Title : Workstudy

Date: 09/04/2020

Name of Faculty: Mr. Samik Bhatt

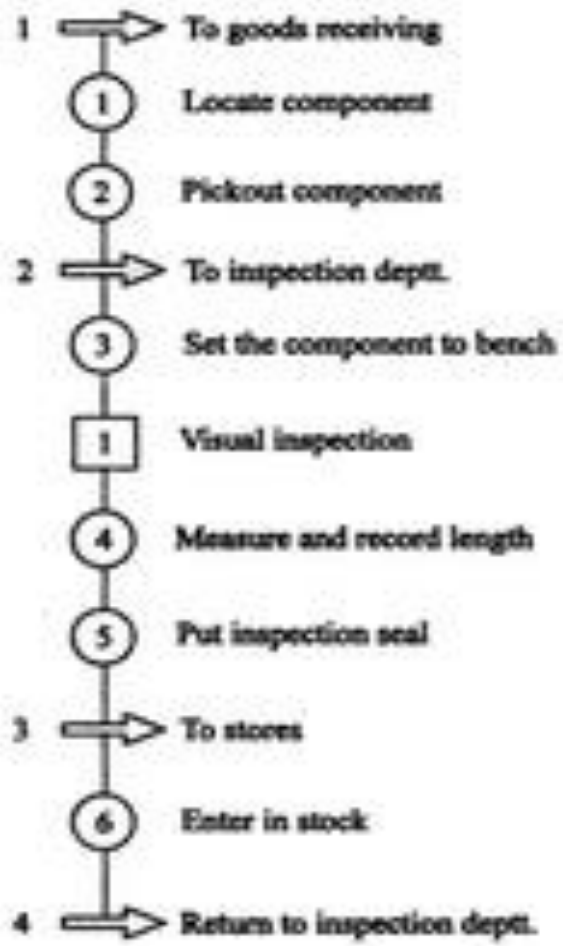
Lecture No : 35

FLOW PROCESS CHART (Man and Material type)
(PRESENT METHOD)

Task : Inspection of component

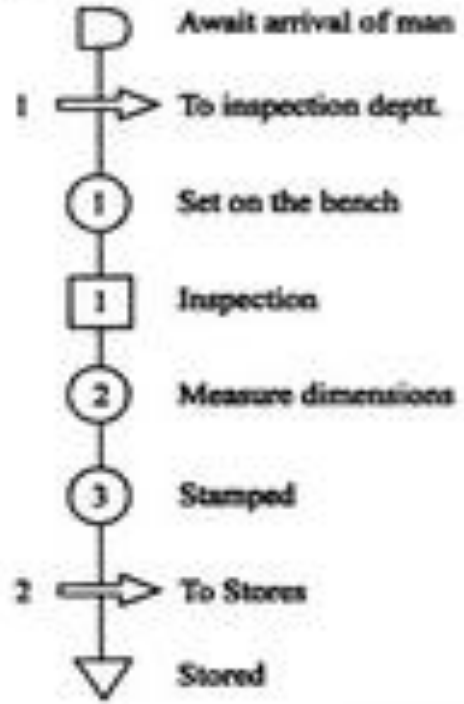
MAN TYPE

Chart begins : Man in inspection Deptt.
Chart ends : Man in inspection Deptt.



