

# A Nation Grows with Improved Productivity



Revised 1998 - 07

Presented by Kazuo Tsuchiya



# PART 1



# Kaizen

versus

# Innovation



# Productivity Improvement is for Everyone

There are two contrasting approaches to improving productivity in companies:

1. the gradualist approach - Kaizen
2. the great-leap approach - Innovation

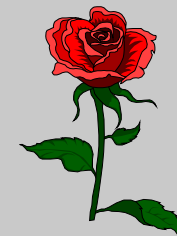
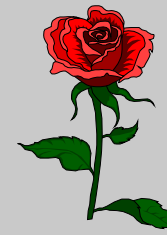
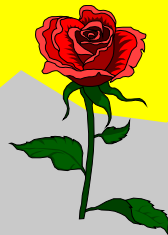
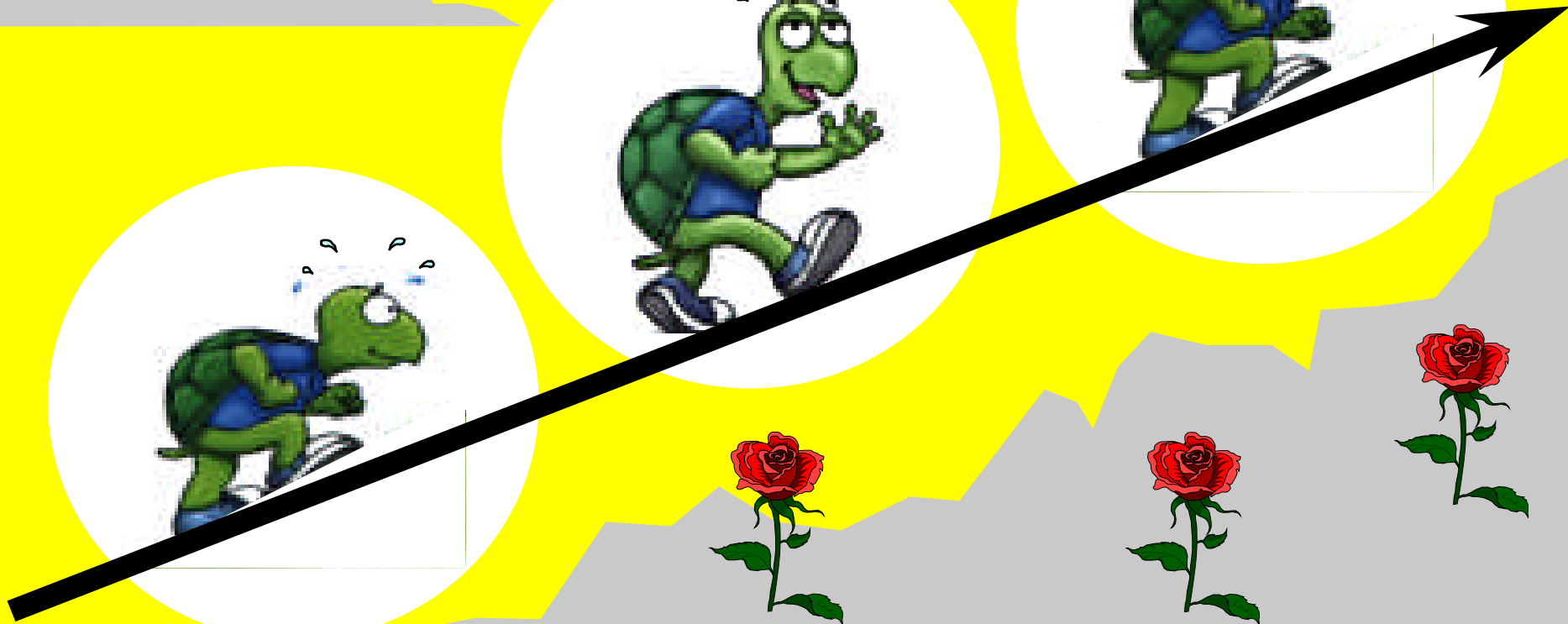
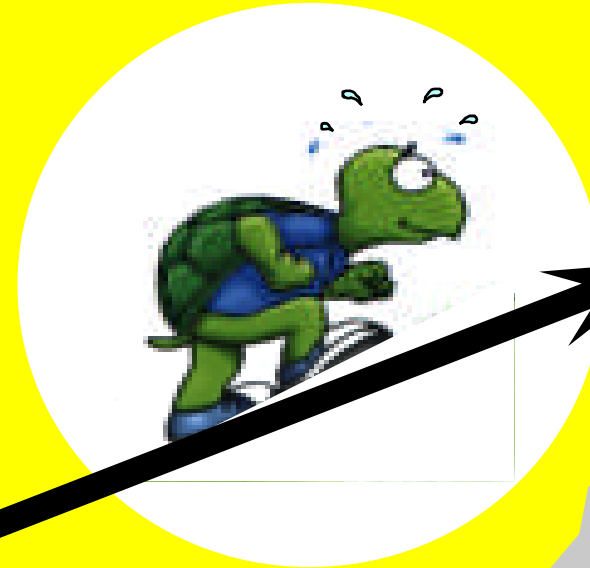
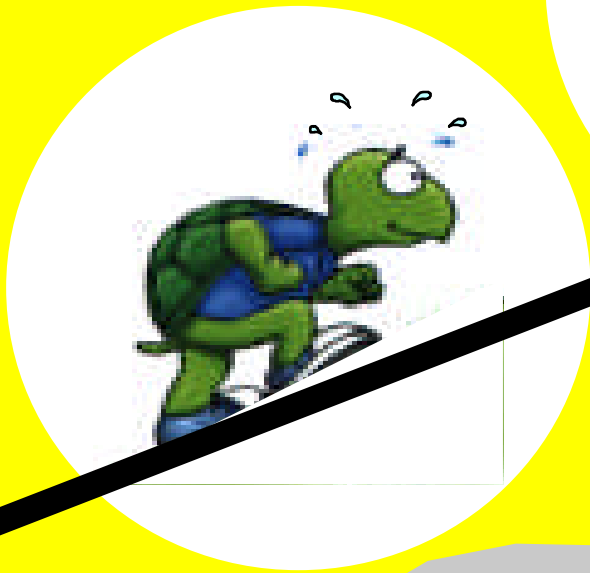
**Kaizen means improvement. Moreover, it means continuing improvement in one's personal life, home life and working life. When applied to the workplace, Kaizen means continuing improvement that involves everyone - managers and workers alike.**

**Japanese companies generally favor the gradualist approach and Western companies the great-leap approach. Innovation is dramatic, a real attention-getter. Kaizen, on the other hand, is often undramatic and incremental.**

**In fact, every Japanese company concentrates on Kaizen or an employee involvement program, because it is within the control of every manager and supervisor. It is less expensive than capital investment (innovation). It enhances the quality of work life; it recognizes participative management; it improves quality of products and services; it reduces costs of operation, etc.**

# ***KAIZEN***

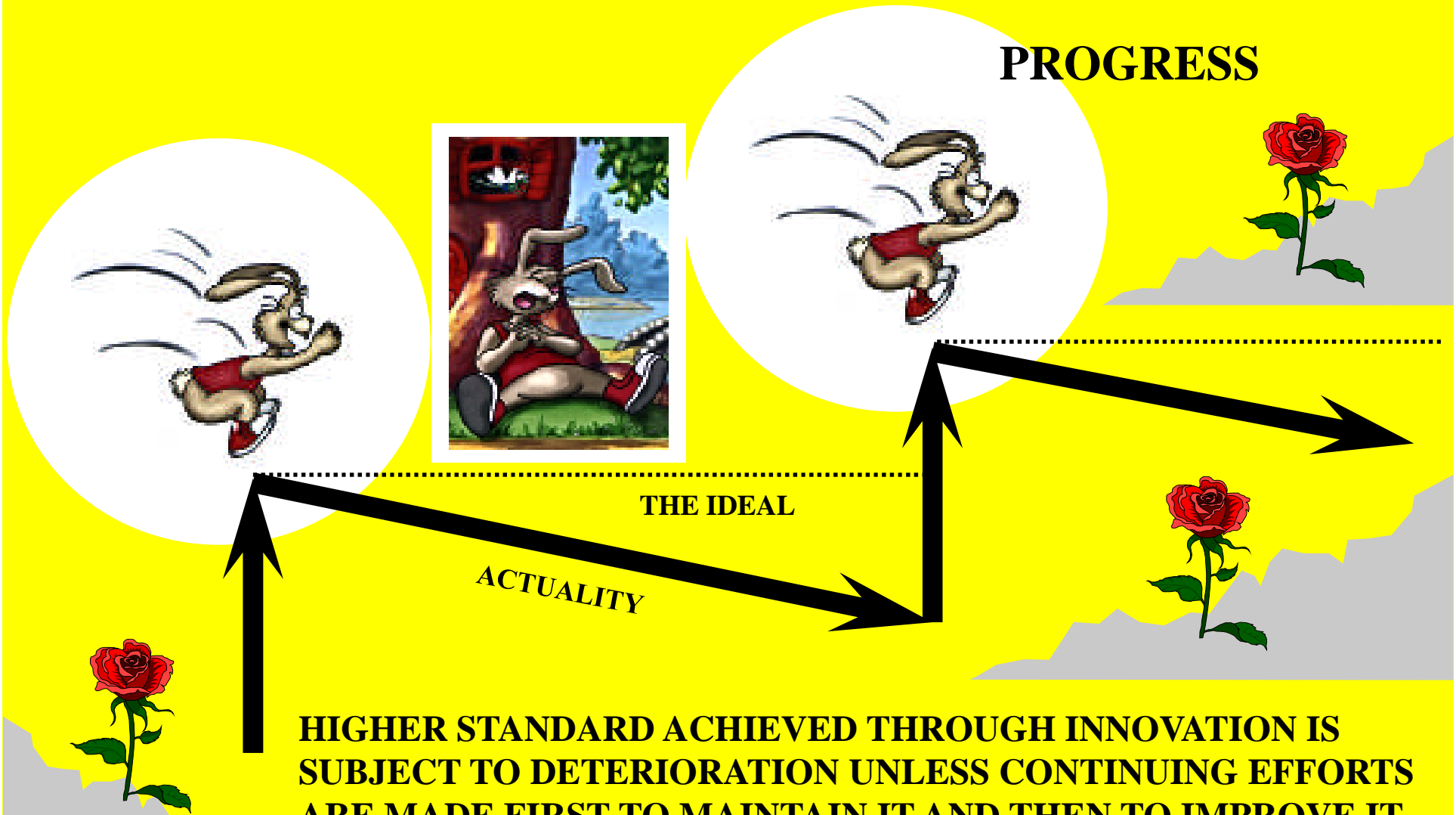
**INCREMENTAL BUT CONTINUOUS PROGRESS**





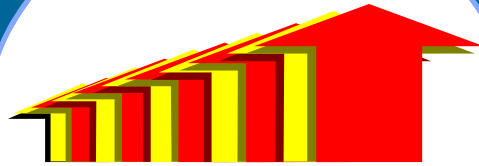
# ***INNOVATION***

**DRAMATIC BUT  
INTERMITTENT  
PROGRESS**



**HIGHER STANDARD ACHIEVED THROUGH INNOVATION IS  
SUBJECT TO DETERIORATION UNLESS CONTINUING EFFORTS  
ARE MADE FIRST TO MAINTAIN IT AND THEN TO IMPROVE IT**

# COMMON ASPECTS OF



**Incremental but continuous progress**



**People-oriented**



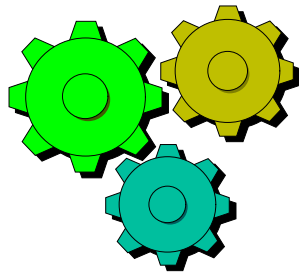
**Little investment but**



**Great efforts**



**Group efforts**

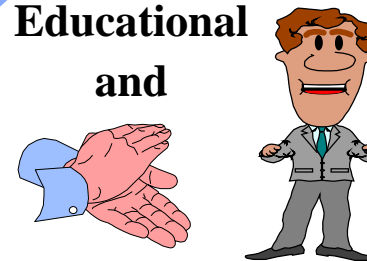


**Process-oriented**



**Conventional know-how**

**Educational and**



**Morale boosting**

# KAIZEN PROGRAMS

# A Suggested Sequence of Implementing Kaizen Programs

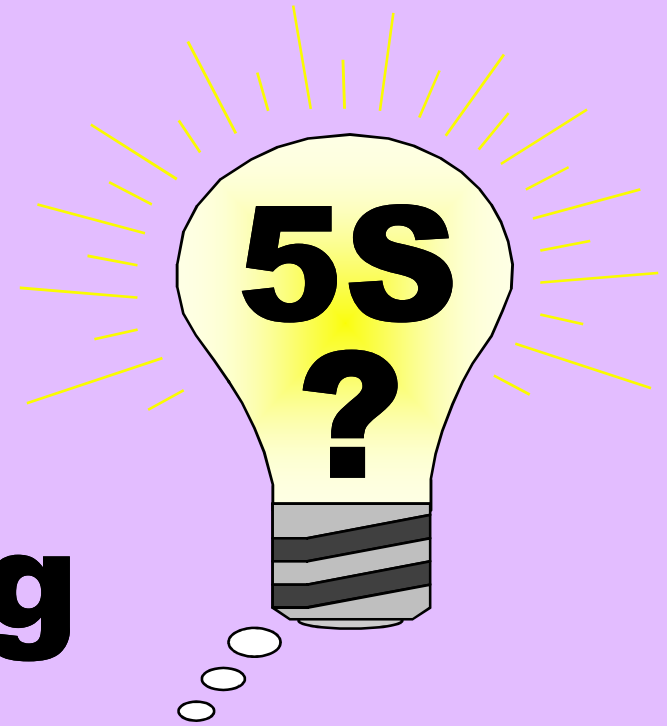


## What is 5S?

- 5S is the beginning of a healthy, comfortable and productive life for everyone at work. This is fundamental to productivity improvement.
- When implemented successfully in a company, 5S will bring about amazing changes. For example, all unnecessary items are removed from the workplace, only necessary items are conveniently located near users, and machines and equipment become clean and shiny.
- 5S is an acronym for five Japanese words that are Seiri, Seiton, Seiso, Seiketsu and Shitsuke.
- The driving force for a 5S program comes from people. In this respect, Shitsuke is critical to its success.
- Shitsuke is to train people accordingly so that they will follow good habit.
- After the spirit and practice of a good 5S is installed as a platform, a company can then develop and implement a Super 5S program which requires a higher level of creativeness and Kaizen approaches.
- *Super 5S is for Everyone* presents the know-how of 5S techniques plus useful Kaizen illustrations. Therefore, I believe this textbook will serve as a good manual for managers and Kaizen Engineers.



## **PART 2**



**Understanding  
the Philosophy  
and Power of**

**SUPER5S**

## Super 5S is a Company-wide Participation Program for Kaizen

- Super 5S is a company-wide participation program involving everyone in the organization.
- It is a very effective approach for motivating people, and improving productivity and the work environment .



## Super 5S Contributes to Each Element of PQCDSM

A company that is implementing Super 5S successfully is always:

- high in Productivity
- consistent in Quality
- Cost-effective
- accurate in Delivery
- Safe for people to work in
- high in Morale



## Super 5S is Becoming Popular for Seven Solid Reasons

- The workplace gets cleaned up and better organized.
- Shopfloor and office operations become easier and safer.
- Results are visible to everyone - insiders and outsiders.
- Visible results enhance the generation of more and new ideas.
- People are naturally disciplined.
- People take pride in their clean and organized workplace
- As a result the company's good image generates more business.



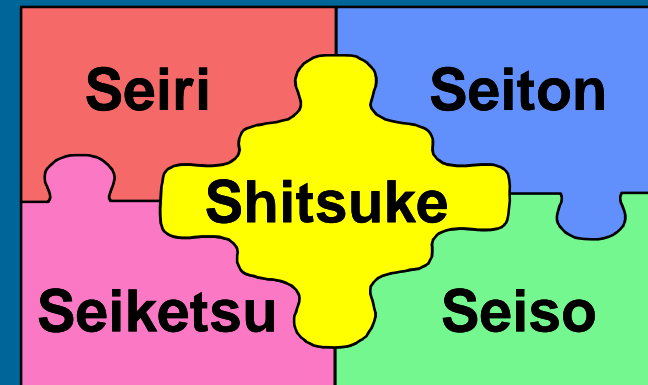


## The Origin of The Term 5S

- 5S is a set of five Japanese words. Each word starts with a sound of “se” or “shi”.
- They are Se-i-ri, Se-i-to-n, Se-i-so, Se-i-ke-tsu, and Shi-tsu-ke.

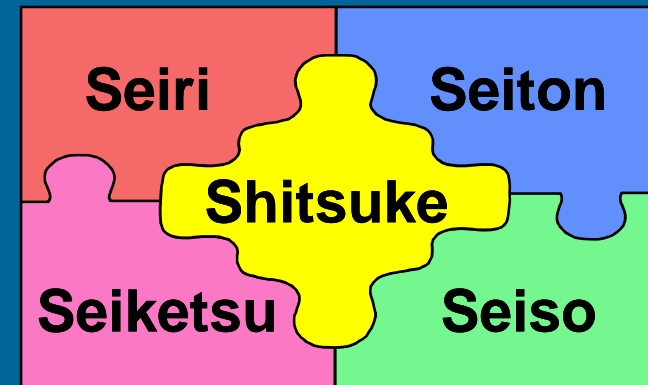


## The Definition of Seiri



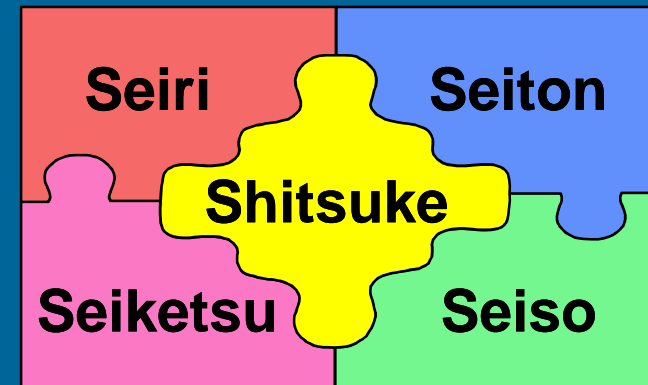
**Seiri is the sorting out and discarding of unnecessary items in the workplace.**

## The Definition of Seiton



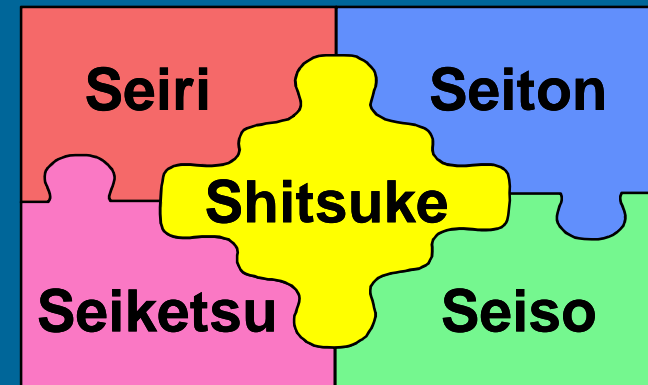
**Seiton is the arrangement of necessary items into good order so that they can be easily selected for use.**

## The Definition of Seiso



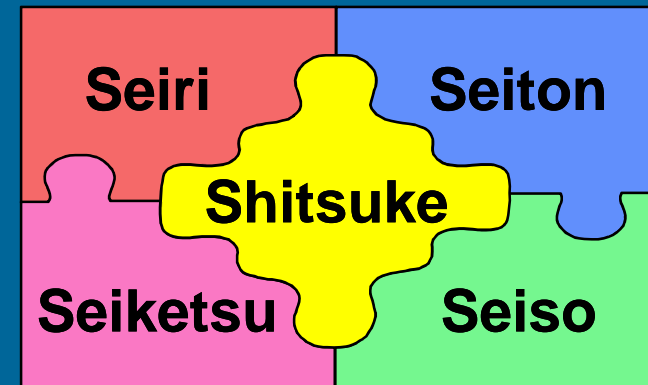
**Seiso is cleaning up one's workplace completely so that there is no dust on floors, machines or equipment.**

## The Definition of Seiketsu



**Seiketsu is maintaining one's workplace so that it is productive and comfortable by repeating Seiri-Seiton-Seiso.**

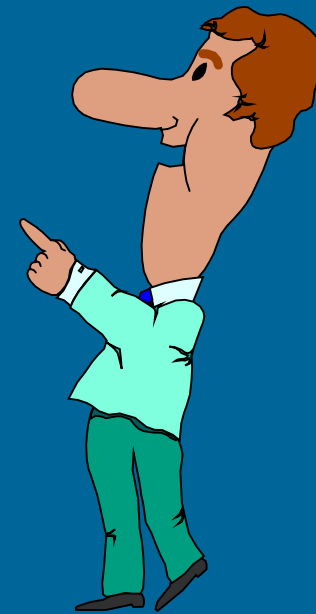
## The Definition of Shitsuke



**Shitsuke is training people to follow good work habits and the strict observation of workplace rules.**

## The Three Different Types of Workplace

- A 3rd class workplace:
  - has people who make a mess and no one cleans up.
- A 2nd class workplace:
  - has people who make a mess and another group of people clean up.
- A 1st class workplace:
  - has people who don't make a mess and yet everyone cleans up.



