laundering operations

3. HISTORY OF LAUNDRY PROCESS

The first commercial laundry in the United States was opened in Oakland, California, in 1851. From the beginning the laundry industry has grown steadily until, in 1958, there were over 38,000 laundries and laundry services doing an annual business of approximately two billion dollars.

The process of dry cleaning clothes was invented in 1849 in Paris by a French tailor named Jolly Belin. In the next 10 years, dry-cleaning establishments sprang up all over Europe. They were soon introduced to the United States, where the industry moved forward slowly. By 1900, dry-cleaning establishments were to be found in most of the principal cities of our country. After 1945, home dry cleaning has practically disappeared. As dry cleaning was applied to other than luxury apparel, it became an indispensable service for the hotel industry. A sharp rise in business volume started in the 1940's and has continued to the present time. In 1954 cleaning and dyeing establishments took in over a billion dollars.

Laundry can be defined as a place where the washing and finishing of washable articles are carried out.

4. TYPES OF LAUNDRIES

A hotel may operate its laundry services through the following types of laundries

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4.1 COMMERCIAL / OFF – SITE / CONTRACTED LAUNDRIES

These cater to hotels on a contract basis .The contract specifies the rate for laundering different articles of linen , the time taken for laundering and so on .Usually the soiled linen are laundered and delivered back to the hotel within 24-48 hours .The laundries however hold back 3-5 percent of the soiled linen for stain removal and other specific treatment. Contract laundries are a good option if the hotel does not want to make a heavy investment in setting up its own laundry or space constraints.

ADVANTAGES TO THE HOTEL

- No capital outlay
- Little technical expertise required
- Labour cost is saved

DISADVANTAGES

- Less control over standards
- Delivery and collection delays
- Loss of article may increase
- Extra cost for special treatment

4.2. ON PREMISES/ ON-SITE/ IN HOUSE LAUNDRY

An on –premises laundry(OPL) is the hotel’s own industry, situated on the premises. It may be run by the management or managed on a contract Many hotel to make this heavy investment to provide quality services to guest .More care is taken while laundering in house since it is direct responsibility of the hotel. Services are faster (returns within 8 hours) hence the par stock is reduced .There is a better supervision and control and hence a longer life for linen.

ADVANTAGES TO THE HOTEL

- No losses of missing the article
- Less stock required as the cycle is quicker
- Can cover emergency requirements

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DISADVANTAGES

- The initial capital investment is high
- Higher labour costs
- Technical expertise or special management is required
- High cost of maintenances ,repair and overheads

4.3. LAUNDROMATS

These are self service laundries usually found in motels .Laundromats may be utilized by using coin slots to pay by the load or by making a fixed monthly payment.In some resorts long stay guest too can use the equipment to wash their linen.

5. WHAT HAS TO BE LAUNDERED?

The items that have to be laundered are classified under three heads according to the fibers used in fabrics

- a. **VEGETABLES FIBERS**-which originate from vegetable forms like cotton, linen, jute etc
- b. **ANIMAL FIBERS**- which originate from animals like wool, silk, fur etc
- c. **SYNTHETIC FIBERS**- which are man-made and originate from fiber prepared by some chemical action like nylon, terelyne, decron, cilffon etc.

Except for vegetable fibers, all animal or synthetic fibers are safe for dry cleaning procedure. Some vegetable fibers can be dry cleaned but not all.

Laundry Equipments

The most commonly used laundry machines are

<ol style="list-style-type: none">1. Washer/Extractor2. Dryers3. Dry clean machine4. Marking Machine5. Spotting machine6. Cuff & Collar press7. Body & Bosom press8. Mushroom press9. Cotton utility legger10. Steam utility legger11. Form finisher12. Touch up board12. Flat work ironer13. Bed sheet folder14. Bagging machine15. Shirt Body Unit16. Towel Folder17. Uniform conveyer	<p><u>Auxiliary equipment</u></p> <ol style="list-style-type: none">1. Boiler2. Compressors3. Dry set vacuum <p><u>Supporting Plant</u></p> <ol style="list-style-type: none">1. Water softening/RO plant2. Effluent treatment plant <p><u>Transporting</u></p> <ol style="list-style-type: none">1. Wet Linen Trolleys2. Dry Linen Trolleys3. Mobile Linen Trolleys4. Folding Tables5. Linen Flapping Trolley6. Pigeon Holes Rack
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6. LAUNDRY EQUIPMENT