MATRERIAL TYPE

Chart begins : Material in goods receiving
Chart ends : Material in stores



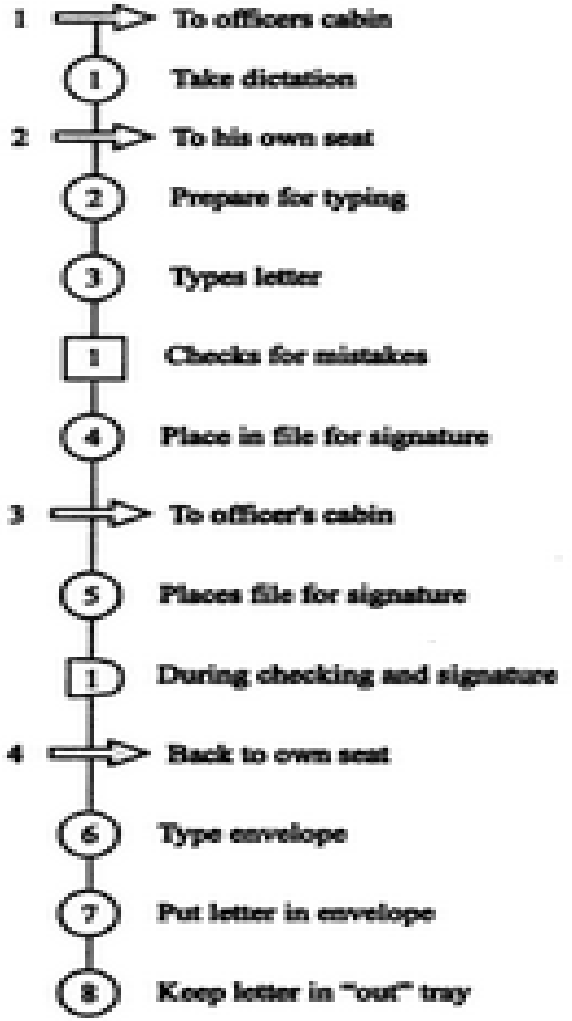
SUMMARY

Symbol	○	⇨	□
Frequency	6	4	1

Symbol	○	⇨	□	D	▽
Frequency	3	2	1	1	1

FLOW PROCESS CHART (Man type)
(PRESENT METHOD)

Task : Writing a letter
Chart begins : Typist in his chiar at his office
Chart ends : Typist puts letter in "out tray"
Charted by : .....
Date of charting : .....



SUMMARY

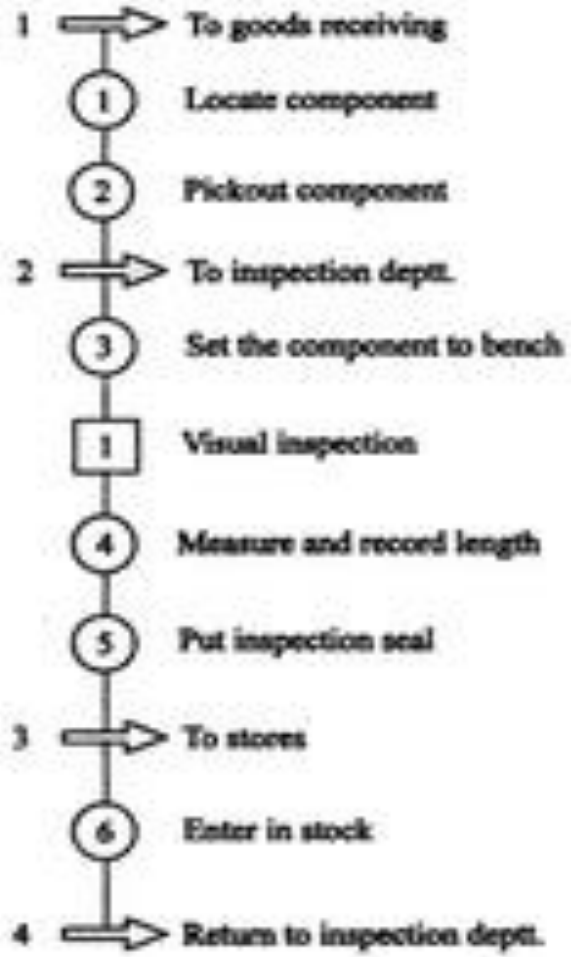
Symbol	○	⇨	□	▽	D
Frequency	08	04	01	–	01

FLOW PROCESS CHART (Man and Material type)
(PRESENT METHOD)