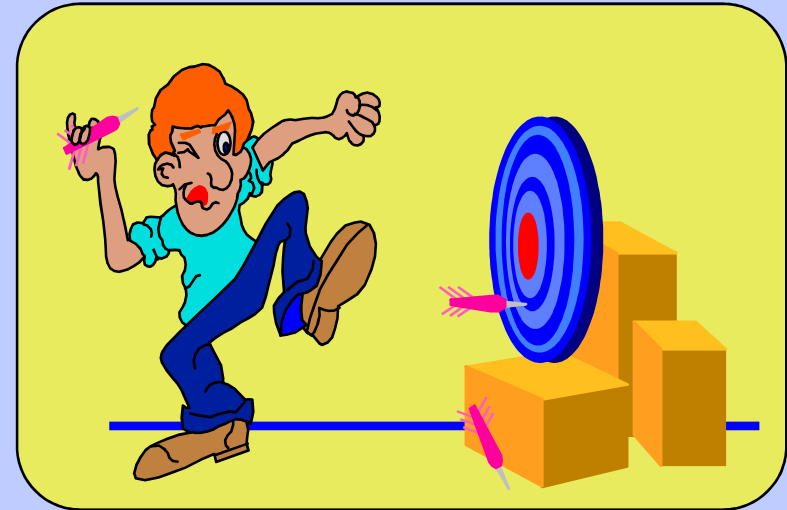
# REPEATING THE 5S CYCLE





## Four Key Factors for Successful Super 5S

- 1** Continued commitment and support by top management
- 2** Super 5S starts with education and training
- 3** There are no observers in Super 5S, everyone participates
- 4** Repeat the 5S cycle in order to achieve a higher standard



***Step by Step***

**Implementation of a**

**SUPER5S Program**

## **A Six-step Super 5S Two-year Master Implementation Plan**

**Step 1: Preparations**

**Step 2: The CEO's Official Announcement**

**Step 3: Big Cleaning by All Colleagues**

**Step 4: Initial Seiri**

**Step 5: Daily Seiri, Seiton and Seiso**

**Step 6: Periodic 5S Audits**

SUPER 5S PROGRESS CHART FOR TWO-YEAR MASTER IMPLEMENTATION PLAN

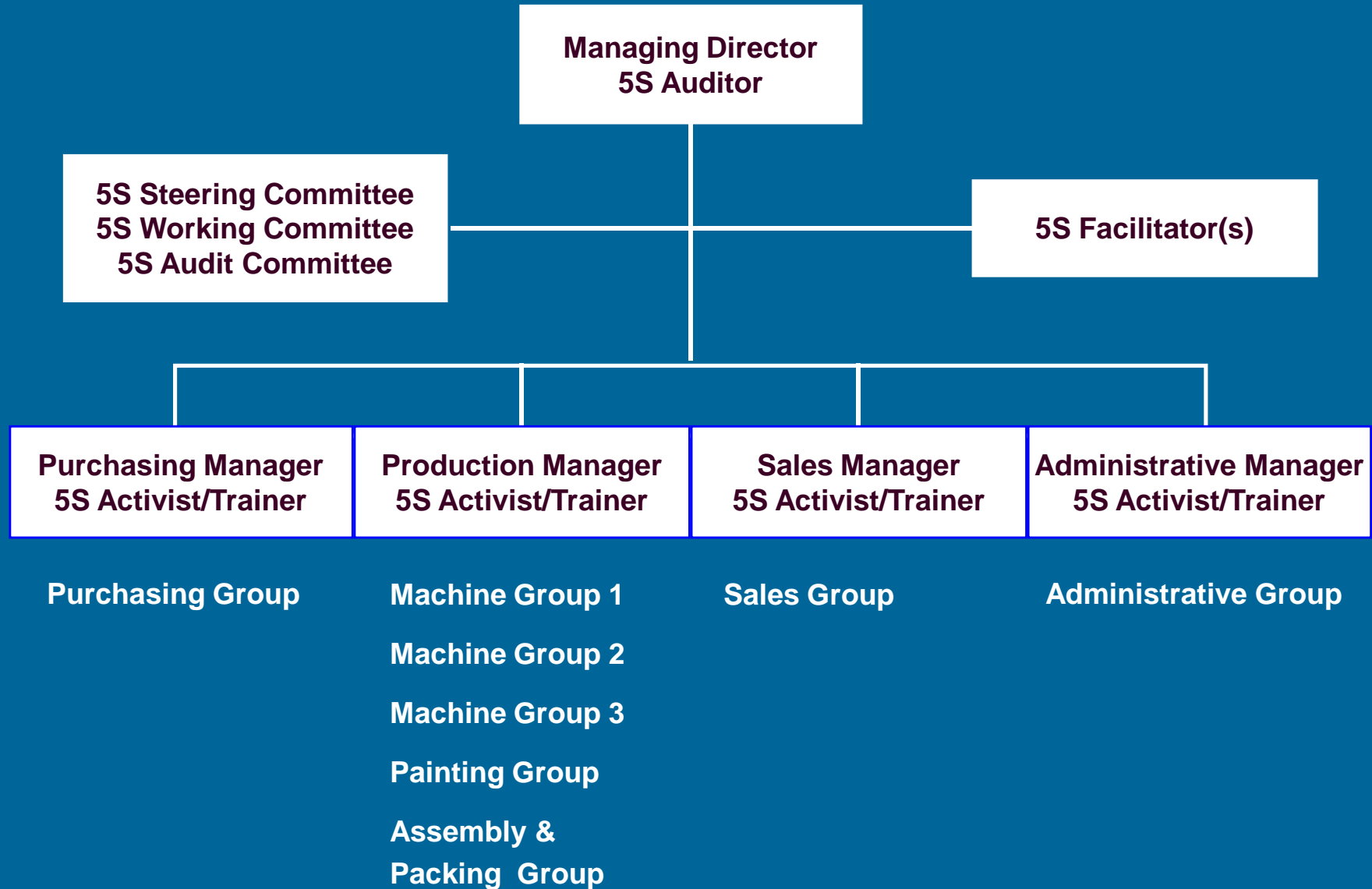
FROM 1 / 1 / 1996 TO 31 / 12 / 1997

STEP	SUPER 5S PROGRAMS	PHASE	PREPARATION			PENETRATION AND ADVANCEMENT												MAINTENANCE AND UPGRADING											
		MONTH	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12			
1	<u>Preparations</u> * Understanding philosophy and benefits of Super 5S by CEO * CEO's visit to Super 5S model companies * CEO's commitment to Super 5S implementation * Organize Super 5S Working Committee * Appoint Super 5S facilitators * Train Super 5S facilitators and practitioners		→																										
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2	<u>CEO's Official Announcement</u> * CEO officially announces implementation of Super 5S for 2 years * CEO explains objectives of Super 5S program to all colleagues * Publicize Super 5S organization and assignments by area * Promote Super 5S with banners, posters and newsletters * Organize basic Super 5S training programs for all colleagues					→																							
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3	<u>Big Cleaning by All Colleagues</u> * Organize a full-day of 'Big Cleaning Day' twice a year * Organize small groups who are responsible for assignments in divided areas of the company's premises. * Provide enough cleaning tools and materials * Implement a company-wide big cleaning for one day * Big cleaning includes the elimination of unnecessary items and wastes						→												→										
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4	<u>Initial Seiri</u> * Establish a Disposal Standard for unnecessary items * Organize a full-day of Seiri activity twice a year * Everyone concentrates to identify and stratify unnecessary items for elimination * Unnecessary items that cost a lot should be evaluated so as to prevent the occurrence of such waste							→												→									
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5	<u>Daily Seiri, Seiton and Seiso</u> * Seiri: Throw away things that are not needed and not being used * Seiton: Improve locations and methods for storing things so that searching time is minimized * Seiso: Set up a daily cleaning schedule for the creation of a healthy and comfortable workplace * Motivate colleagues to come up with creative improvements							→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→		
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6	<u>Periodic Audits on Super 5S</u> * Establish a Super 5S evaluation and incentive plan * Conduct a Super 5S audit regularly by auditors * Organize a Super 5S inter-departmental competition for upgrading * Award groups and individuals for their contributions * Organize study tours to other companies doing Super 5S * Organize Super 5S inter-company competition to sustain the program								→						→					→									
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- **The CEO should understand the philosophy and benefits of Super 5S.**
- **The CEO's visit to Super 5S model companies.**
- **The CEO's commitment to Super 5S implementation.**
- **Organize a Super 5S Working Committee.**
- **Appoint Super 5S facilitators.**
- **Train Super 5S facilitators and practitioners.**

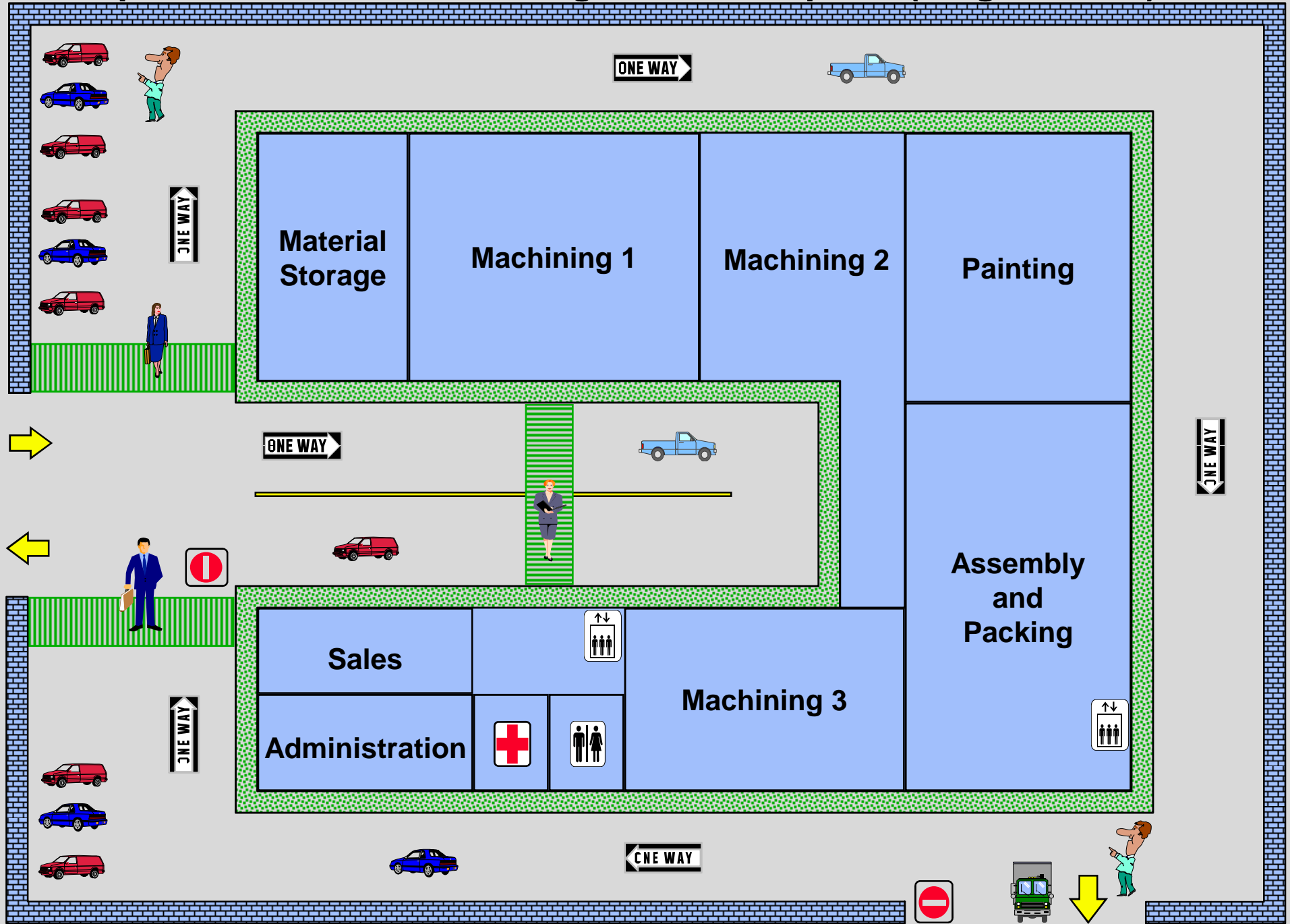
- **The CEO officially announces the implementation of a Super 5S program for two years.**
- **The CEO explains the objectives of Super 5S program to all colleagues.**
- **Publicize the Super 5S organization chart and layout diagram showing areas divided by borders for the assignment of responsibilities to small groups of people.**
- **Work out various promotional tools including banners, posters, pamphlets and newsletters.**
- **Organize off- and on-the-job training programs on the basics of Super 5S to all colleagues.**

# Organizing to Implement Super 5S



# A People-Centered Clean and Organized Workplace (Target Vision)

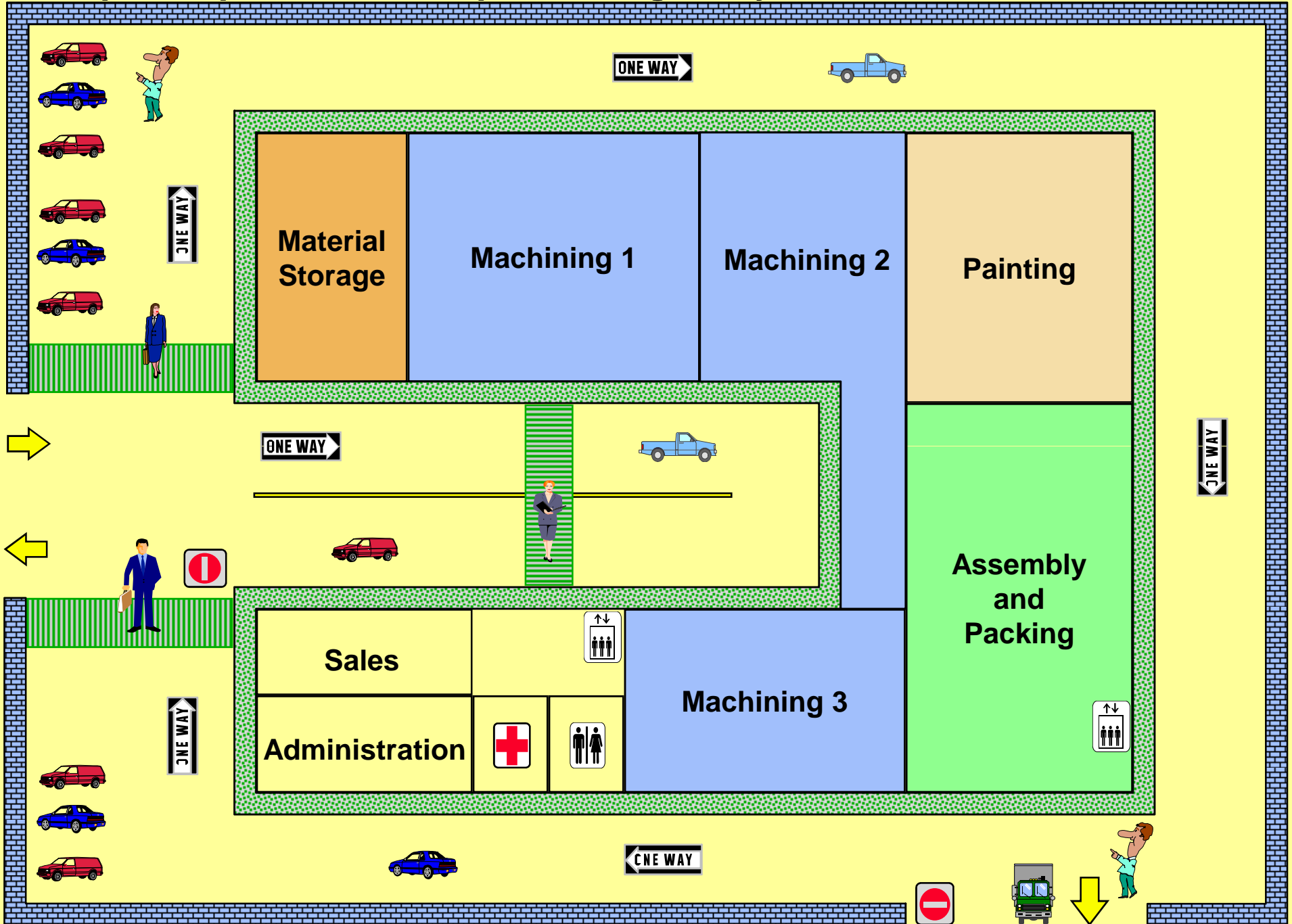
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# Groups Responsible for Implementing 5S by Area

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# 5S TOOL BOX

## Promotion Tools

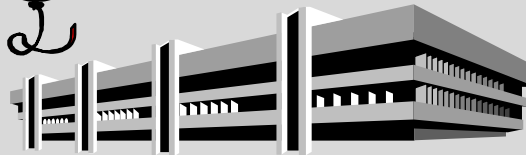
### 5S Newsletters

#### What is Seiton?

Seiton is arranging necessary items in good order so they can easily be selected for use

## Implementation Tools

### 5S Days (once a month)

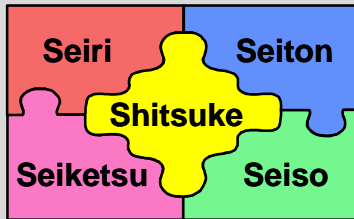


## Evaluation Tools

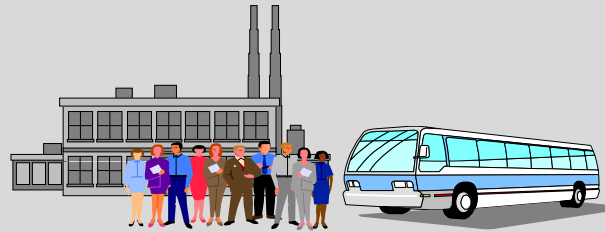
### 5S Guidance Stickers



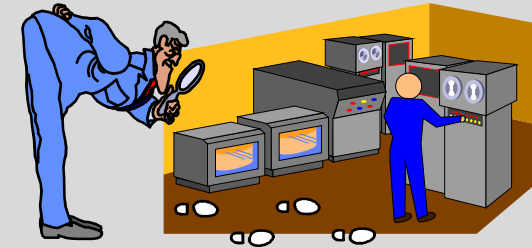
### 5S Posters



### 5S Study Tours



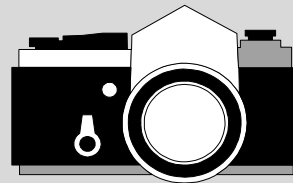
### CEO's Inspection Tours



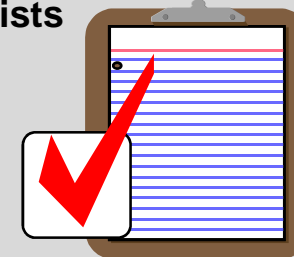
### 5S Banners



### Photographing for Improvement



### 5S Checklists



### 5S Badges



### 5S Inter-Department Competition



### Congratulations!



# **EXAMPLE OF 5 S POSTERS**

## Seiri

Sort out unnecessary items in the workplace and discard them

## Seiton

Arrange necessary items in good order so they can easily be selected for use

## Shitsuke

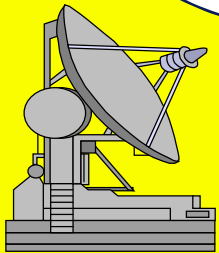
Train people to follow good work habits and to strictly follow workplace rules

## Seiketsu

Maintain one's workplace so that it is productive and comfortable by repeating Seiri-Seiton-Seiso

## Seiso

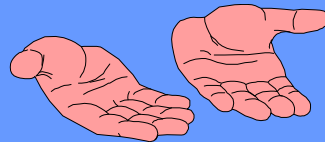
Clean your workplace completely so that there is no dust on floors, machines or equipment



**5S IS FUNDAMENTAL TO  
PRODUCTIVITY IMPROVEMENT**

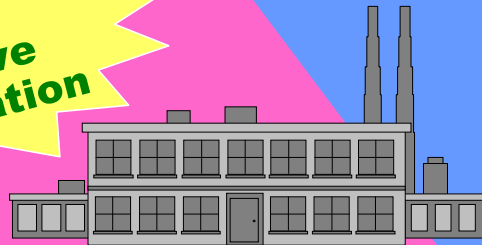
# Success in **5S** Comes from...