6.1. EQUIPMENT FOR LAUNDRY OPERATIONS

Hotels with over 200 rooms may certainly decide to have their own laundry for the sheer size of operations. Smaller properties may decide to have part operation like only washing activity while outsourcing dry cleaning operations to a public laundry. Alternatively, the owner may decide to outsource guest laundry while retaining the house operations. Should the hotel decide to have their own laundry, the best allies are the laundry equipment manufacturers who are able to give reliable estimates of workloads and the kind of equipment required to meet them. The main equipment for laundry operations are as follows.

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6.2. SPOTTING MACHINE

The spotting machine is a self-contained table that has all the stain removers and steam gun for treating spots. The spotter uses a nozzle called a steam gun that can spray a jet of water vapour to wet the stain. Special stain removing chemicals are used depending on the nature of the stain and fabric.

6.3. COMMERCIAL WASHING MACHINE

All washing machines work by using mechanical energy, thermal energy and chemical energy. Mechanical energy is imparted to the clothes by the rotation of the agitator in top loaders or by the tumbling action of the drum in front loaders. Thermal energy is supplied by the temperature of the wash bath.

The machine may be top loading (lesser capacity), front loading or side loading (for large loads in industrial laundering). The machine rotates for 15 seconds in one direction, stops and reverses direction for 15 seconds. This prevents the 'roping' of linen in the drum. The speed of rotation of the drum depends on the diameter and ranges between 40 to 60 r.p.m. Centrifugal action of the drum causes friction between the cloths thereby suspending dirt. The water level is referred to as 'dip'. The temperature of water ranges from 30°C to 95°C. The machine operates on manual switches or dial settings or computerized cards or on computer panels.

Modern machinery have sensors that can gauge the length of cycle, level and temperature of water, amount of water, amount of laundry agent and when it should be added in the washing cycle as well as the type of drum action, for a specific wash load. Industrial machine has a control panel, which displays the stage in the wash cycle in progress, the time remaining for the completion of the cycle, the temperature of water and the chemicals in use. Machines, which carry out washing as well as hydro-extraction, are called washer extractors.

6.4. HYDRO- EXTRACTOR

Modern hydro extractor work on the centrifugal action and the procedure is usually part of the wash cycle. The drum rotates at high speed (at least ten times the wash speed) and the clothes are pressed against the sides of the drum and water passes out through the perforations and out through the open drain.

6.5. OTHER MACHINES

6.5.1. TUNNEL WASHERS

This is also known as batch washers or continuous washers and are effect in a series of inter- connect washers. Each 'bath' is in a different cylinder and the load moves from one

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cylinder to the next. Computerized systems automatically adjust the time, temperature and chemicals to be used, so that each batch receives the required treatment. Machines may be top transfer or bottom transfer. Tunnel washers have distinct advantages in that they are time saving, thereby reducing staff requirement. Tunnel washers can also be hooked up to an extractor and subsequently with conveyors to the dryer.

6.5.2 TUNNEL DRYER

It is a fully automated process that transfers the linen to the next area of activity. Clothes are hung on conveyor belts that pass through a tunnel. Hot air blowing in the tunnel, renders the articles completely dry by the time they exit.

6.5.3. TUMBLE DRYER

These are machine that dry laundry by tumbling it slowly in a perforated drum exposed to hot air ranging from 40° to 60°C in low capacity dryers and going right upto 85°C in an industrial dryer. There are programmes for delicate articles requiring low or no heat. Dryers may operate on gas, electricity or steam. For speedy drying and less wrinkling the volume of the dryer should be 25% more than the washer- extractor. Most dryers have a microprocessor computer control system.