Task : Inspection of component

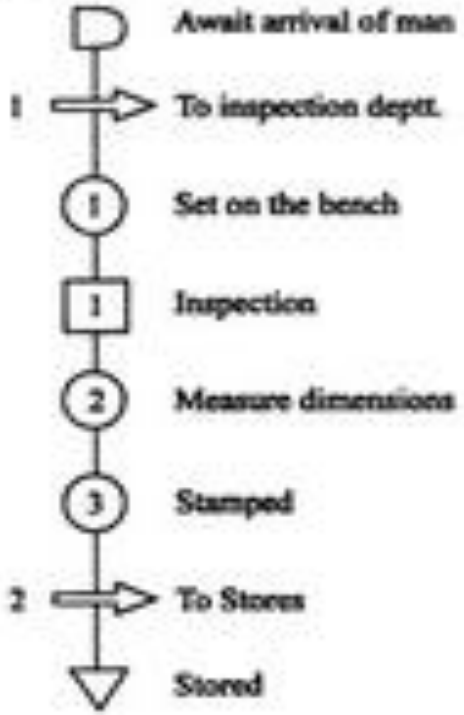
MAN TYPE

Chart begins : Man in inspection Deptt.
Chart ends : Man in inspection Deptt.



MATRERIAL TYPE

Chart begins : Material in goods receiving
Chart ends : Material in stores



SUMMARY

Symbol	○	⇨	□
Frequency	6	4	1

Symbol	○	⇨	□	D	▽
Frequency	3	2	1	1	1

Recording Techniques - Charts

✓*Flow process chart usefulness:*

- *Reduce travel distance of man/material*
- *Avoid waiting time & unnecessary delays*
- *Reduce cycle time by combining or eliminating operations*
- *Fix up the sequence of operations*
- *Relocate the inspection stages*

Recording Techniques - Charts

✓*Two handed process chart*

(Operator process chart)

- *Records activity of workers hand*
- *Representing sequence of manual activities of the worker*
- *Studies work station layout & repetitive task*

➢ *Inspection – touch/feel by hand is to be recorded*

➢ *Storage – hand used as a grip or vice to hold the object*

TWO HANDED PROCESS CHART
(PRESENT METHOD)

Task : Assembly of nut and bolt
Chart begins : Both hands free before assembly
Chart ends : Both hands free after assembly
Charted by : .....
Date of charting : .....

SUMMARY

Symbol	○	⇨	▽	D
Frequency (R.H.)	5	4	–	–
Frequency (L.H.)	2	2	2	2

LEFT HAND		RIGHT HAND	
Description	*Symbol*	*Symbol*	*Description*
Reach for bolt	1 ⇨	1 ⇨	Reach for nut
Grasp bolt head	(1)	(1)	Grasp nut
Carry to central position	⇨	2 ⇨	Carry to central position
Hold bolt	▽	(2)	Place nut on bolt
		(3)	Screw nut
Hold bolt	▽	(4)	Grasp assembly
Transfer assembly to right hand	(2)	3 ⇨	Carry to box
	D	(4)	Release assembly
	D	4 ⇨	Return hand to central position

Recording Techniques - Charts

✓*Multiple activity chart*

- *Activities of more than one subject (man or equip.) are each recorded on a common time scale to show their inter-relationship*
- *Study idle time of man & machines*
- *Determing number of machines handled by one operator*
- *Determing number of operator required in teamwork to perform given job*

Task : **Machining of a component**
Chart begins : **The part to be machined lying near machine**
Chart ends : **Machined part lying in the container**
Charted by : .....
Charting date : .....

	Operator			***Machine***		
0	Description	**T**	**S**		**T**	S
0.20	LOAD JOB	0.2		IDLE		
0.28	SWITCH **'ON'**	0.08		IDLE		
0.36	SWITCH 'ON'	0.08		IDLE		
1.86	IDLE			MACHINING OF PART "Autocycle"	1.5	
1.91	PICKUP PART	**0.05**		IDLE		
1.96	KEEP **IN** TRAY	0.05		**IDLE**		

Subject	*Cycle time (min)*	*Time **worked** per cycle*	*Percentage utilisation*
OPERATOR	1.96	**0.46**	**23.4**
MACHINE	1.96	**1.5**	**76.6**

Questions

- Explain the use of Flow Process Chart for Material & Machines.
- Explain the application of Multiple Activity Chart.
- What is the use of Two Handed Process Chart. Explain it with appropriate example.