Your Creative Thinking



Dirtying Your Hands

**A Clean and  
Highly  
Productive  
Organization**



**SEIRI SEITON SEISO SEIKETSU SHITSUKE**

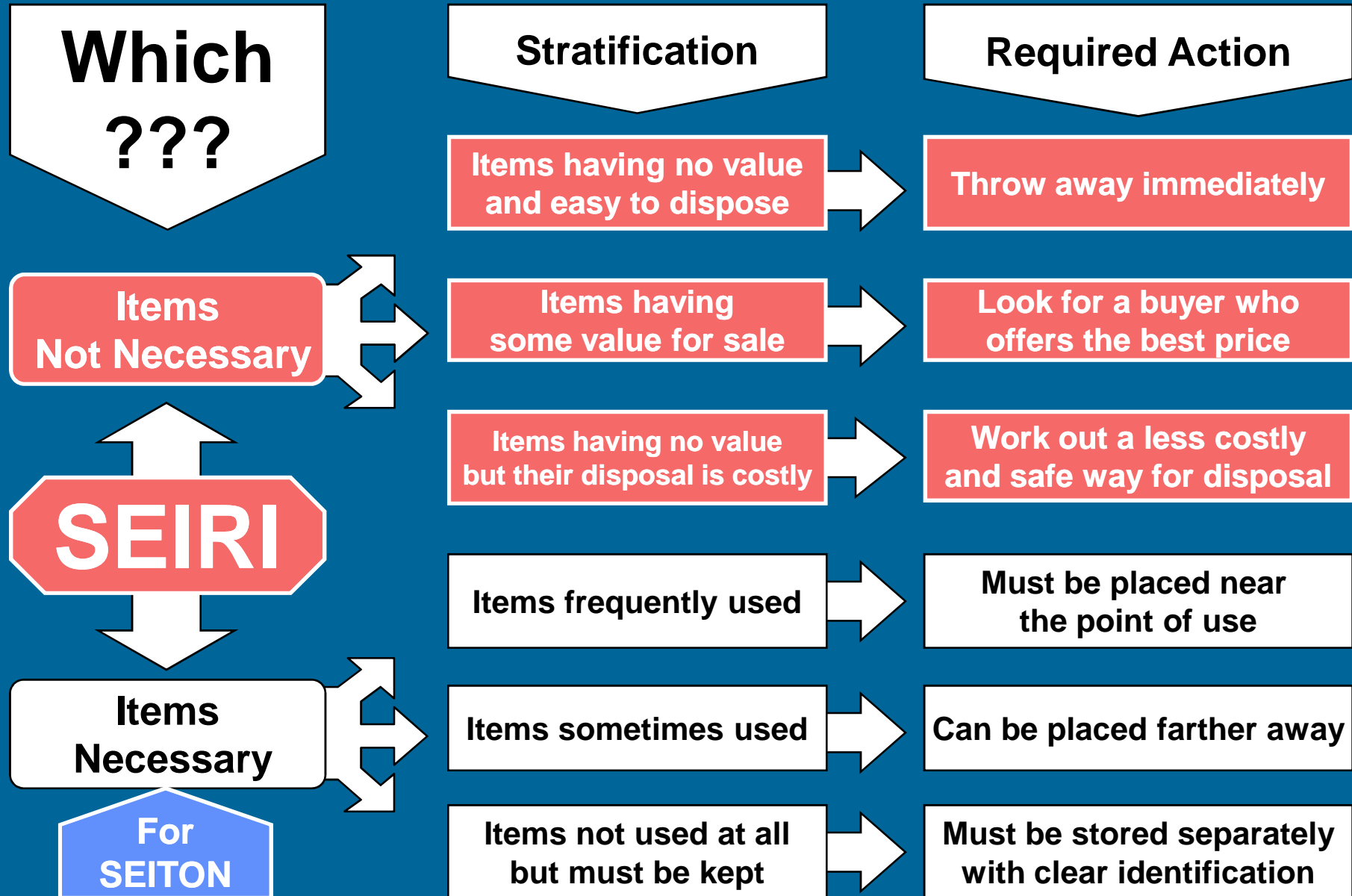
# **5S** is fundamental to Productivity and Quality Improvement



- **Organize “A Big Cleaning Day” immediately after the 5S implementation announcement by the CEO.**
- **Divide the company premises into small areas and assign small groups of people to be responsible for each area.**
- **Provide enough cleaning tools and materials.**
- **Implement a company-wide full day’s big cleaning by all colleagues.**
- **This big cleaning also includes Seiri of wastes and items identified as being unnecessary.**
- **A Big Cleaning Day should be organized twice a year on a continuing basis.**

- **Establish Disposal Standards for unnecessary items.**
- **Initial Seiri is an activity practiced by everyone to get rid of all unnecessary items after a big cleaning day.**
- **Every one concentrates to identify and stratify unnecessary items for elimination.**
- **Unnecessary items that cost a lot should be evaluated so as to avoid future purchase of unneeded items.**
- **A company-wide, full-day of concentrated Seiri activity should be organized twice a year on a continuing basis.**

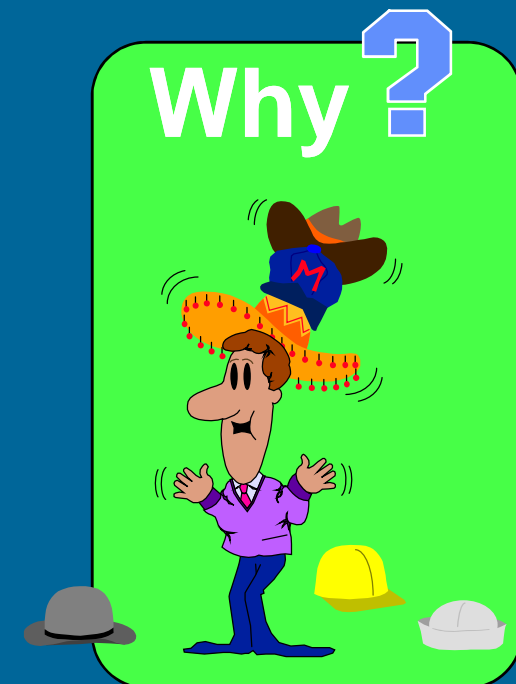
# How to SEIRI Your Workplace





## Why Do Unnecessary Items Accumulate?

- Change in sales-production plan
- The excessive ordering
- The incorrect ordering
- The lack of quality control
- The lack of quantity control
- Improper storage locations and or poor storage methods
- A poor receiving and issuing system
- Duplicated ordering or delivering
- Aged or obsolete machines and equipment
- Damage by improper handling
- The duplicated production and storage of paper work
- Others



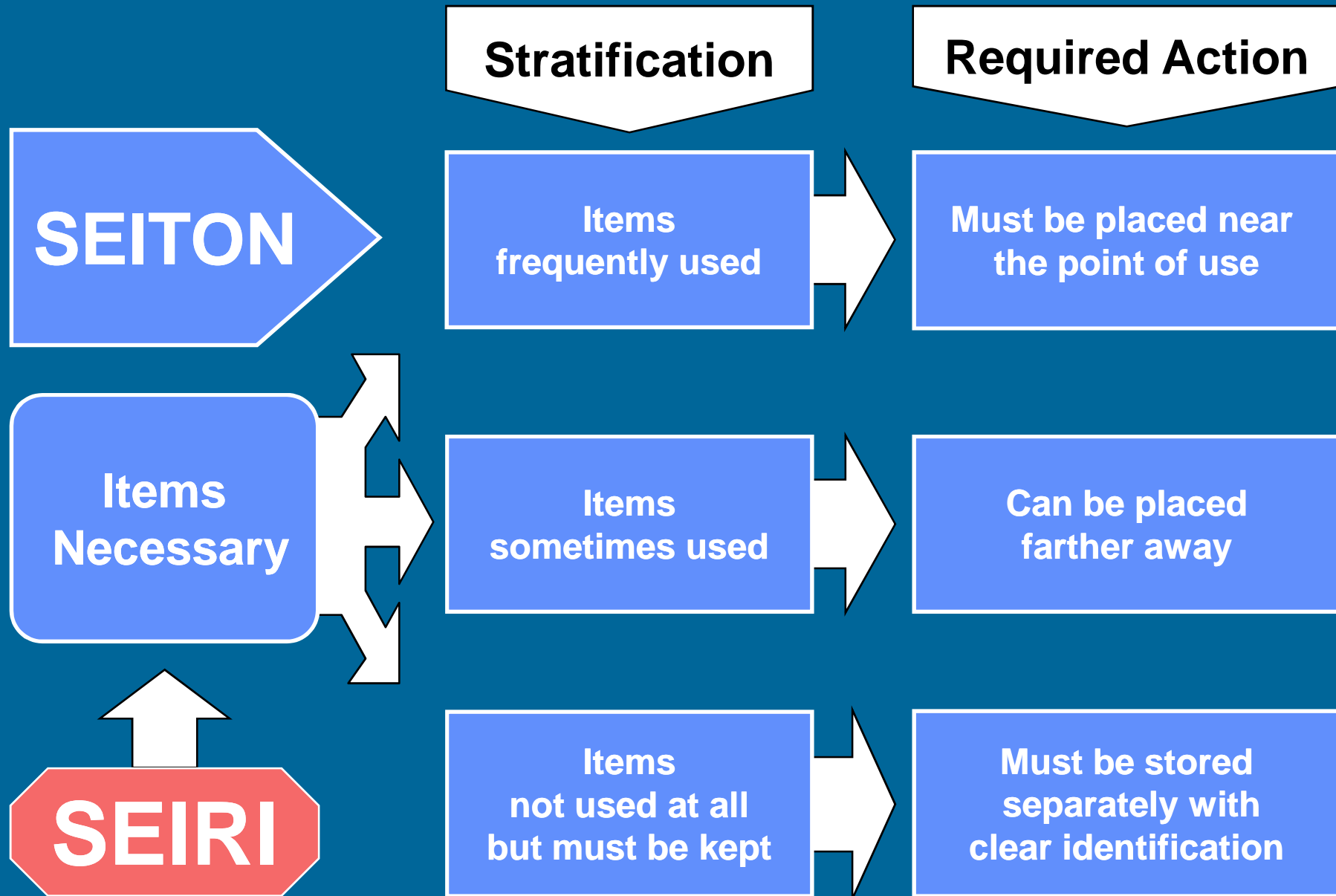
## When, Who and Where to Seiri Unnecessary Items?

- On big cleaning days, everyone tries to eliminate unnecessary items.
- Twice a year, organize “A Big Seiri Day” and everyone concentrates on the elimination of unnecessary items.
- During daily Seiri, Seiton and Seiso activities, everyone tries to eliminate unnecessary items and tries to prevent the accumulation of wastes.
- Managers and 5S auditors walk around workplaces and advise people in charge about the elimination of unnecessary items.



- **Seiri:** Throw away things that are not needed and not being used. Use space more economically (space is money).
- **Seiton:** Improve locations and methods of storing things so that searching and retrieval time is minimized (time is money).
- **Seiso:** Continue daily cleaning schedule for the creation of a healthy and comfortable workplace.
- **Motivate colleagues to come up with creative improvements for the workplace.**

# How to SEITON Your Workplace



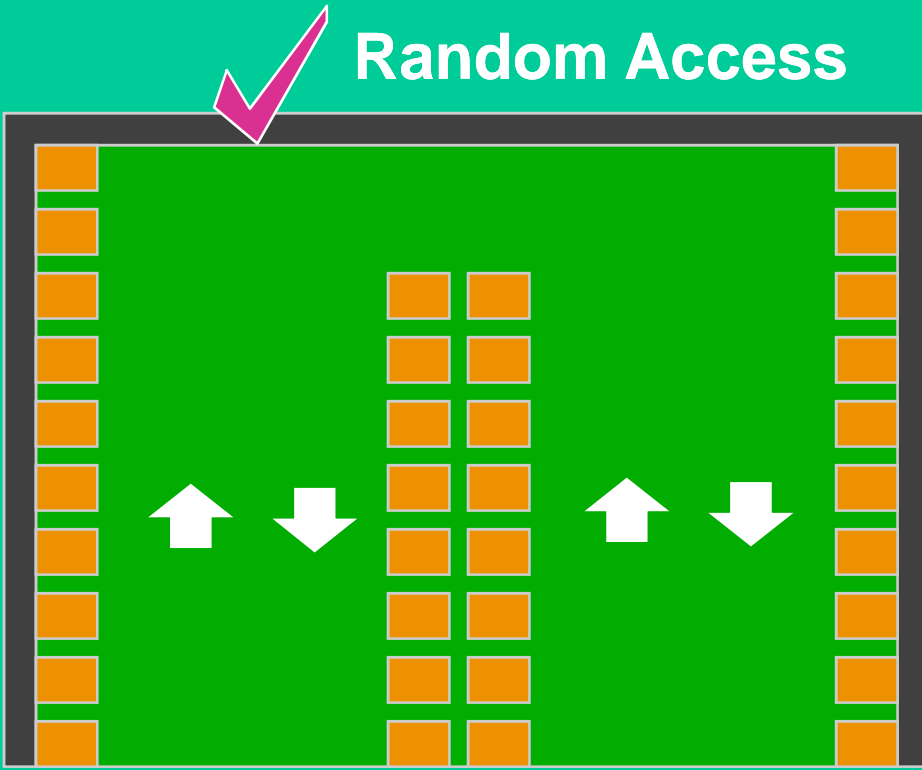
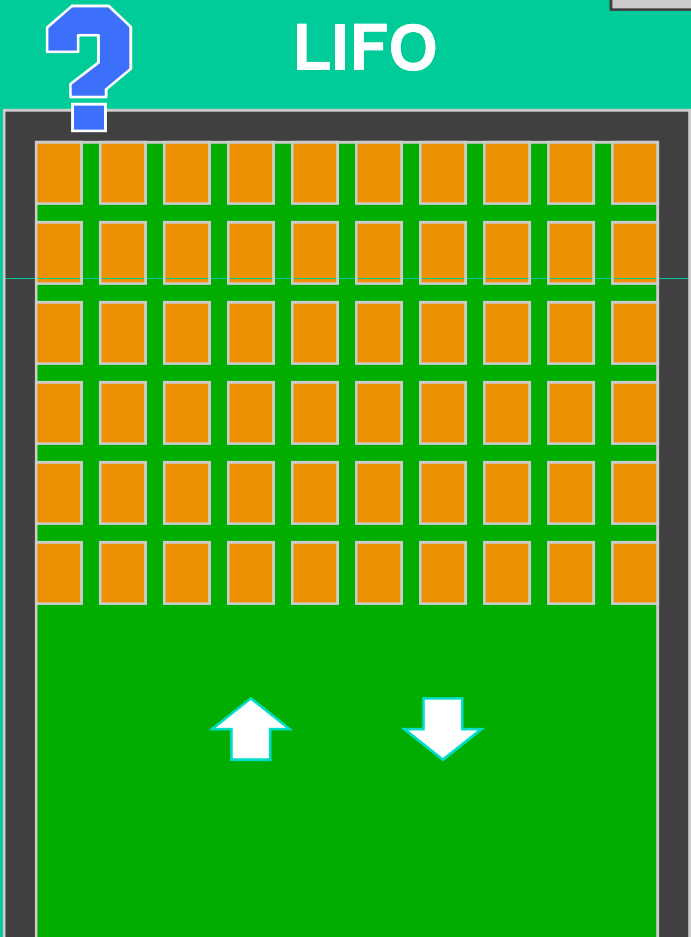
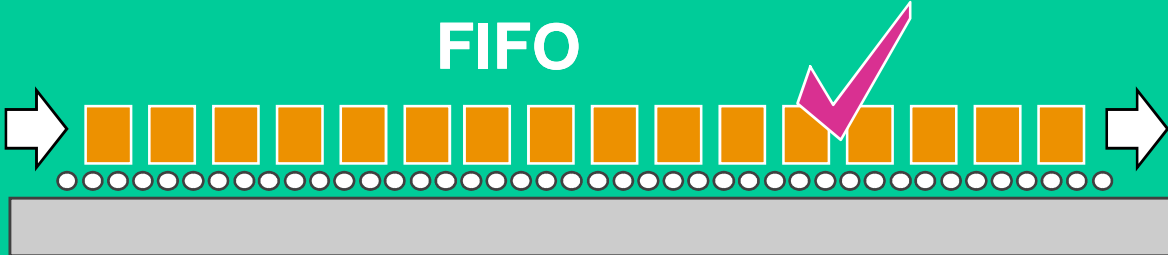
# Seven Seiton Principles

- Follow the first-in-first-out (FIFO) method for storing items.
- Assign each item a dedicated location.
- All items and their locations should be indicated by systematic labeling.
- Place items so that they are visible to minimize search time.
- Place items so they can be reached or handled easily.
- Separate exclusive tools from common ones.
- Place frequently used tools near the user.