Although suitable drying times are usually recommended for specific fabrics, some dryers have sensors hooked onto their microprocessors so that they can gauge the moisture in the load and cut the dryer off automatically the moment the laundry is dry. A lint screen traps the lint particles and must be cleaned regularly. The length of the drying cycle is dependent on the absorbency of the fabric and the residual moisture. Modern dryers are equipped with high tech features such as signal lights, self-cleaning lint screens, reverse cylinder drums as well as energy-saving devices like extra insulation and heat reclaimers.

6.5.4. CABINET DRYER OR DRYING ROOM

A chamber where low- crease garments are suspended on hangers steam or hot air is circulated through the cabinet.

6.5.5. DRY CLEANING MACHINE

Dry cleaning is a process that removes dirt and stains from fabrics. Dry cleaning uses little or no water, but the process is not really dry. It involves the use of liquids called solvents. Dry cleaning machine are able to handle volume fabrics of the same type. The fabrics must be of the same colour and type. Before clothes are dry cleaned they must be spotted to remove any stains that could become permanent during the dry cleaning process. The dry cleaning machine

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has a movable drum that is filled with liquid solvent rather than water. A special dry cleaning detergent is added to the solvent to help remove soil.

6.5.6. FINISHING EQUIPMENTS

For those articles that require a pressed finish there are many finishing equipment. Flatwork Ironer/ Roller Iron/Calendar. There are used for flatwork i.e. items like sheets, pillowcases, tablecloths, serve aprons, sarees, etc. the items are passed through heated rollers for ironing.

Some of the more frequently used equipments are listed below:

6.5.7. FLATWORK IRONER/ROLLER IRON /CALENDAR

These are used for flatwork i.e. items like sheets, pillowcases, tablecloths, servietters, aprons, etc .the items are passed through the heated rollers and ironing .

6.5.8. IRONING SECTION

This is the area where linen and clothes are pressed by various means. Uniforms and guest garments are ironed by means of various types of presses. Press is used for fine pressing of Flat Linen like table covers, pillow covers, napkins, kitchen linen and staff uniforms. They are special presses to perform specific functions and operations can be on electricity or steam.

6.5.9. STEAM PRESS

This device comes in a table top version that is operated by hand a floor version that is operated with foot. The press has two padded heads that press together. The top head opens and closes and feeds steams on the clothes while the lower heads is static on which clothes are spread for ironing. The hand-leg equipment has a foot pedal that when pressed can lower the top head and open it when pressing. A busy laundry will have several of these machines.

6.5.10. HOT HEAD PRESS

This press is similar to the steam press in construction. The top movable head has a hot iron surface instead of a padded one and provides hot pressure on the lower padded head when clothes are spread for pressing. This is ideal for wrinkle free garments.

SHIRT PRESS: These are special presses to give men's shirts their proper contours and creases especially sleeves, shoulder and collars.

HAND PRESS: They are like domestic presses used for light garments. Laundries can have heavy duty presses for stubborn creases and materials.

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6.5.11. FLATWORK IRONS (CALENDAR MACHINES)

Linens like bed sheet, towels, pillow slips and napkins are fed into the roller by conveyor belt. Those that do this activity are called feeders. The items come out from the other end and folded into desired sizes by folder. The materials coming must be properly washed. The feeders inspect items before rolling them into the flatwork iron. Dirt on linen can shorten the iron's life; too much sour can make them catch in the roller; and too much alkali can turn the linen brown. Linen should be moist before ironing as dry linen causes static electricity. Alternatively, too wet linen can be difficult to feed in the roller and can overload the effect of the flatwork iron. There are machines that are of single roller and double rollers that may be selected according to the volume of work and efficiency required.

6.5.12. FOLDING MACHINES

This term is quite misleading as the machine does not fold linen but secures it well for a folder to fold the linen more easily. Earlier, the folder had the onerous task of spreading the linen on a folding table and folding them with proper creases and sizes. When one considers the tons of linen being churned out by washing machines the task seems challenging. The folding machine is a labour saving and productivity enhancing device.

6.5.13. STACKERS

These are equipment that feed off from folding machines and stock the linen in appropriate sizes. It helps in determining the lot size for easy accounting of linen.