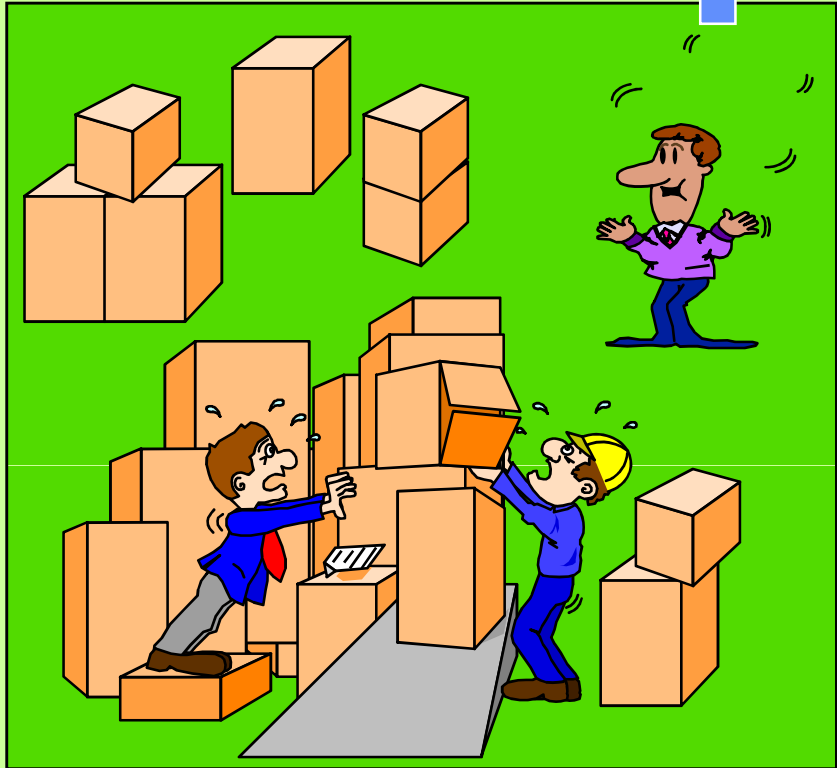
## How to Seiton



# SUPERSEITON

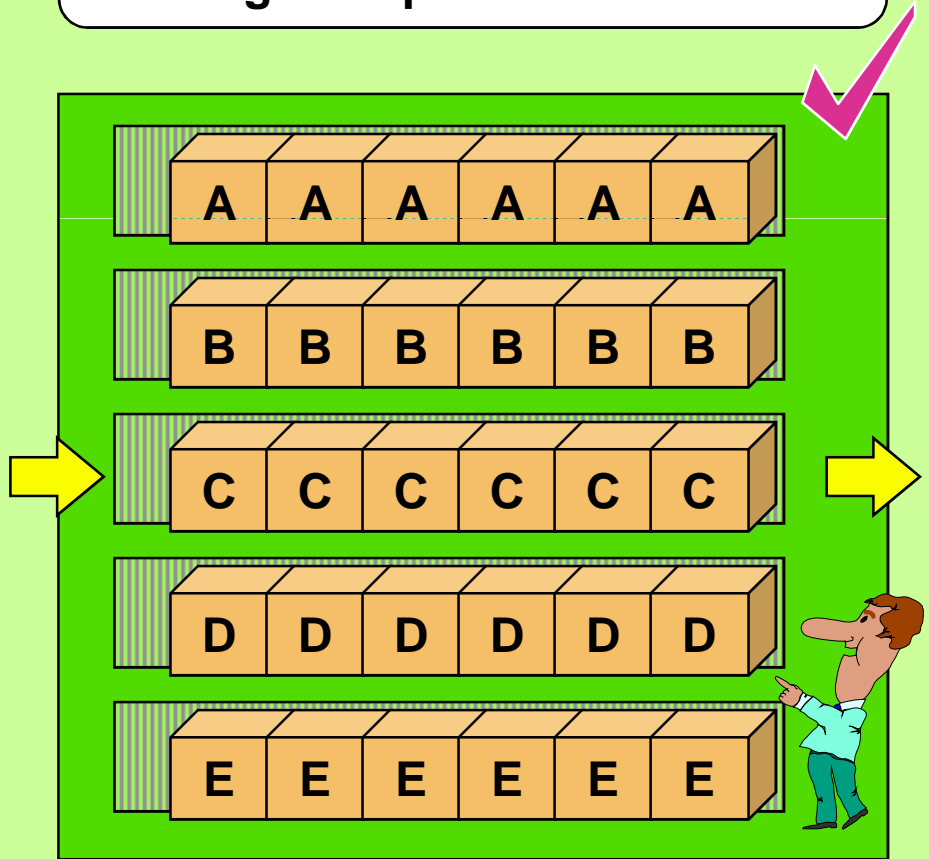


# SUPERSEITON



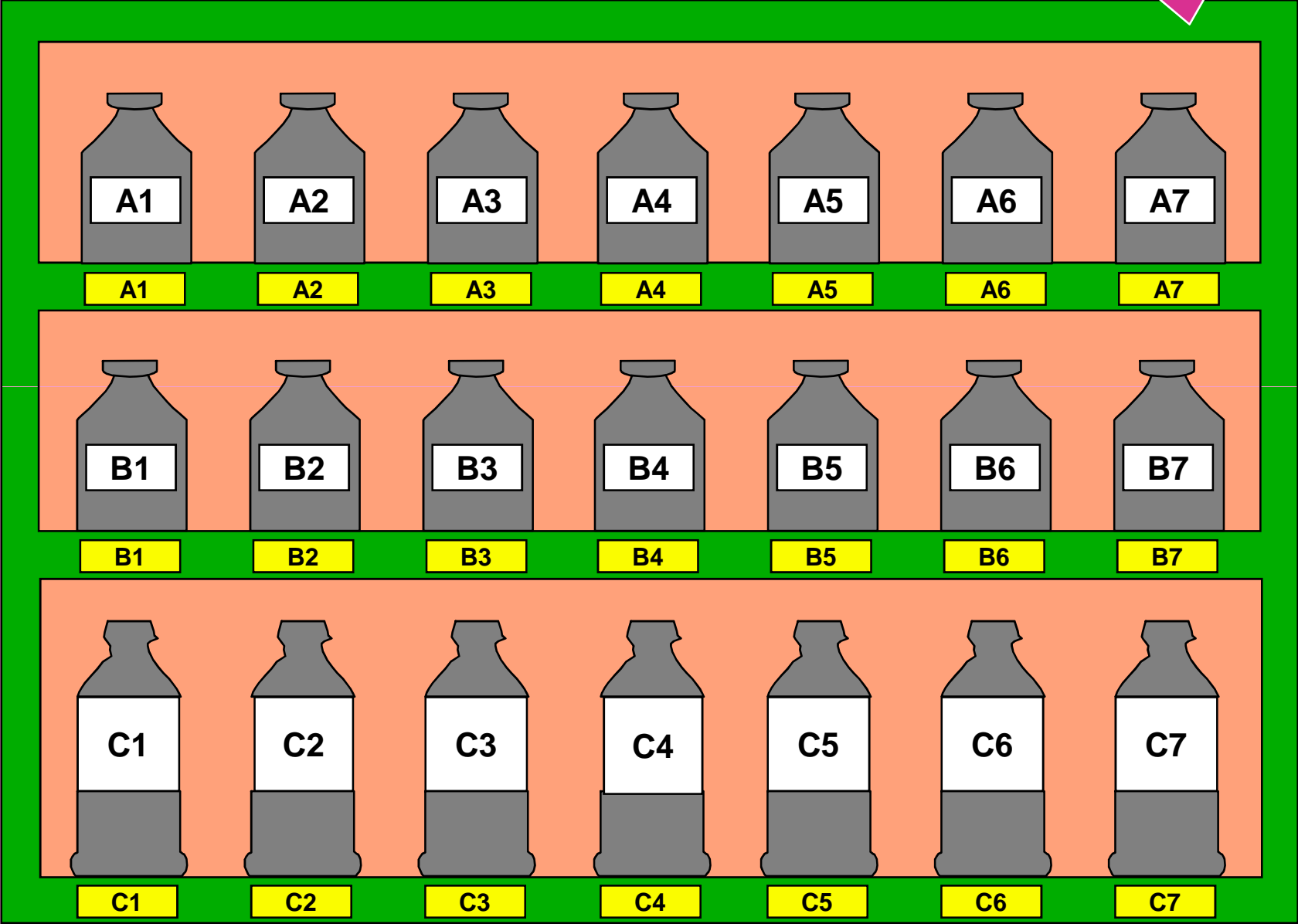
• Before 5S activity

- FIFO - Push out
- Store according to product lines
- Sliding transport



- Reserved seats
- Matching names

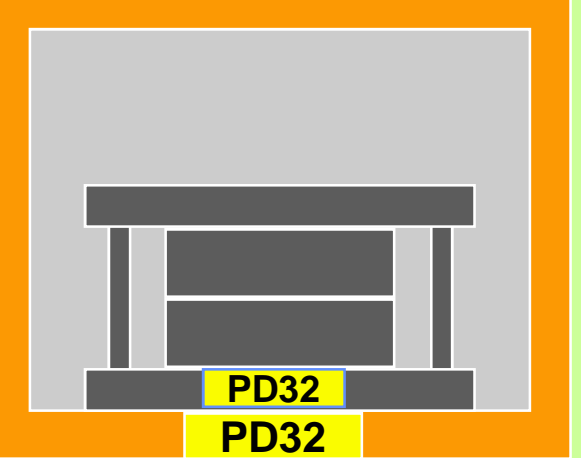
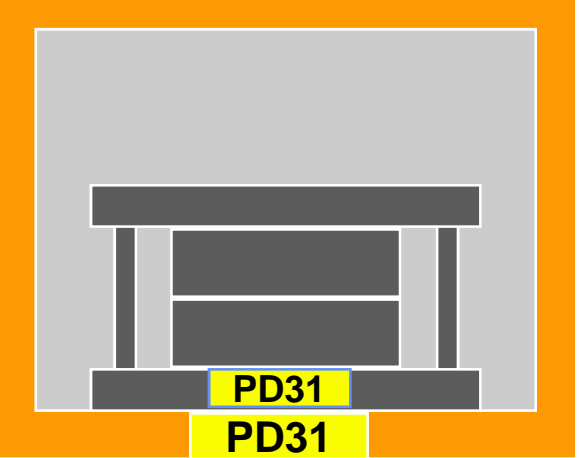
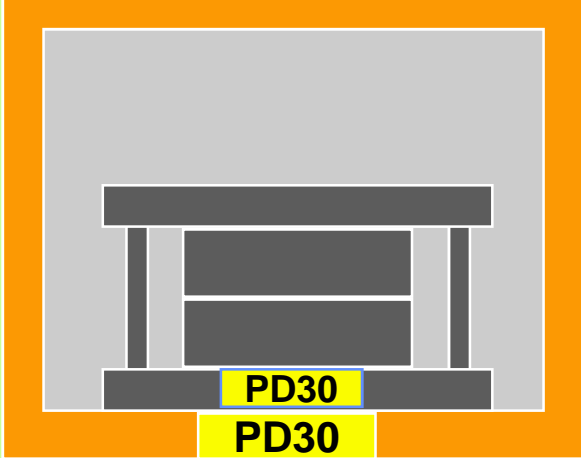
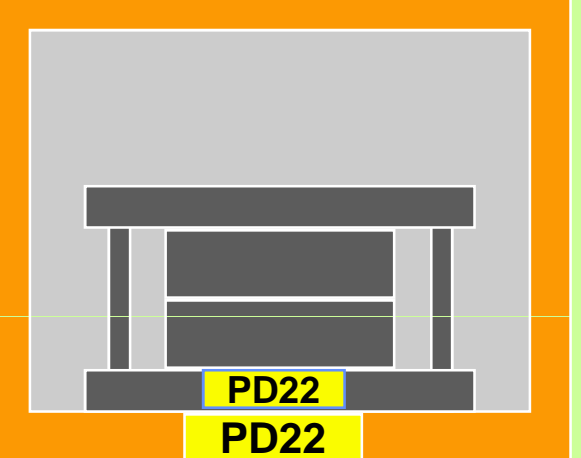
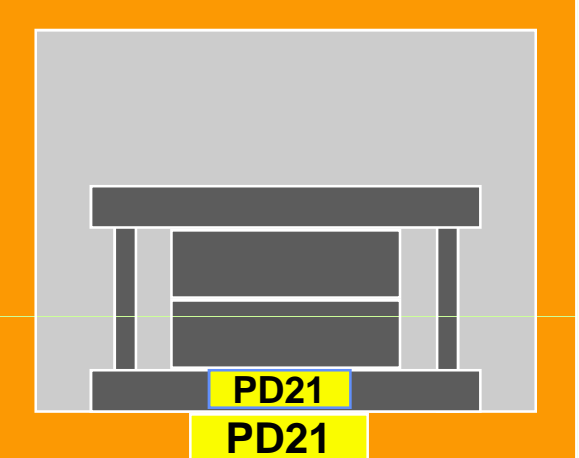
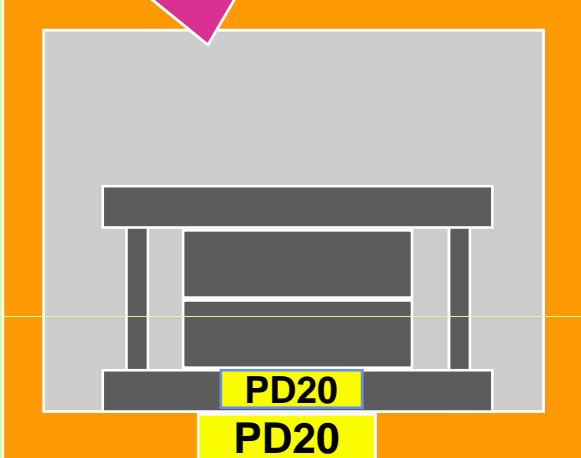
# SUPERSEITON





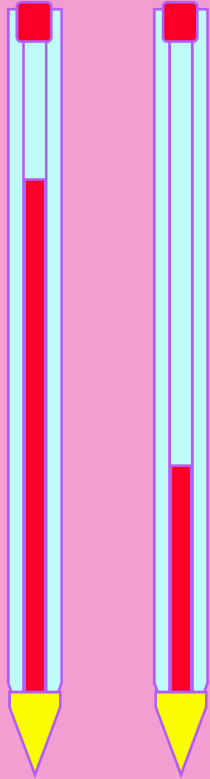
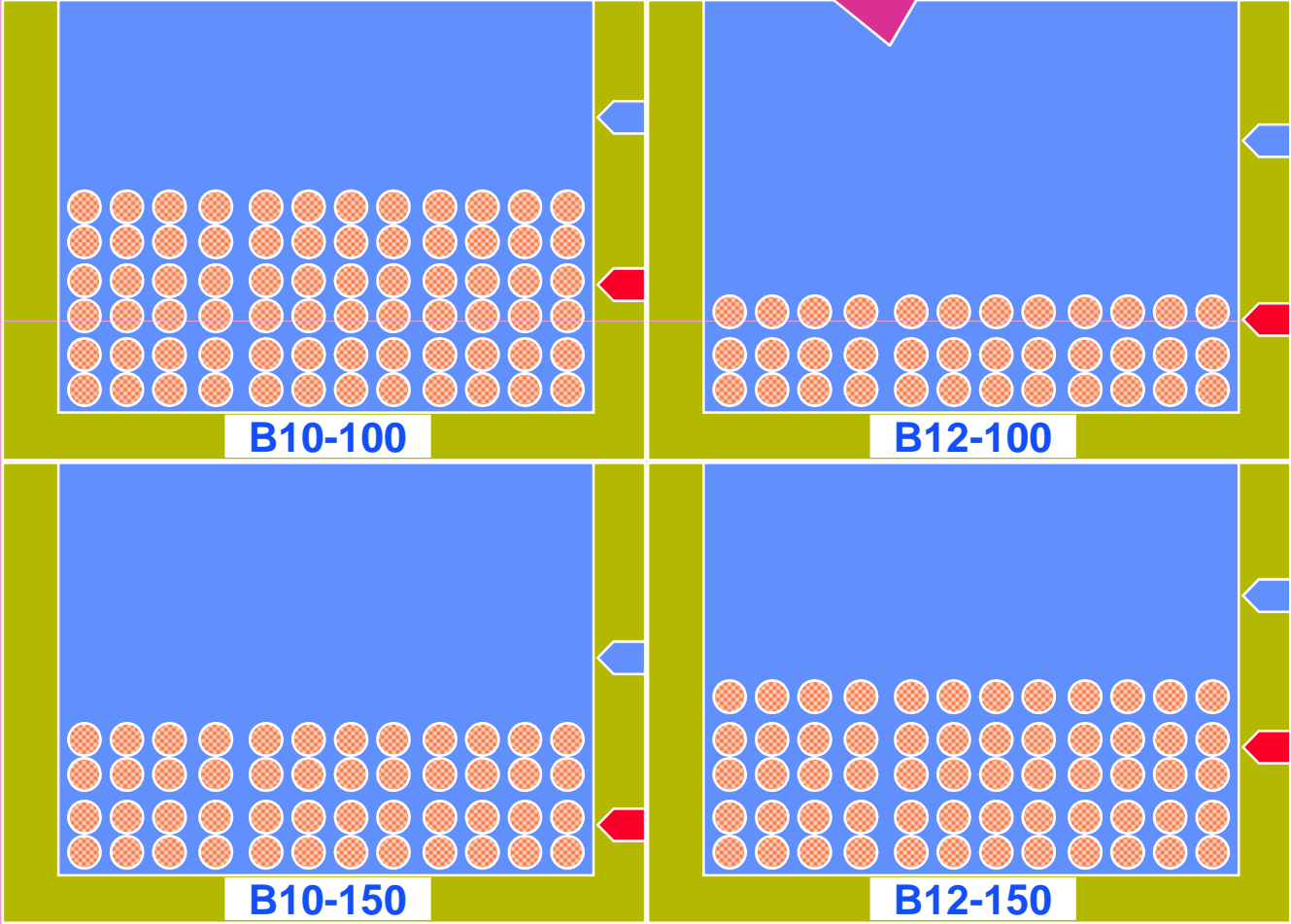
# SUPERSEITON

- Reserved seats
- Matching names

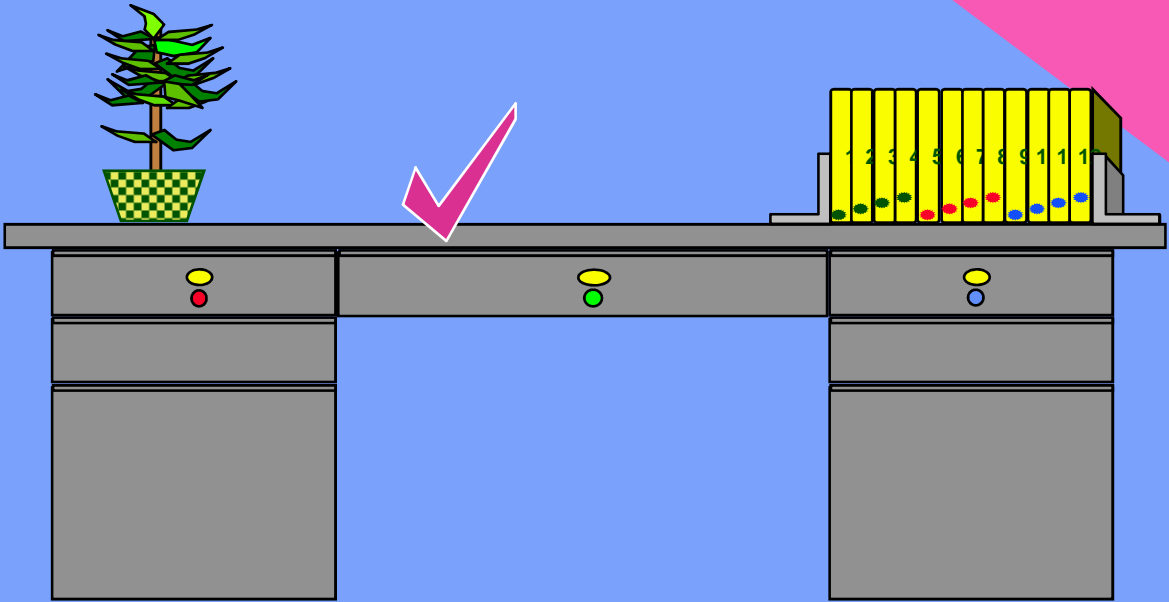
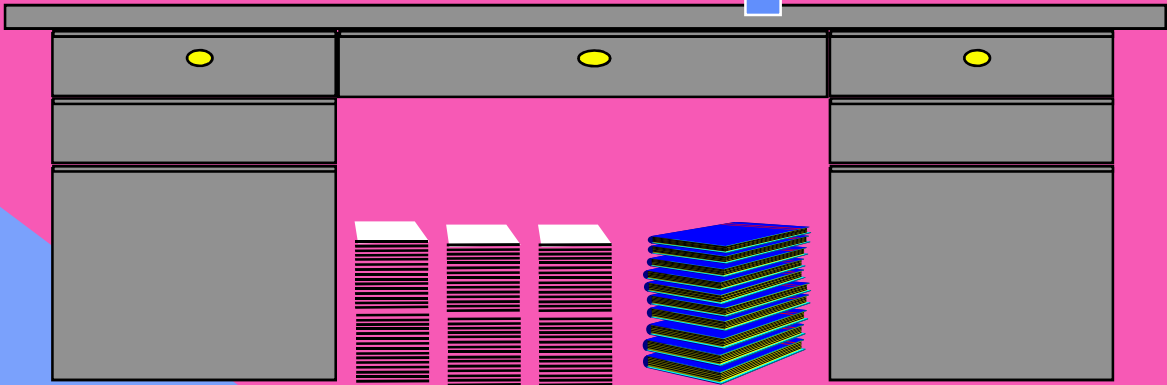


# SUPERSEITON

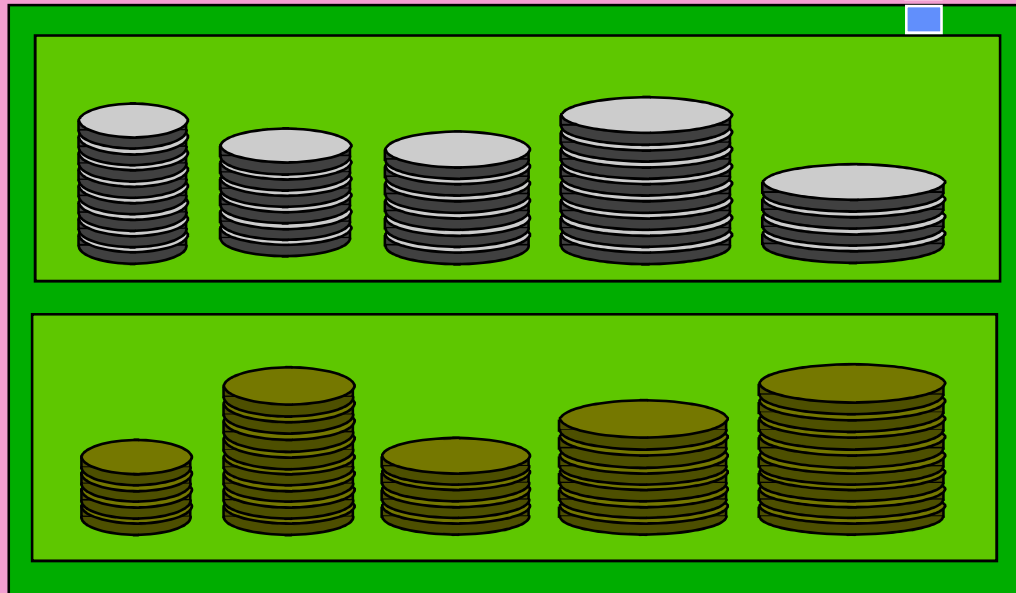
- Transparent / no cover
- Stock level indicators