6.5.14. STEAM CABINETS AND TUNNELS

Steam cabinets or tunnels effectively eliminate wrinkles from uniforms and linen. It is a chamber fed with hung uniforms or linen that moves through the chamber either manually fed or on a conveyor belt, steaming them and removing the wrinkles as they move through.

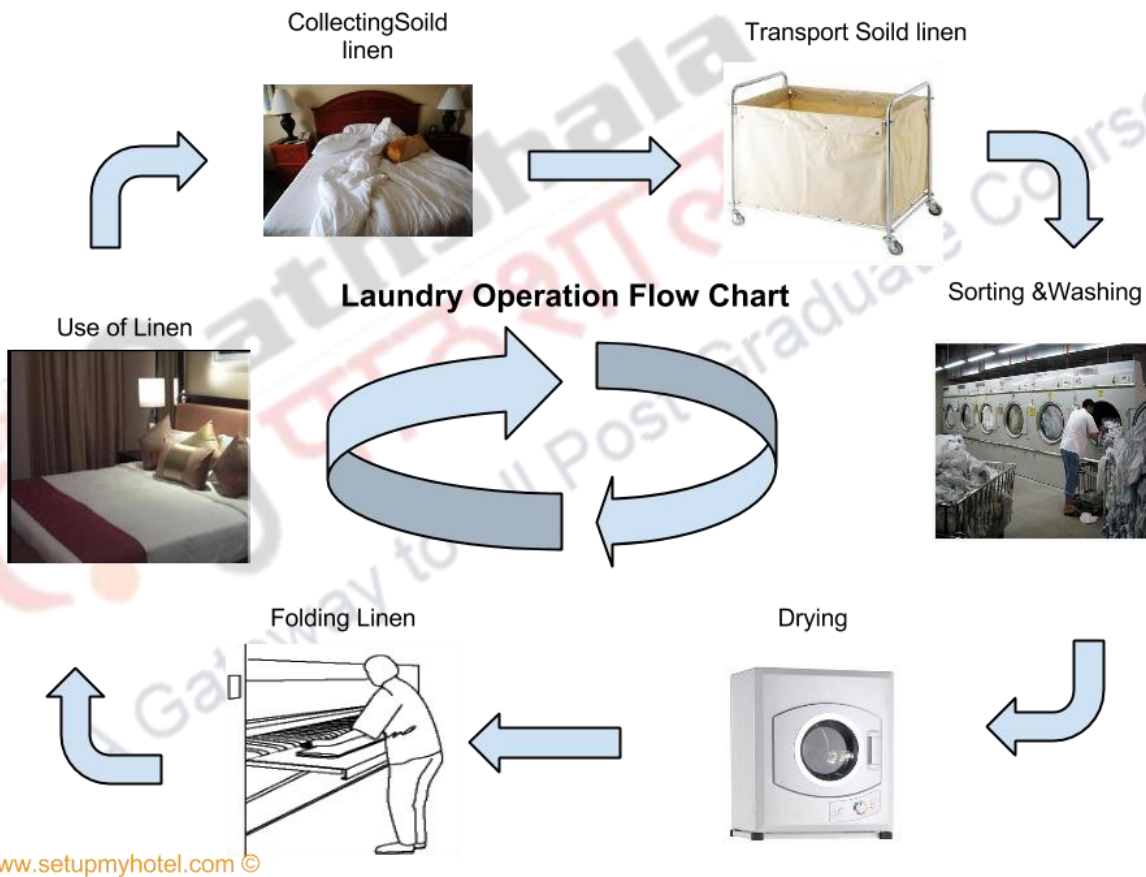
6.5.15. TRANSPORTERS

In addition to the standard heavy equipment given above, the laundry also has a number of mobile transporters to carry the volume of laundry from one machine to another or from the laundry to the linen and uniforms rooms. They come in all shapes and sizes to meet the requirements in a daily operation.

These are used for the transfer of clean linen from the laundry to the linen rooms and from the linen room to the floor pantries and so on. Linen carts and trolleys may be made of aluminum or steel. Laundry sacks may or may not be mobile. They may be made of wicker, fiberglass or plastics.

7. LAUNDRY PROCESS FLOW

The laundry department is very crucial to the success of a housekeeping department. It is responsible to wash tons of linen and uniforms that are generated daily. The supply of fresh linen is crucial to be able to make rooms available for sale or for food and banquet outlets to be ready to sell their food and service. In other words the revenue generating capacity is greatly enhanced or impaired by the efficiency of the laundry services.



8. STAGES OF LAUNDRY OPERATION

The relationship between housekeeping and laundry is very significant for the smooth functioning of housekeeping services. The importance of laundry is inevitable as it processes soiled linen and uniform and supplies housekeeping with clean stocks on a daily basis to keep

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hotel services running. Therefore it is important for housekeeping personnel to know something of the operations of the laundry to fully understand its importance and contribution.

8.1. SOILED RETRIEVAL

In this step, the linens are collected by laundry personnel and returned to the laundry facility. Housekeeping staff will place the soiled linen at a collection point, usually by dropping it down a laundry chute. Laundry workers will then collect the soiled linen, place it in carts reserved for soiled linen and transport it to the laundry.

Linen retrieval poses a problem, especially in health care institutions. Soiled linen can be contaminated with blood borne and airborne pathogens. For this reason, employees who retrieve soiled linen are required to use personal protective gear and standard safety precautions. This problem is especially prevalent in hospitals. Prior to sorting, the linen must be covered to prevent the spread of airborne germs.

8.2. SOIL SORTING

At this stage, the retrieved linen is unloaded and sorted according to item type. Different items often require different washing formulas. Also, later stages in the process require the linen to be pre-sorted, since it is handled batch by batch. Heavy or bio hazardous stains such as blood and feces may require longer wash times and stronger formulas. Thus it is inadvisable to mix different items of linen in the same wash batch. Large institutions often use a production line method for soil sorting, with several full-time employees assigned to the task. The person who are employed for this task are named as **Sorter / marker**

Since soiled linen may be contaminated with biohazards or sharp objects, employees involved in the sorting process are required to use personal protective equipment and standard safety precautions. Smaller items tend to "hide" among larger items. For this reason, some sorting goes on during the washing, processing and packaging stages.

8.3. WASHING

TUNNEL WASHER

The sorted linen is weighed according to the washing machine's load limit. Large washing machines are usually operated by a certified washer operator. The washer operator loads and unloads the washer, decides what is to be washed according to the laundry's schedule, and monitors the chemical levels in the water. Since modern tunnel washer monitor their own chemical levels and unload linen directly into the laundry's "clean area", the operator is required only to load the linen.

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Proper washing depends on five factors: **W**ater quality, **A**gitation, **T**ime, **C**hemical concentration and **H**eat. Washer operators use the acronym **WATCH**. These five factors work together. The purer the water and the fresher the chemicals, the cleaner the laundry will be. Mechanical action exposes the surface area of the linen to the water and chemicals, ensuring that the item is thoroughly soaked. Mechanical action also tends to dislodge stains. Heat helps the chemicals to react with the stains. The longer the item is exposed to heat, chemicals and mechanical action, the cleaner it will be.

The washing process includes the following stages in which the first one is compulsory while the last two are optional.

8.3.1. WETTING: In this stage the clothes are wetted in a detergent solution; this is done to loosen the soiling or dirt. Some fabrics are waterproof, so care should be taken while wetting fabrics like wool and silk.

8.3.2. SOIL REMOVAL: The main objective of the washing process is to loosen dirt and separate. Soil removal is done in this step, the failure of this stage will spoil the whole cleaning process.

8.3.3. SOIL SUSPENSION: In this stage, the soiling or dirt is to be prevented from re-deposition on the fabric and must be held back in the detergent solution. If re-deposition occurs on the fabric then fabric turns greenish and if it is uneven then it forms black spot known as scum.

8.3.4. REMOVAL OF SOIL: This stage includes rinsing of the clothes to remove the suspended dirt as well as the detergent from clothes. In washing machine, removal of soil is actually done by diluting the detergent solution in the machine.