# SUPERSEITON

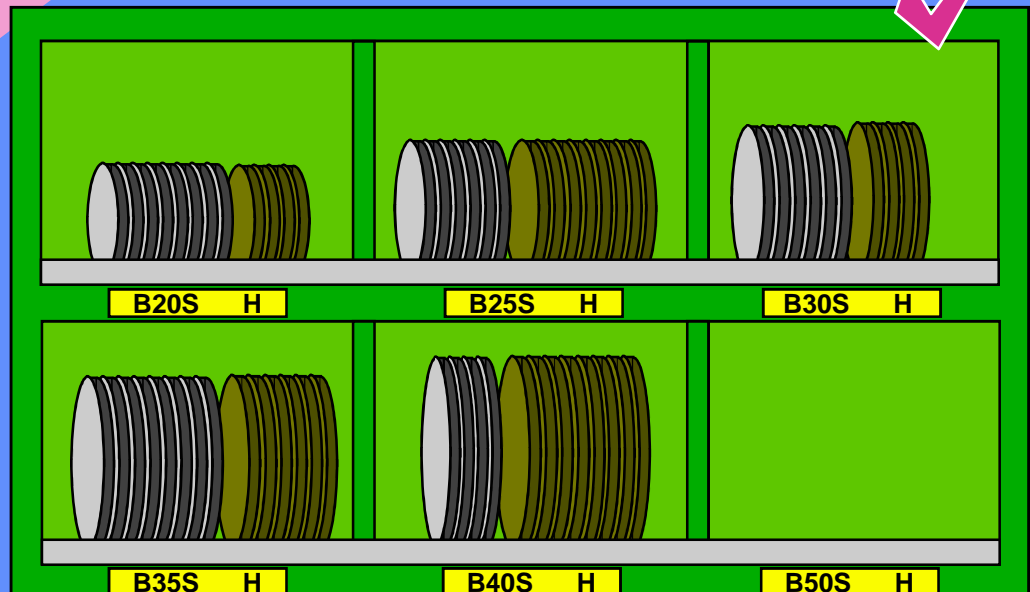
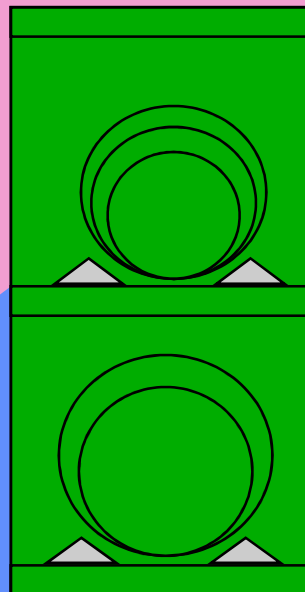


- Seiri wastes
- No horizontal piling
- Nothing on floor

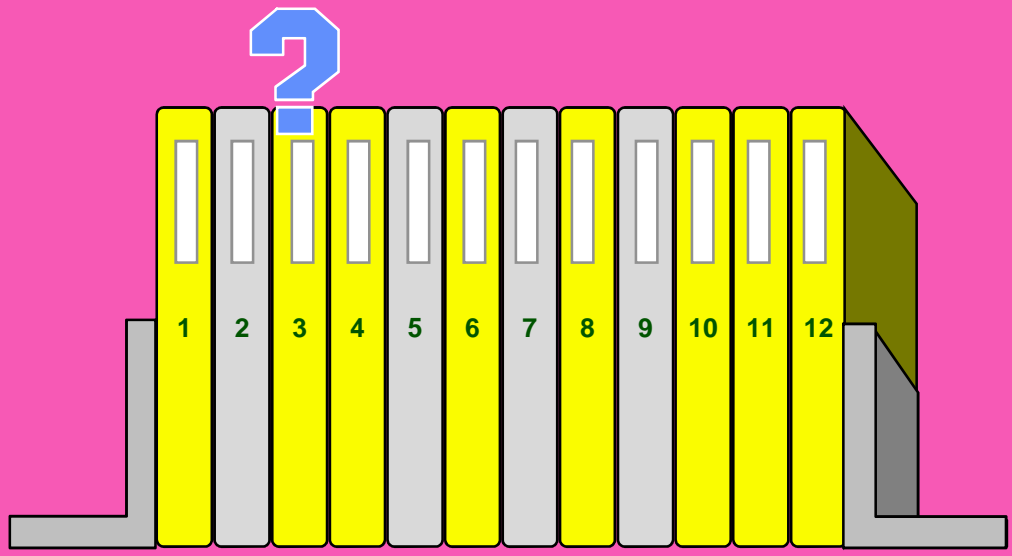


# SUPERSEITON

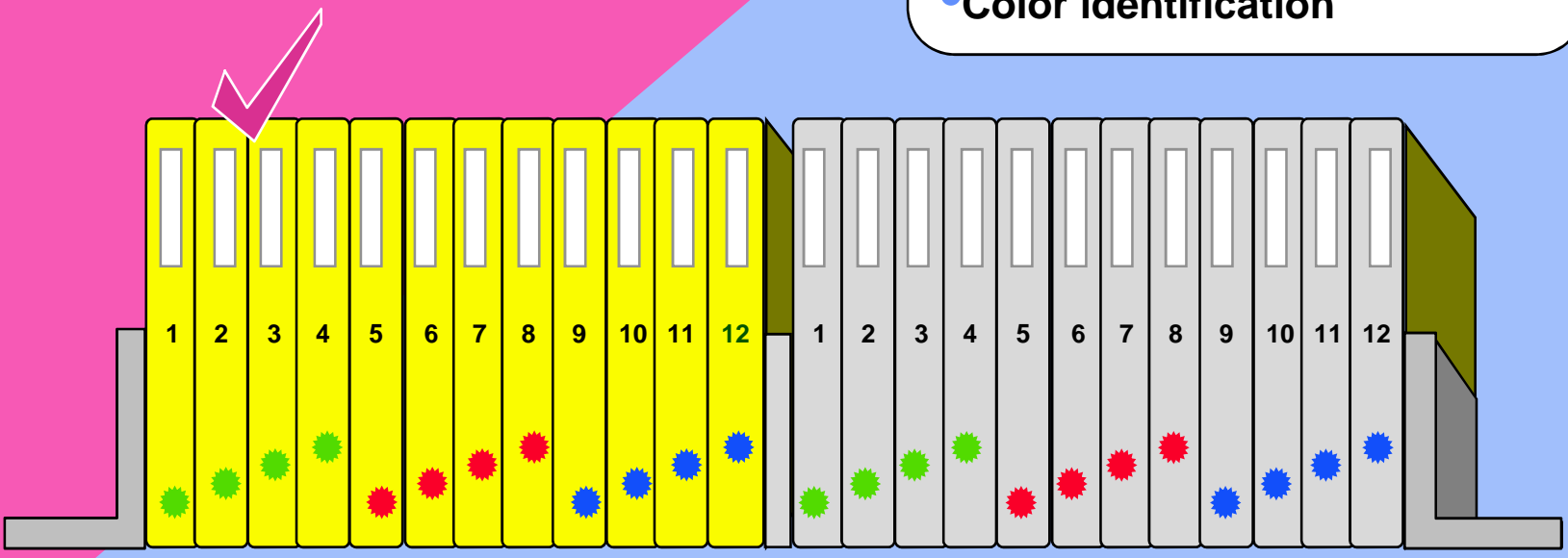
- Quick retrieval
- No horizontal piling
- Vertical holders



# SUPERSEITON

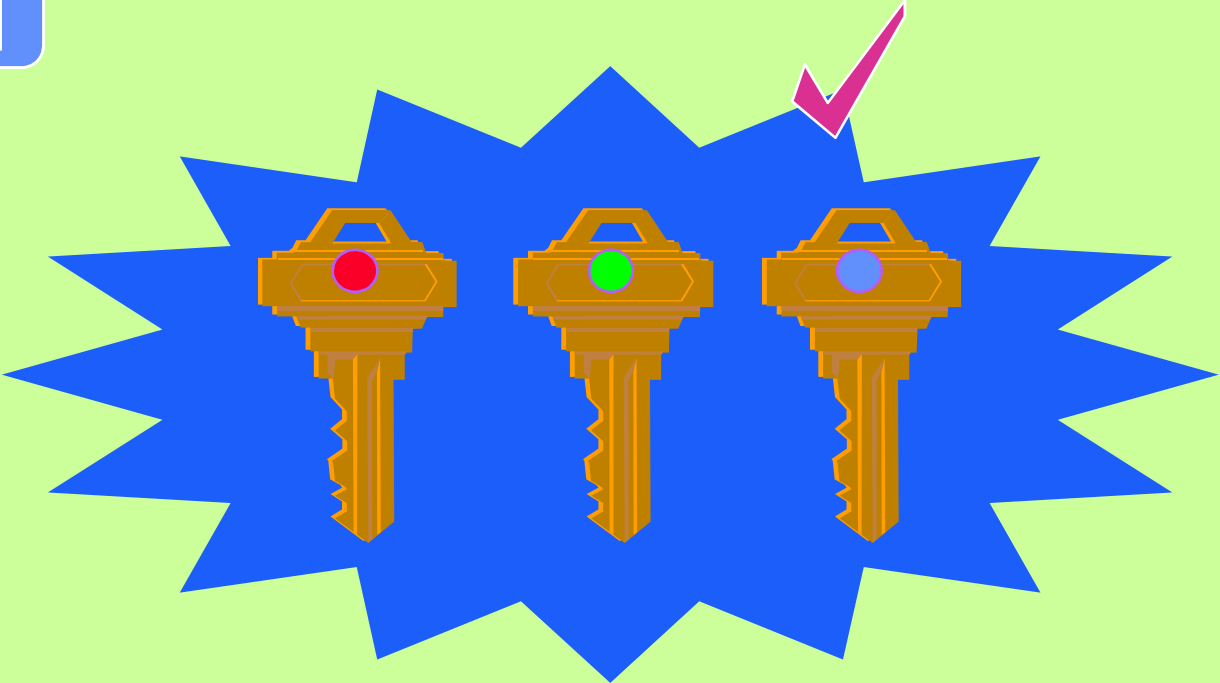
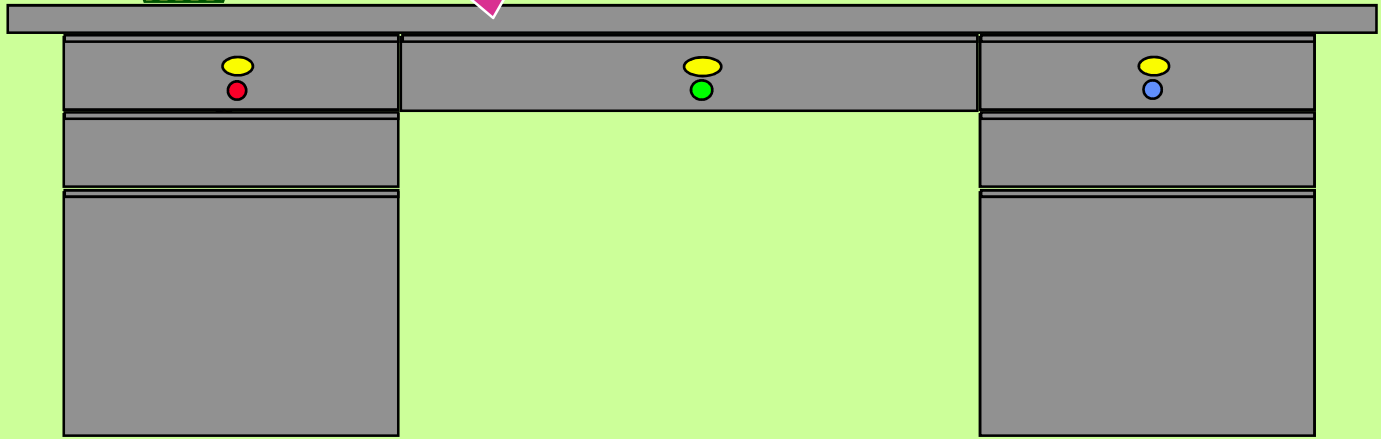


- Retrieval within 30 seconds
- Labeling reserved seats
- Color identification



# SUPERSEITON

- Matching labels
- Color identification



# SUPERSEITON

- Matching labels
- Open/Close separation



### CLOSED

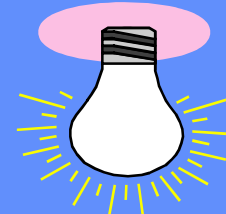
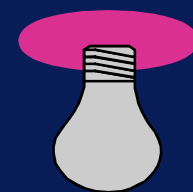
1 *	2 2	3 *	4 *	5 5
6 6	7 *	8 8	9 *	10 *
11 11	12 12	13 *	14 *	15 15
16 *	17 *	18 18	19 *	20 20

### OPEN

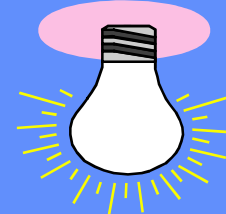
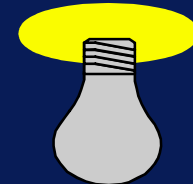
1 1	2 *	3 3	4 4	5 *
6 *	7 7	8 *	9 9	10 10
11 *	12 *	13 13	14 14	15 *
16 16	17 17	18 *	19 19	20 *

# SUPER SEITON

- Matching labels
- Color identification

A central orange control panel with four switches, each labeled 'OFF' in green. The switches have colored indicators: green, pink, yellow, and light pink. A large pink checkmark is positioned to the right of the panel.

OFF	OFF	OFF	OFF

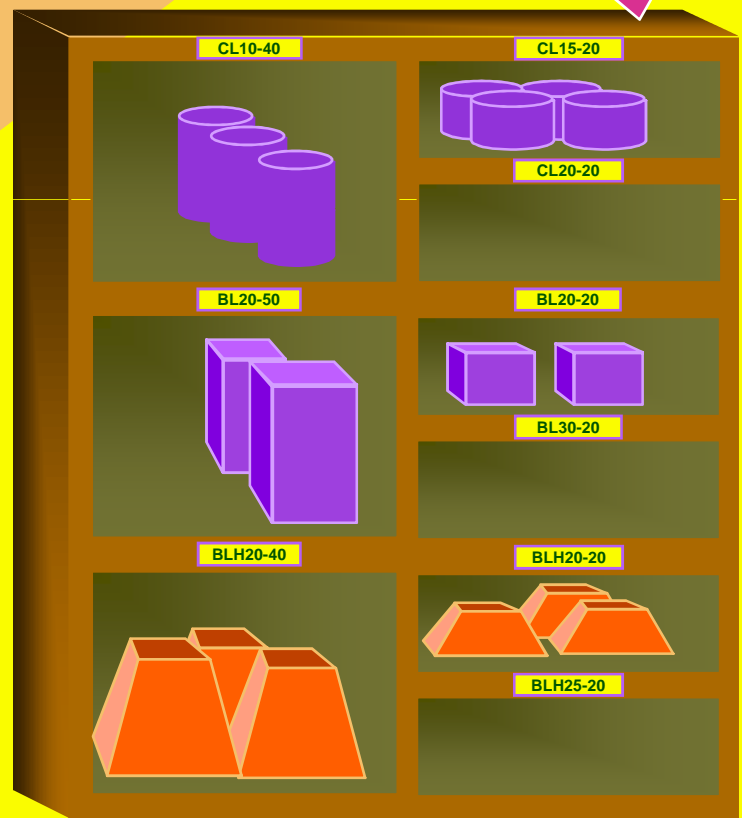




# SUPER SEITON

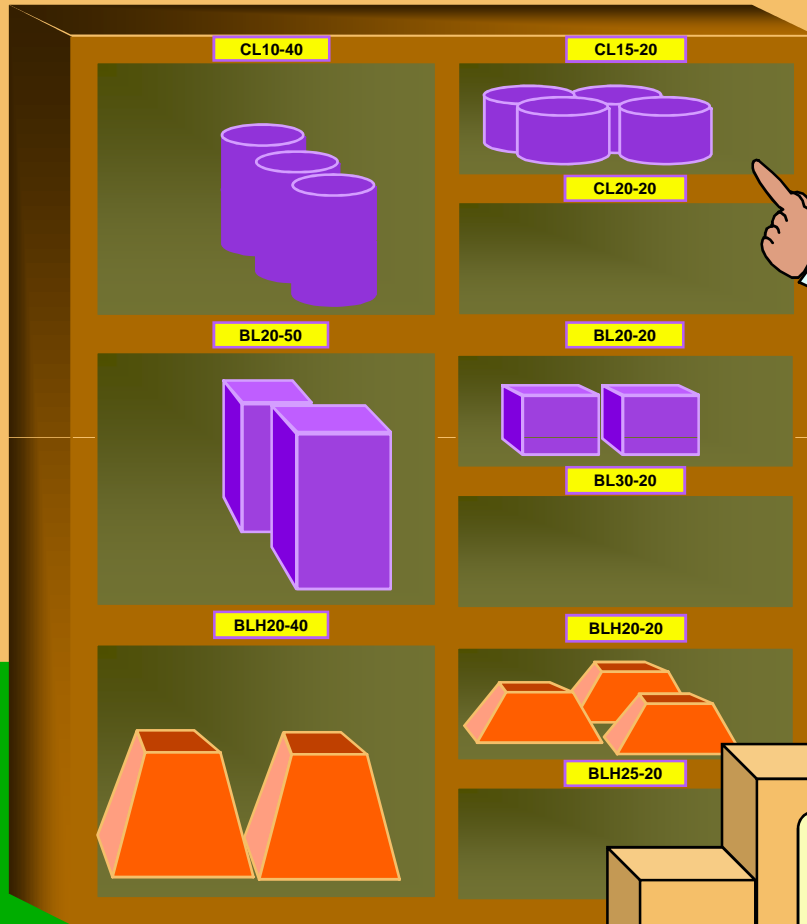


- A place for a kind
- Effective use of space



Cast Materials

SUPERSEITON



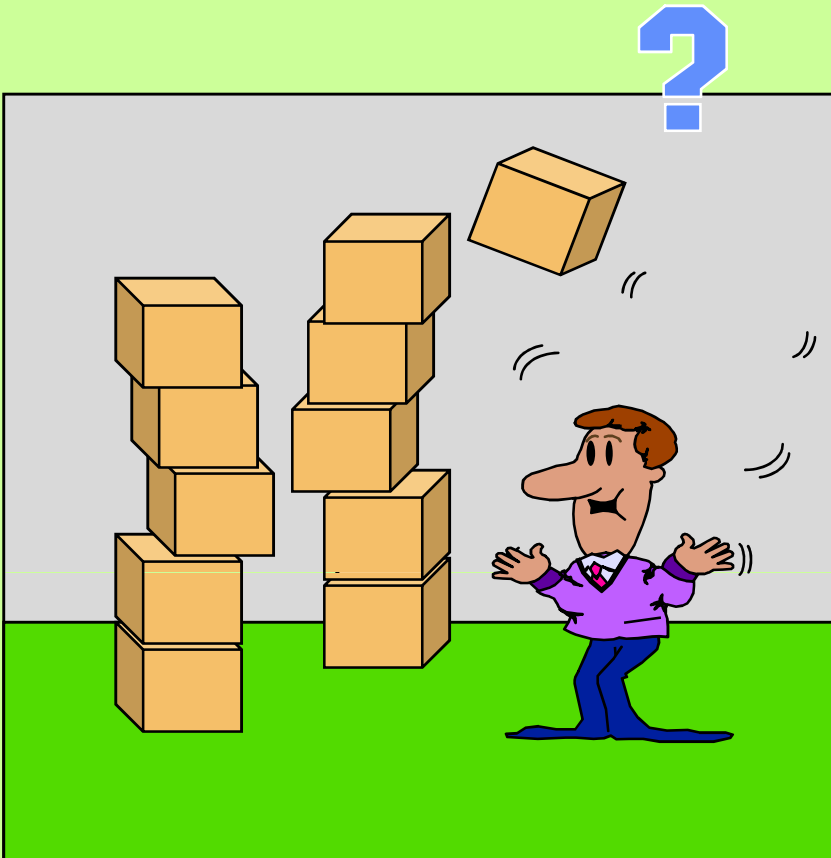
- Kanban
- Parking place
- Safety sign

Cart No. 5

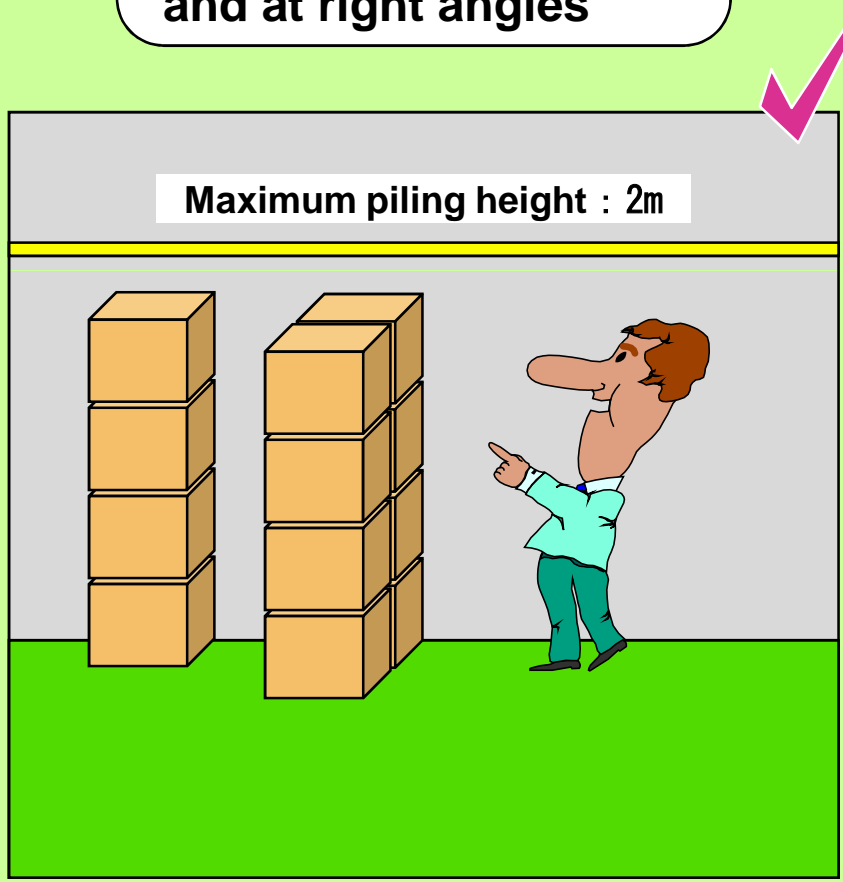
Cart No. 5  
Safety First

# SUPERSEITON

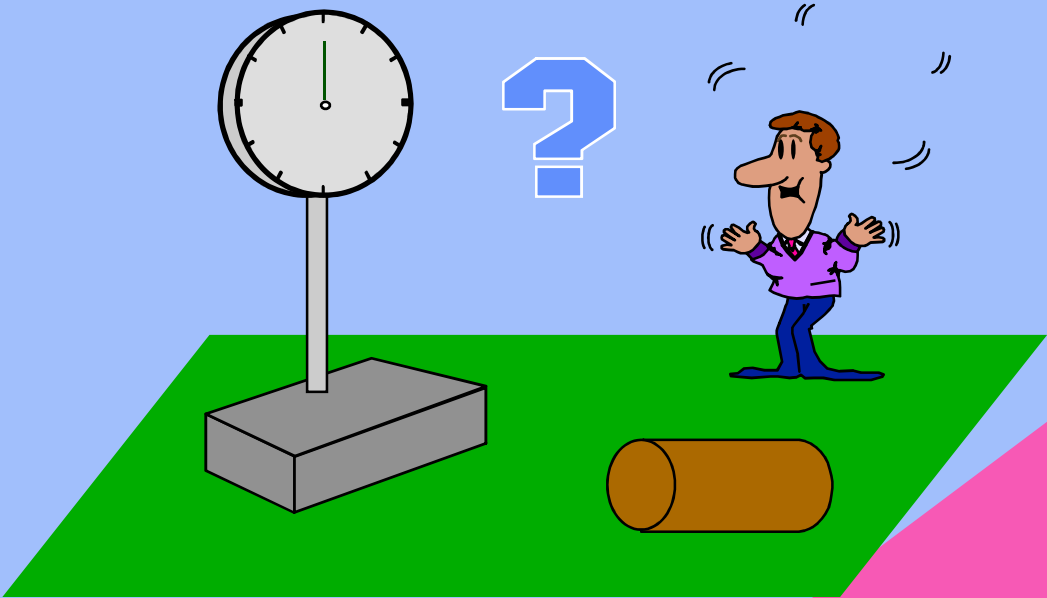
- Max. height indication
- Placing items straight and at right angles



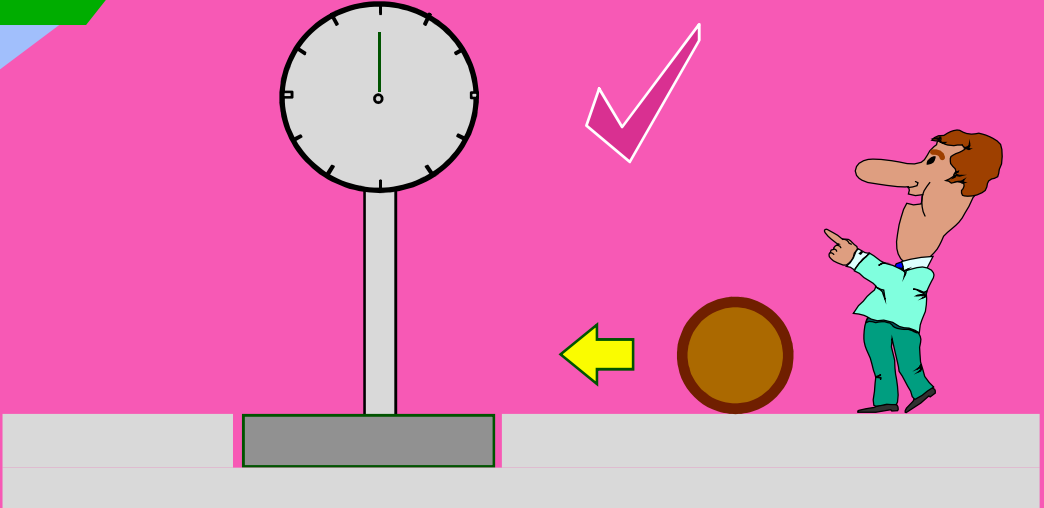
- Before 5S - unsafe
- No height control



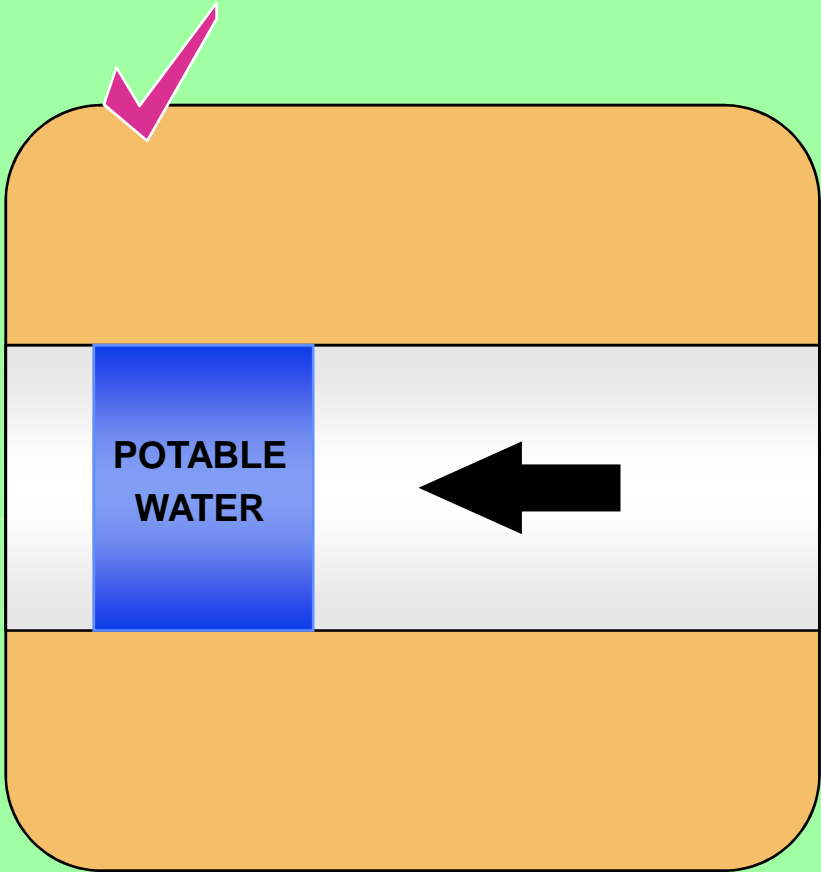
# SUPERSEITON



- No lifting by hands
- Sliding or rolling

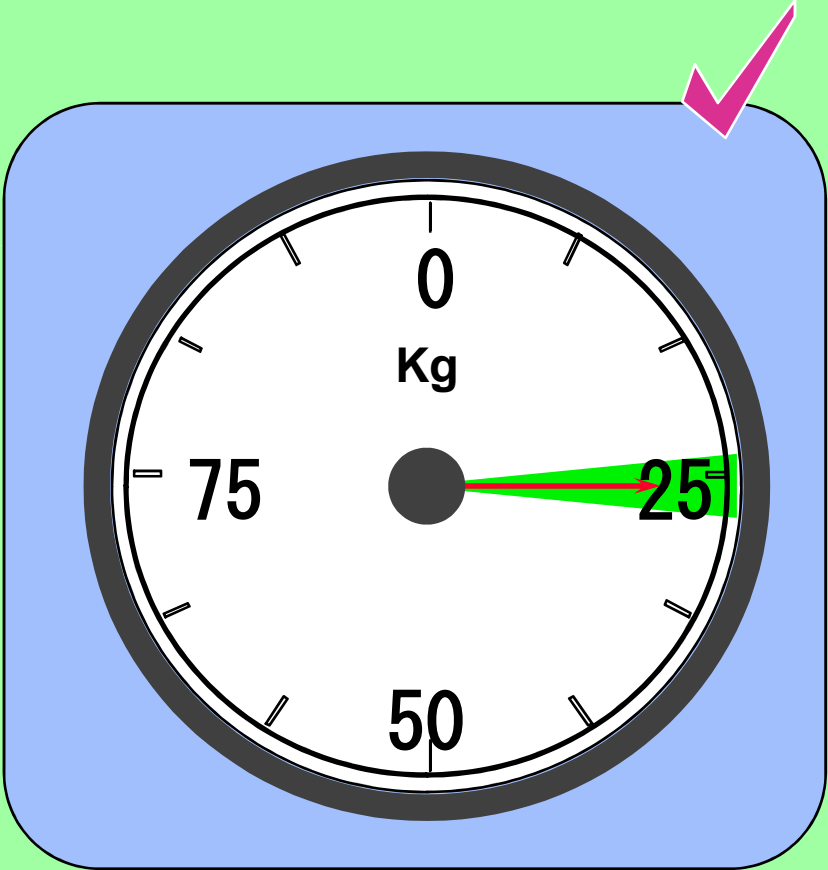


# SUPERSEITON

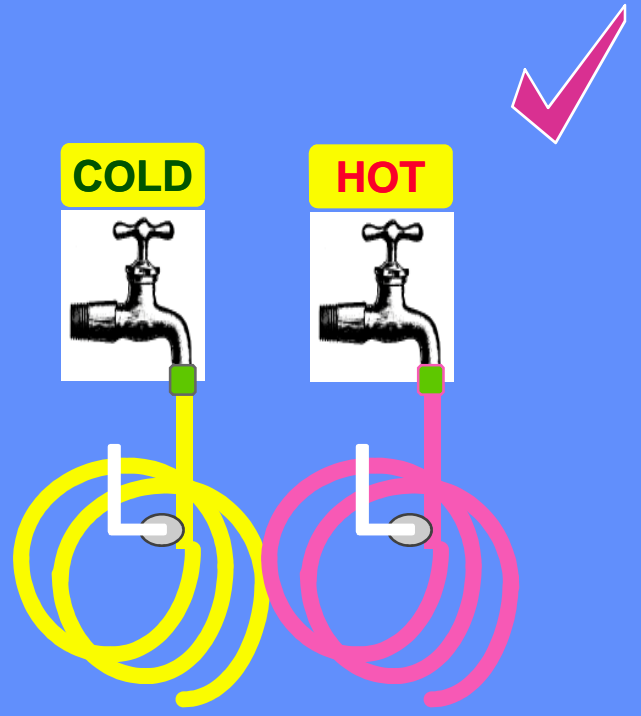
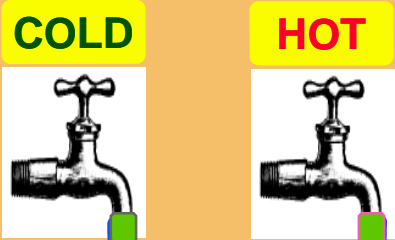


- Color labeling for invisible substances
- Indication of flow direction

- Indication of control limits



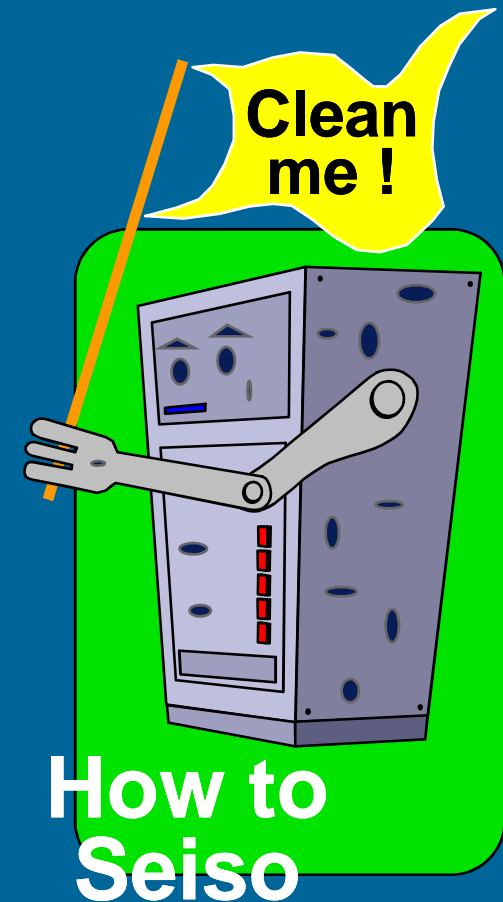
# SUPER SEITON



- Hanging hoses on hooks
- Color identification
- Clear ground surfaces

## Some Good Seiso Practices

- Practice 5-10 minutes of Seiso daily.
- Assign an owner to each machine.
- Combine cleaning (Seiso) with inspection.
- Repeat sweep-wipe-polish-check-fix.
- Organize a Big Cleaning Day once or twice a year.



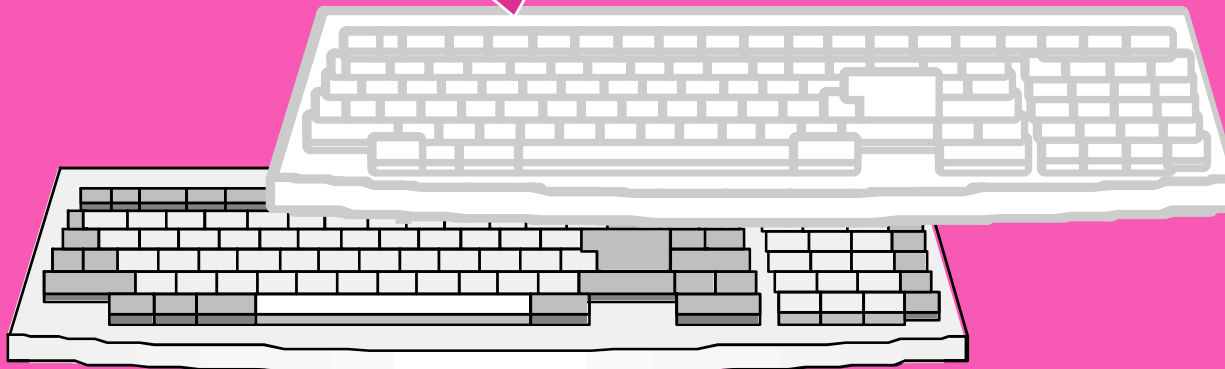
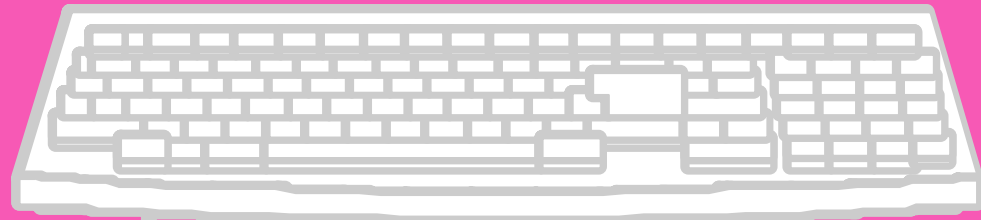
# Various Cleaning Tools





# SUPER SEISO

- Prevent it from getting dirty
- Use of transparent plastic dust cover

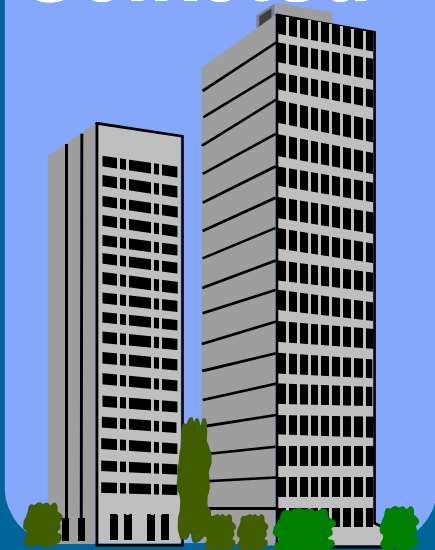


## Maintaining and Upgrading an Attained Level of Seiketsu

When you repeat Seiri-Seiton-Seiso activities correctly, your workplace will become clean and organized. We call this state of being Seiketsu. To maintain and upgrade the already attained level of 5S, the following approaches are effective:

- (1) A 5S audit by top management
- (2) An inter-departmental 5S competition
- (3) An inter-company 5S competition

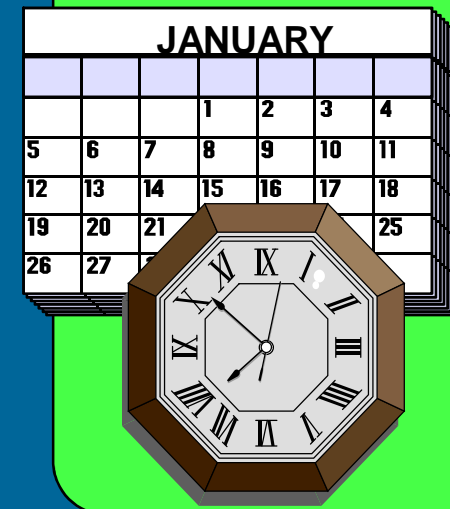
How to  
Seiketsu



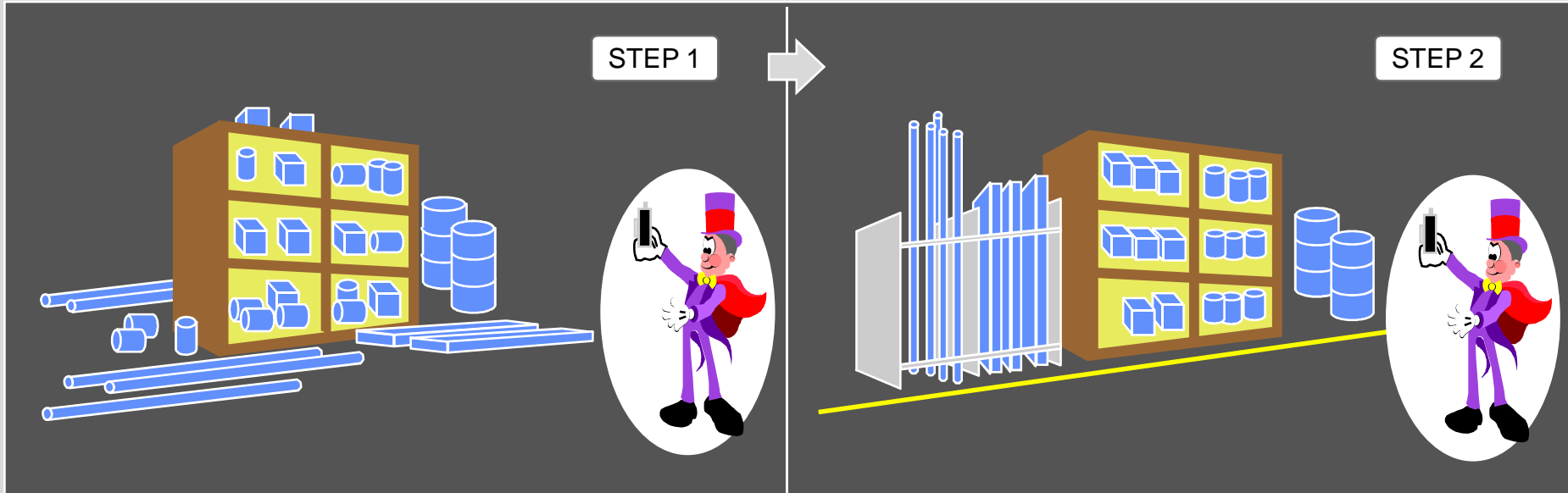
## Some Suggested Good Shitsuke Practices

- Contact people with a big smile.
- Be a good listener.
- Be devoted and kaizen-oriented.
- Demonstrate team spirit.
- Conduct yourself as the member of a reputable organization.
- Be punctual.
- Always keep your workplace clean and tidy.
- Observe safety rules strictly.