8.3.5. BLEACHING: Bleach improves the white color of white fabrics. The bleaching of an article should be restricted to a minimum and should be done when it is really required.

8.3.6. BLUEING: This is done only to the white linen after wash. White linen becomes yellowish and this can be corrected by applying blue to a fabric. After bleaching, Blueing can correct yellowness, excess of blueing can may a shirt look blueish or even spotted or marked with blue.

9. WASH CYCLE

A complete wash cycle is composed of various stages and the time taken is approximately 40 to 50 minutes. It has been proven that quick wash cycles using large volume of water broken

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down into the following sequence is most effective. Typical wash cycle consist of 9 steps they are

Flush (1 ½ -3 min)→ Suds(5-8 min)→ Carryover Suds /Intermediate Rinse(2-5 min)
→Bleach(5-8 min)→ Rinse(1 ½ -2 min)→ Intermediate Extract(1 ½ -2 min) →Sour / Softer
Starch /Sizing(3-5 min).→ Final Extract (2-12 min)

Over the past twenty years, many industrial laundries have switched from conventional washers to tunnel washers, also called continuous-batch washers. Since tunnel washers don't have to be stopped for loading and unloading of linen, they provide a more continuous flow of clean laundry. Higher-volume facilities, which may process over 15,000 pounds of linen per day, often rely heavily on tunnel washers.

10. PROCESSING

10.1. DRYING

In this stage, the clean linen is dried, ironed and folded. Some items, such as towels and blankets, are put through a dryer until they are no longer damp, then sent to mechanical folders. "Wet work" items, such as sheets are sent through steam-powered ironers which dry, press and fold them.

Dryers use hot air and mechanical action to evaporate the moisture and chemicals from the linen prior to folding. Heated air is forced through pores into a spinning central cylinder called the drum. As the cylinder constantly spins, the linen inside tumbles, exposing the surface area to heat which evaporates the moisture. The air temperature must be carefully controlled. If it isn't hot enough, the linen won't be thoroughly dried. If it is too hot, the linen may over dry, damaging the product and creating a fire hazard.

10.2. IRONING

Ironers use heavy steam-heated rollers to dry the linen while pressing out wrinkles. Sheets ,pillow cases, tablecloths and napkin directly goes into the flat irons. Guest clothing and uniforms are finished on various steam presses.

10.3. FOLDING

Folders use mechanical action to fold the linen into shapes that are easily stored and handled. Folders come in two varieties: large-piece for blankets and other large items, and small-piece for smaller items such as towels or pads. The more compact the shape into which the item is folded,

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the greater the amount of linen that can be packed into a limited storage space. Some items, such as wash cloths must be packaged by hand.