## How to Shitsuke



# RECORD IMPROVEMENTS WITH PHOTOGRAPHS



## 5S IMPROVEMENT RECORDS

WORKPLACE	<b>SPARE PARTS STORAGE</b>	LOCATION NO.	<b>88</b>
-----------	----------------------------	--------------	-----------

<b>STEP 1</b>	DATE	<b>01/04/95</b>
COMMENTS <b>Very messy.</b> <b>Needs Seiri, Seiton and Seiso</b>		
RATING <b>★</b>		



<b>STEP 2</b>	DATE	<b>10/04/95</b>
COMMENTS <b>Much improved, but...</b> <b>needs further study</b>		
RATING <b>★★★</b>		



<b>STEP 3</b>	DATE	
COMMENTS		
RATING		




<b>STEP 4</b>	DATE	
COMMENTS		
RATING		

# 5S IMPROVEMENT RECORDS

WORKPLACE \_\_\_\_\_ LOCATION NO. \_\_\_\_\_

**STEP 1** DATE \_\_\_\_\_




COMMENTS \_\_\_\_\_

RATING ★ ★ ★ ★ ★



**STEP 2** DATE \_\_\_\_\_




COMMENTS \_\_\_\_\_

RATING ★ ★ ★ ★ ★



**STEP 3** DATE \_\_\_\_\_




COMMENTS \_\_\_\_\_

RATING ★ ★ ★ ★ ★



**STEP 4** DATE \_\_\_\_\_




COMMENTS \_\_\_\_\_

RATING ★ ★ ★ ★ ★

WORKPLACE \_\_\_\_\_ LOCATION NO. \_\_\_\_\_

**STEP 1** DATE \_\_\_\_\_




COMMENTS \_\_\_\_\_

RATING ★ ★ ★ ★ ★



**STEP 2** DATE \_\_\_\_\_




COMMENTS \_\_\_\_\_

RATING ★ ★ ★ ★ ★



**STEP 3** DATE \_\_\_\_\_




COMMENTS \_\_\_\_\_

RATING ★ ★ ★ ★ ★



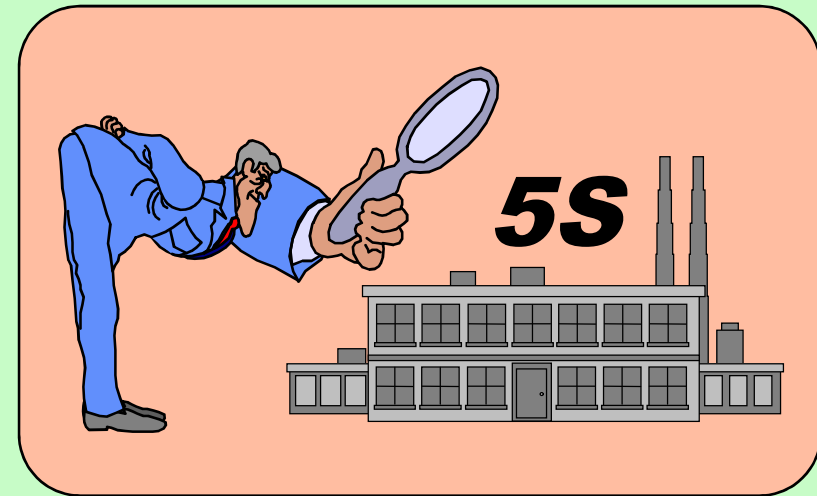
**STEP 4** DATE \_\_\_\_\_



COMMENTS \_\_\_\_\_

RATING ★ ★ ★ ★ ★

- **Establish 5S evaluations and incentive plans.**
- **Conduct 5S audits regularly by auditors.**
- **Organize 5S inter-departmental competitions to sustain activities.**
- **Periodically award groups and individuals implementing good 5S practices in appreciation for participation.**
- **Organize study tours to other companies practicing 5S so that the mutual exchange of ideas will help to bring about improvements.**
- **Organize 5S inter-company competition to prevent backsliding and for further upgrading.**



# How to Audit and Guide SUPER5S Activities

## Twelve Focal Points Super 5S Auditors Should Examine

- Do the CEO and managers support Super 5S program?
- Are people proud of their workplaces?
- Are workplaces clean and organized?
- Are workplaces safe for people to work in?
- Are machines and equipment clean and well maintained?
- Are items easy to retrieve?
- Are machines and tools conveniently located?
- Are inventories stored for FIFO retrieval?
- Are products free from dust?
- Do people clean daily without prompting?
- Are the uniforms worn by people clean and tidy?
- Is a good image of the enterprise reflected in its people?



## **Rules for Participating in Super 5S Inter-Departmental Competitions - 1**

### **1. Objectives**

**Proposed competitions are aimed at improving the organization's total productivity through everyone's participation in the Super 5S program.**

### **Qualification for Participation**

**Any department which is implementing 5S on a certain level is eligible for participation.**

### **3. Competition Period**

**Each competition will be organized for a period of 6 months, two times a year on a continuing basis.**

### **4. Auditing Team**

**An auditing team appointed by the Super 5S Steering Committee will visit each competing department and evaluate its Super 5S activities at the end of each competition period.**

### **5. Super 5S Evaluation Forms**

**One of the following Super 5S Evaluation Forms will be used by the auditors according to the function of the participating departments:**

## Rules for Participating in Super 5S Inter-Departmental Competitions - 2

(a) Super 5S Evaluation Form - Factory / Operation Site

(b) Super 5S Evaluation Form - Office

### 6. Evaluation

#### 1) Two Aspects of the Evaluation

Evaluation scores will be recorded by each auditor in two aspects of Super 5S activities for each participating department:

(a) Scores on the 5S Level Achieved

(b) Scores on the Super 5S Practice Identified

#### 2) Evaluation on the 5S Level Achieved

Each auditor is expected to mark his score on each itemized question listed on the form and enter the added total score in the space TOTAL SCORE (a). ADJUSTED SCORE (maximum 100) will be obtained by the the following formula:

**ADJUSTED SCORE = TOTAL SCORE (a) / NO. OF ITEMS EVALUATED (b) x 10**

## **Rules for Participating in Super 5S Inter-Departmental Competitions - 3**

### **3) Evaluation of the Super 5S Practice Identified**

**Each auditor is also expected to look for Super 5S practice(s) implemented in each department, and give an additional score to such good practice(s) according to it(s) value(s) in the space BONUS SCORE FOR SUPER 5S PRACTICE(S) provided on the form (maximum 20).**

### **4) Final Score**

**The ADJUSTED SCORE (for 5S level achieved) and the BONUS SCORE FOR SUPER 5S PRACTICE(S) are totaled and become the FINAL SCORE (maximum 120).**

### **5) Auditor's Explanation on Super 5S Practice(s) Identified**

**Each auditor should explain his reason(s) for awarding a BONUS SCORE in the space SUPER 5S PRACTICE(S) IDENTIFIED.**

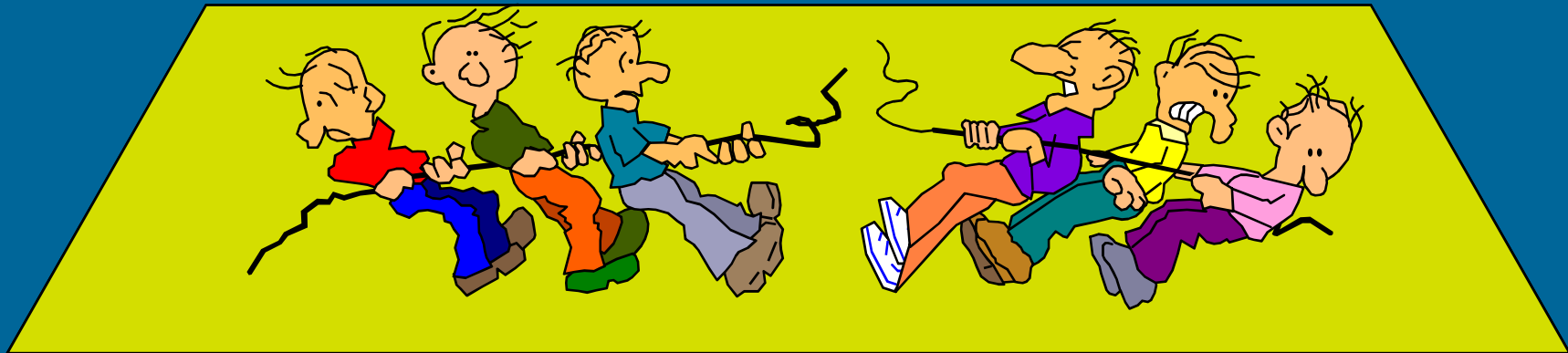
### **6) Auditor's Comments for Future Improvement**

**Each auditor is advised to state his comments for future improvement suggested in the space COMMENTS FOR IMPROVEMENT.**

## Rules for Participating in Super 5S Inter-Departmental Competitions - 4

### 7. Awarding

With better results and psychological effects in mind, the implementing organization should work out an awarding method that can encourage, but not discourage, the participating colleagues and departments toward intended objectives.



**SUPER 5S EVALUATION FORM - FACTORY / OPERATION SITE**

**DEPARTMENT:**

ITEM		FOCUS	SCORE				
1	materials / parts	are they conveniently located and labeled for easy retrieval?	10	8	6	4	2
2	work-in-process	are they conveniently located for easy handling?	10	8	6	4	2
3	finished products	are they conveniently located and labeled for easy retrieval?	10	8	6	4	2
4	defective / rejects	are they clearly labeled for separation from good items?	10	8	6	4	2
5	machines / equipment	are they clean, safe, well-maintained and convenient to operate?	10	8	6	4	2
6	wiring / piping	are they laid out in a tidy, safe and convenient manner?	10	8	6	4	2
7	dies / tools / jigs	are they conveniently labeled and placed at designated locations?	10	8	6	4	2
8	spare parts / lubricants	are they conveniently labeled and placed at designated locations?	10	8	6	4	2
9	containers / pallets	are they clean and conveniently placed at designated locations?	10	8	6	4	2
10	racks / shelves / cabinets	are they dust-free, tidy and conveniently labeled for items stored?	10	8	6	4	2
11	carts / wagons / forklifts	are they well-maintained and placed at designated locations?	10	8	6	4	2
12	lifts / conveyers / cranes	are they clean, tidy, safe and well-maintained?	10	8	6	4	2
13	desks / tables / chairs	are they clean and organized inside and outside?	10	8	6	4	2
14	forms / files / records	are they up-to-date, easy to retrieve and at convenient locations?	10	8	6	4	2
15	floors / passages / stairways	are they dust-free, tidy, safe and well-maintained?	10	8	6	4	2
16	walls / windows / ceiling	are they dust-free, tidy, safe and well-maintained?	10	8	6	4	2
17	lighting / ventilation	are they adequate for efficient operation?	10	8	6	4	2
18	working wears / shoes	are they clean and do they present a good image?	10	8	6	4	2
19	safety devices	are they conveniently located for use and well-maintained?	10	8	6	4	2
20	fire extinguishers / fire exits	are they adequate and cleaned regularly?	10	8	6	4	2
21	cleaning tools / waste baskets	are they clean, tidy and well-maintained?	10	8	6	4	2
22	canteens / toilets / lockers	are they clean, tidy and well-maintained?	10	8	6	4	2
23	external areas / gardens	are they clean, tidy, safe and do they present a good image?	10	8	6	4	2
24	security guards / car parks	are they clean, tidy, safe and do they present a good image?	10	8	6	4	2
TOTAL SCORE (a)							
NO. OF ITEMS EVALUATED (b):		ADJUSTED SCORE = (a) / (b) x 10					
BONUS SCORE FOR SUPER 5S PRACTICE			20	15	10	5	0
FINAL SCORE							
SUPER 5S PRACTICE IDENTIFIED:		COMMENTS FOR IMPROVEMENT:					
AUDITOR:							
DATE:							

**SUPER 5S EVALUATION FORM - OFFICE**

**DEPARTMENT:**

ITEM		FOCUS	SCORE				
1	desks / tables / chairs	are they tidy and conveniently organized?	10	8	6	4	2
2	cabinets / shelves	are they clean and labeled for the easy retrieval of things needed?	10	8	6	4	2
3	documents / files	are they clean and systematically organized?	10	8	6	4	2
4	forms / office supplies	are they tidy and conveniently stored for retrieval?	10	8	6	4	2
5	telephones	are they clean and well-maintained?	10	8	6	4	2
6	facsimiles	are they clean and well-maintained?	10	8	6	4	2
7	typewriters / word-processors	are they clean and well-maintained?	10	8	6	4	2
8	computers / monitors	are they clean and well-maintained?	10	8	6	4	2
9	printers	are they clean and well-maintained?	10	8	6	4	2
10	copying machines	are they clean and well-maintained?	10	8	6	4	2
11	electric wiring	Is it tidy, safe and conveniently laid out for operation?	10	8	6	4	2
12	lighting / ventilation	are they adequate for efficient operation?	10	8	6	4	2
13	floors / walls / windows / ceiling	are they dust-free and well-maintained?	10	8	6	4	2
14	fire extinguishers	are they adequate and well-maintained?	10	8	6	4	2
15	emergency exits	are they adequate and clear of obstacles in case of emergencies?	10	8	6	4	2
16	safety devices	are they adequate and well-maintained?	10	8	6	4	2
17	working clothes / shoes	are they clean and do they present a good image?	10	8	6	4	2
18	waste baskets	are clean and well-maintained?	10	8	6	4	2
19			10	8	6	4	2
20			10	8	6	4	2
21			10	8	6	4	2
22			10	8	6	4	2
23			10	8	6	4	2
24			10	8	6	4	2
TOTAL SCORE (a)							
NO. OF ITEMS EVALUATED (b):		ADJUSTED SCORE = (a) / (b) x 10					
BONUS SCORE FOR SUPER 5S PRACTICE			20	15	10	5	0
FINAL SCORE							
SUPER 5S PRACTICE IDENTIFIED:			COMMENTS FOR IMPROVEMENT:				
AUDITOR:			DATE:				









## Ten Useful Hints for Winning Super 5S Competitions

- Two heads are better than one - try brainstorming.
- Look for inconvenient areas to improve.
- Look for disorganized areas to improve.
- Look for unsafe areas to improve.
- Look for dirty or untidy areas to improve.
- Look for seven categories of waste to eliminate.
- Clean the surface of machines extensively.
- Pay more attention to common areas including canteens, toilets, gardens, external passages and car parks.
- Show evidence that more colleagues are involved in Super 5S activities.
- Make your Super 5S practices more visible.

## How to do 5S Step by Step

4

	STEP 1	STEP 2	STEP 3	STEP 4
T A R G E T S	Seiri 1	Seiri 2	Seiri 3	Seiri 4
	Seiton 1	Seiton 2	Seiton 3	Seiton 4
	Seiso 1	Seiso 2	Seiso 3	Seiso 4
	Seiketsu 1	Seiketsu 2	Seiketsu 3	Seiketsu 4
	Shitsuke 1	Shitsuke 2	Shitsuke 3	Shitsuke 4
A C T I O N S	Keep only necessary items	Do not put anything on the floor	Separate work areas from passageways	Create more space for effective use
	Assign items a place	Make needed items accessible	Reduce searching time	Reduce walking distances
	In each section clean one machine well	Increase the number of clean machines	Increase the number of clean machines	Keep all the machines clean and shiny
	Create a clean workplace	Create a comfortable workplace	Create a healthy and safe workplace	Create a highly productive workplace
A C T I O N S	Discard unnecessary items more often	Use wagons to transport items	Draw lines to separate passageways for people	Reduce excess inventory
	Arrange items by type and size	Remove obstacles around needed items	Use labels to simplify retrieval	Place frequently used items close by
	Select a machine and clean it completely	Use more convenient cleaning tools	Prevent machines from getting dirty	Combine cleaning with inspection
	Clean one's workplace daily	Set up a cleaning schedule	Eliminate hazards	Introduce creative thinking

## PASSPORT TO SUCCESSFUL 5S

1

### What is 5S?

- Seiri:** Sort and discard unnecessary items in the workplace.
- Seiton:** Arrange necessary items so that they can easily be selected for use.
- Seiso:** Clean your workplace completely so that there is no dust on the floors, machines or equipment.
- Seiketsu:** Keep one's workplace productive and comfortable by repeating Seiri-Seiton-Seiso.
- Shitsuke:** Train people to follow good work habits.

**5S** is fundamental to productivity improvement

### 5S Contributes to PQCDSM

- Productivity** - increased competitiveness
- Quality** - no defects
- Cost** - no waste
- Delivery** - no delays
- Safety** - no accidents
- Morale** - good teamwork

### Checklist for Step 3

2

	checkpoints	score
1	The 5S Activity Bulletin Board is well-organized and data are updated	
2	The locations for materials, components and work-in-process are labeled for easy retrieval	
3	Dies, jigs, fixtures and tools are conveniently located so that there is no need to search	
4	Bolts, nuts, components and other materials are not kept on the floor	
5	Passages and operation areas are clearly indicated and separated by distinct lines	
6	Failures found are immediately fixed (uneven floor, projections, machine failures, etc.)	
7	Areas difficult to clean are cleaned periodically	
8	Without searching tools or documents can be retrieved in less than 30 seconds	
9	Rules for 5S practice are implemented and are observed without prompting	
10	A 5S patrol is regularly conducted by supervisors for continued improvement	

Score: Satisfactory - 5 Tackled - 3 Not Tackled - 1

### Checklist for Step 4

3

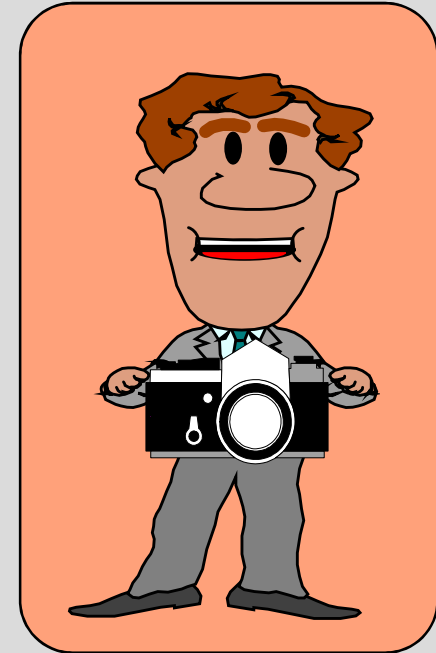
	checkpoints	score
1	5S inspections are practiced and recorded at starting and closing times	
2	Jigs and tools are easy to return to their designated locations	
3	Dirt and stains on machines are removed immediately	
4	Things that cause dirt or stains are eliminated	
5	Tools and measurement devices are periodically checked and failures are fixed	
6	People are active in implementing Kaizen for the improvement of safety, quality and cost	
7	Violators of rules are warned by colleagues	
8	Components, tools and documents are labeled and easy to retrieve	
9	Rules are strictly observed (punctuality, cleaning at the end of the day, etc.)	
10	5S is well maintained and upgraded through creative activities	