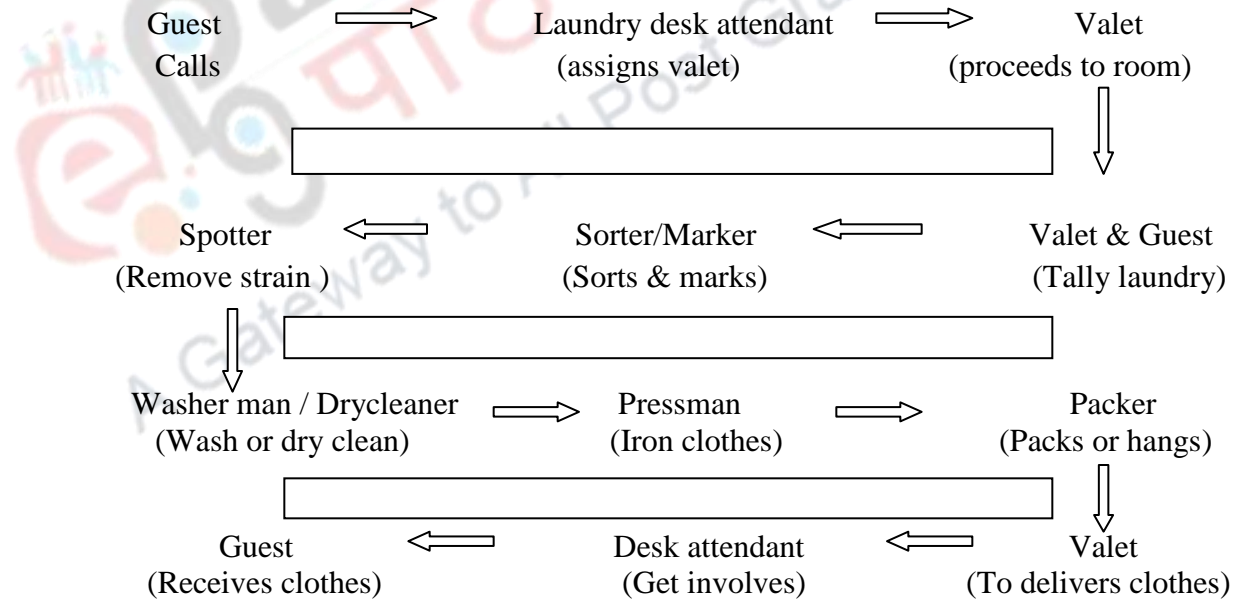
10.4. PACKAGING

In this step, the processed linen is prepared for delivery. Individual orders are filled, based on the needs and requests of the laundry's customers and then sent to the laundry's main distribution points and storage areas. Linen not used for orders is placed in storage areas, giving a reserve of clean laundry.

10.5. DISTRIBUTION

In this step, trained delivery people transport the clean linen back to the customers. This is a skilled position, since the delivery person must have a thorough knowledge of both laundry operation and the principles of good customer service. In hospitals, delivery people must be familiar with patient relations, policies confidentiality and hospice. Large institutions will usually employ several full-time delivery employees who are known as valet .

10.6. HANDLING GUEST LAUNDRY



GUEST CYCLE

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11. GUEST CALLS

Dealing with guest laundry is one of the major responsibilities of the house keeping department. Guest may avail of laundry service by their telephoning the housekeeping desk and room attendant is sent to collect the laundry. If the laundry is on premise valet runner will collect the laundry. Generally laundry must be picked up on time, laundered and delivered back to the guest on time without any mix ups. Usually guest laundry clothes are collected in the morning and given back in the evening. In hotels, which offer this service, the lists are left in the bedroom, together with laundry bags. The guest is expected to place the soiled linen in the laundry bags, fill the laundry forms and handover to valet. In charge person fills the column "Guest Count" mentioning the number of each item and the expected cost of each set of items.

When linen is sent to be laundered, it goes through six stages. The first three stages are called "soiled side" operations, since they occur before the linen is actually washed. The last three are called "clean side" operations, since they involve the handling of clean linen. Laundry desk attendant is a person who receives the call and notes the name of the guest and room number and alerts the valet.

12. VALET SERVICE:

Most hotel provide valet service, the valet is the term given in hotels for those who collect and deliver laundry from guest rooms, then tallies the guest count with his own physical count and notes the number in the column "house count". Valet person makes sure that the laundry list has the guest's name, room number, date, urgency of service and his /her signature. Valet verify himself against the list if they does not match, the guest is requested by the valet to rectify the mistake. Valet are responsible for returning the clean guest clothes.

The usual laundry service for in - house guests is referred to as normal service and entails laundry being collected from guest before 10.a.m and returned by evening. On week days, there are no additional charges for this service apart from the rate specified in the laundry list. On Sundays and holidays, the normal service rate is charged at 25 % extra. Hotels have a provision for an express service, which takes about 2-3 hours. Guests are usually charged 50 % extra or double the rate.

13. SUMMARIZE

To summarize this module laundry services are important aspects of housekeeping department in a hotel. Depending on whether the hotel has an OPL or contracted laundry, the activities carried out in the linen and uniform differ. The various types of laundry equipments have been discussed. The laundry process which is divided into stages. Lastly we had seen about the guest laundry and valet services. When these aspects have been carried out without any hurdles housekeeping department will function very smoothly.