Score: Satisfactory - 5 Tackled - 3 Not Tackled - 1



**A Collection of  
Photographs  
Illustrating**

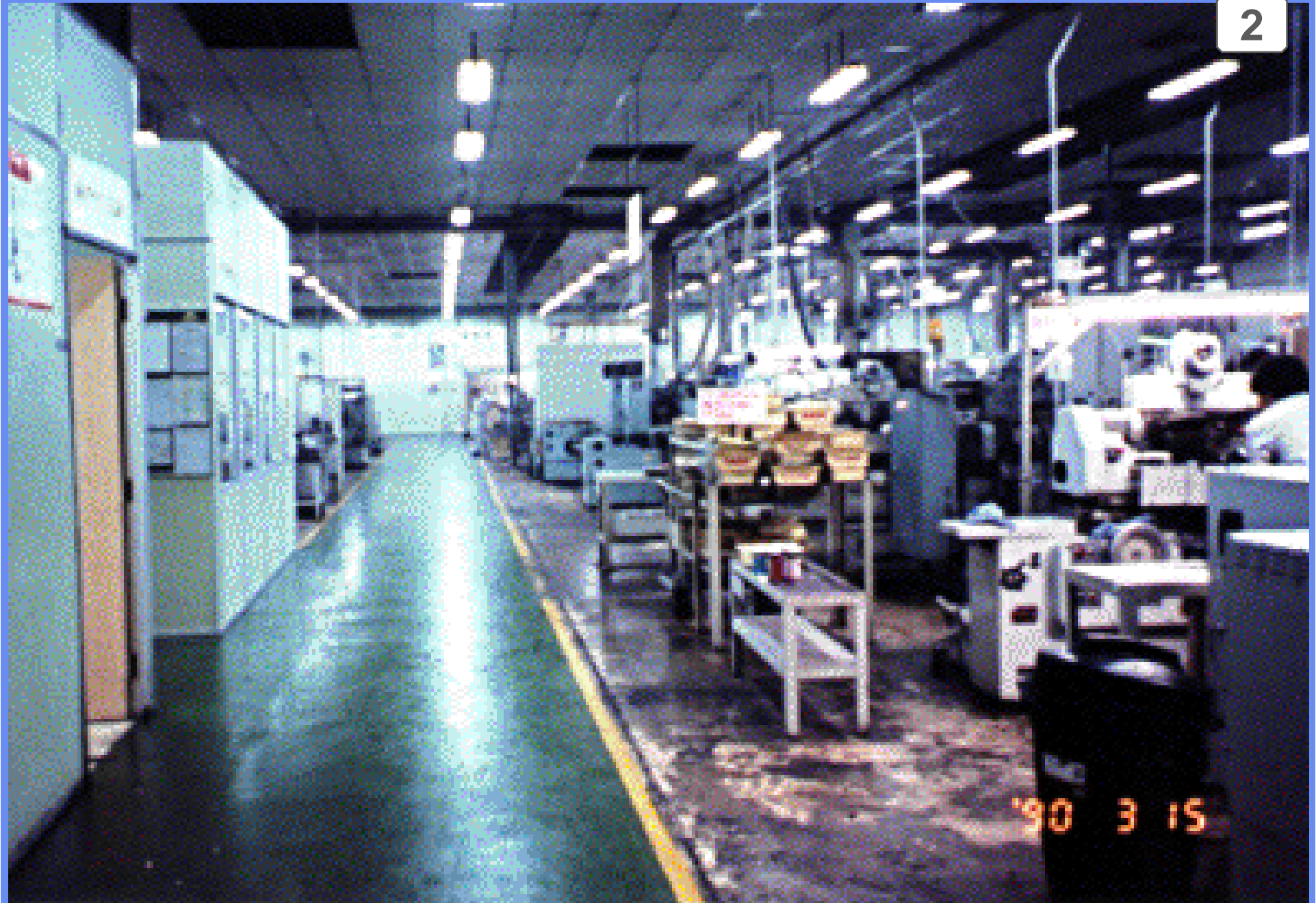
**SUPER5S Practices**





***SUPER SEIKETSU***

89 5 29



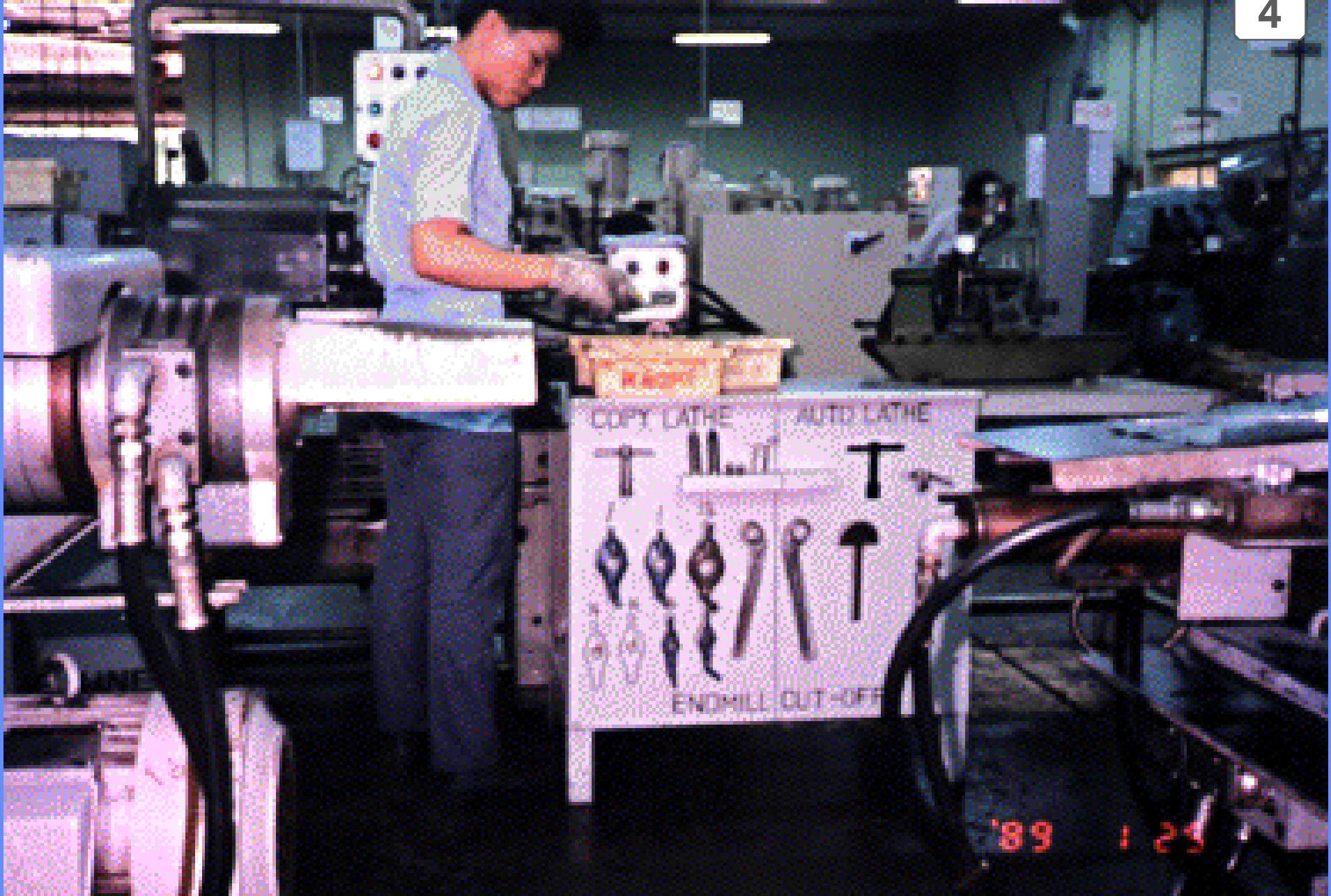
'90 3 15

# ***SUPER SEITON***

3







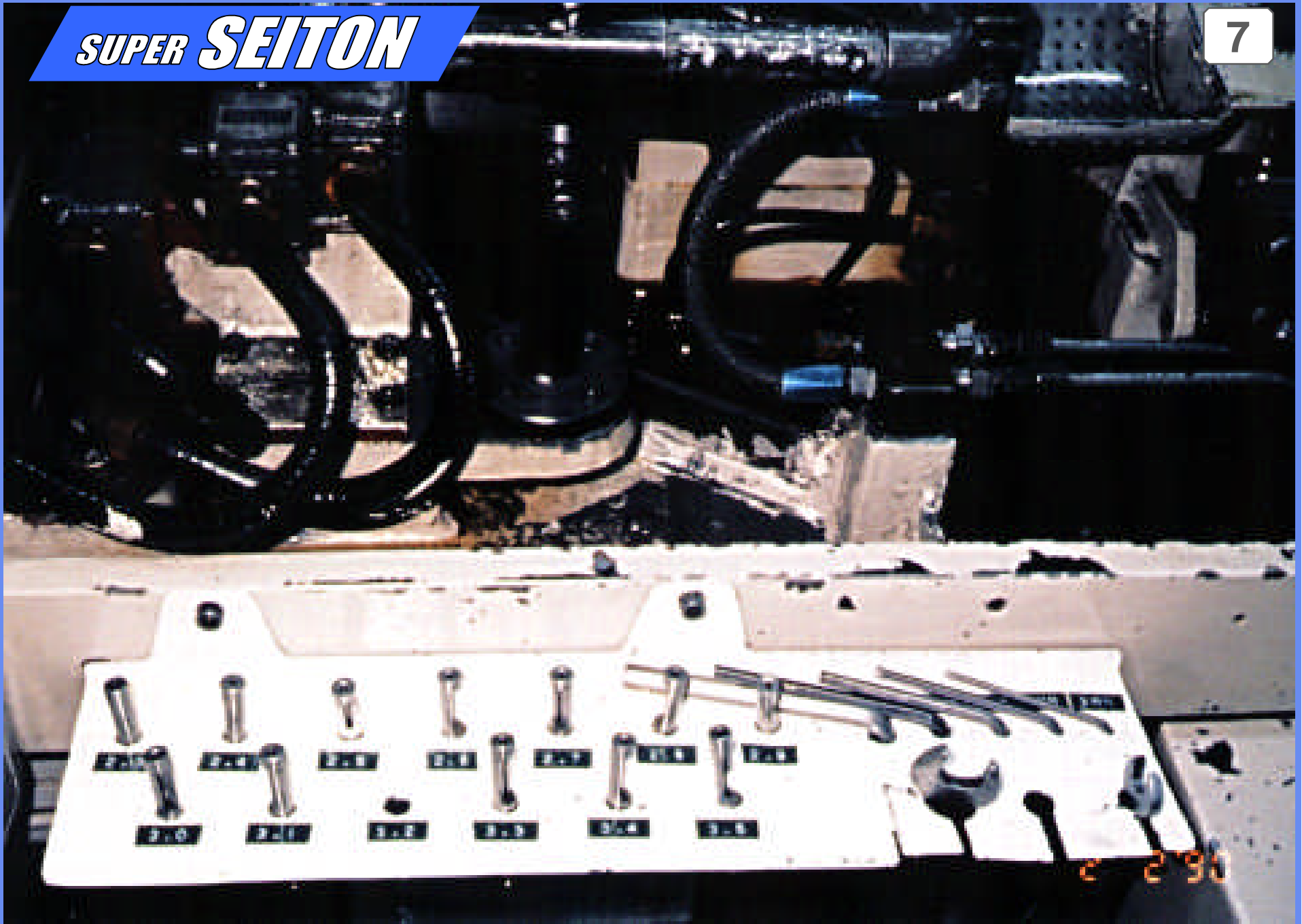
# ***SUPER SEITON***

5

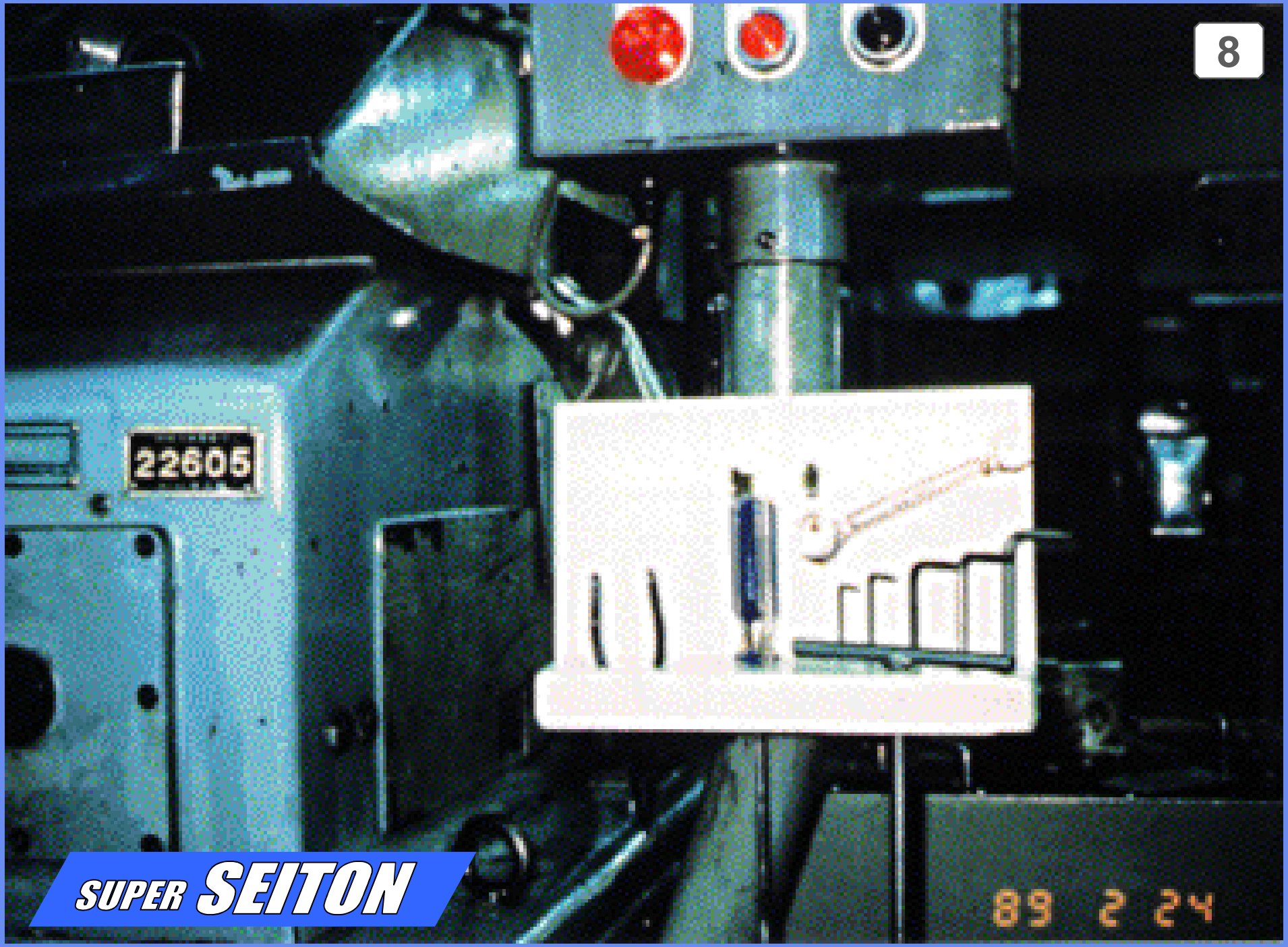


# ***SUPER SEITON***

7



05.2.20

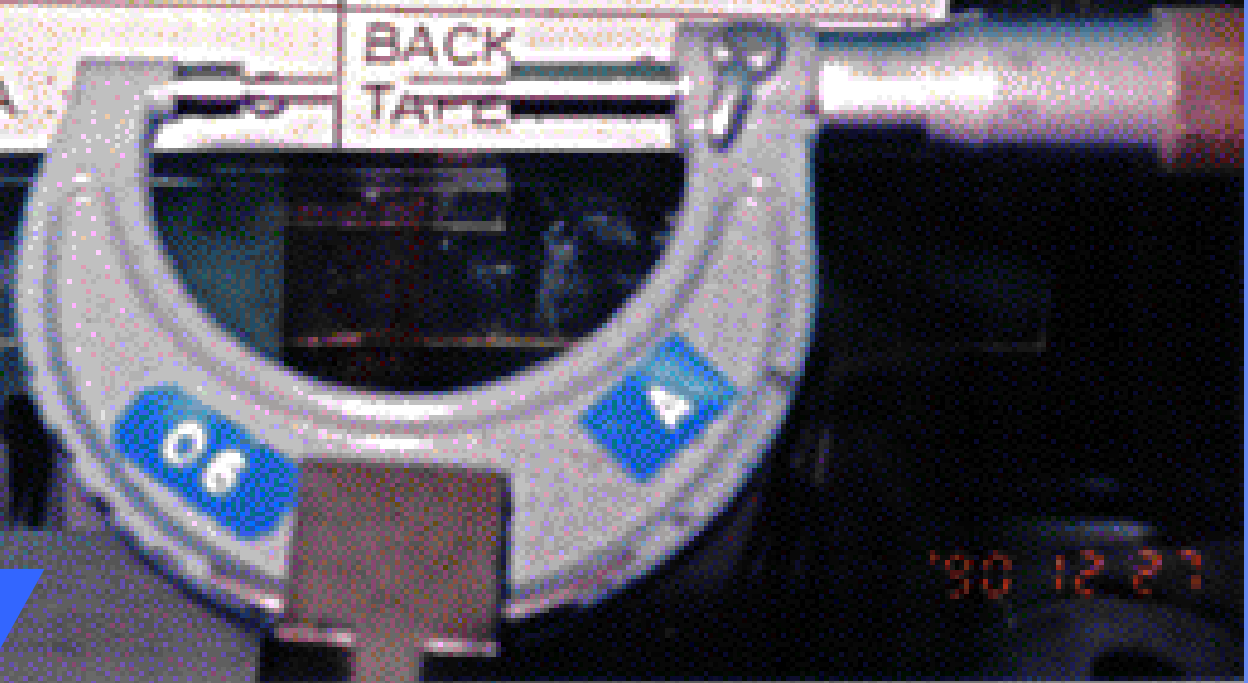


***SUPER SEITON***

CENTRELESS FINISHING GR.

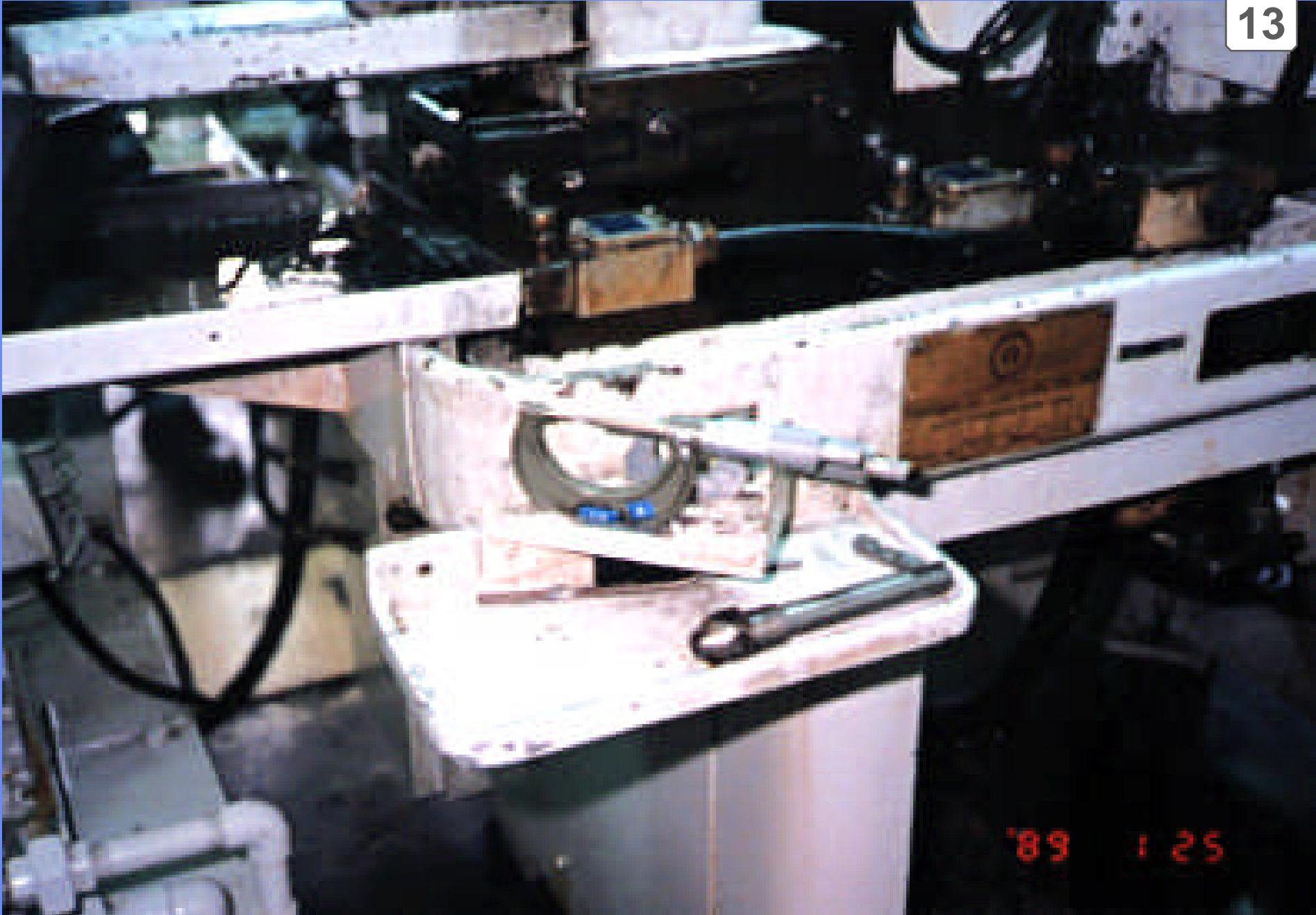


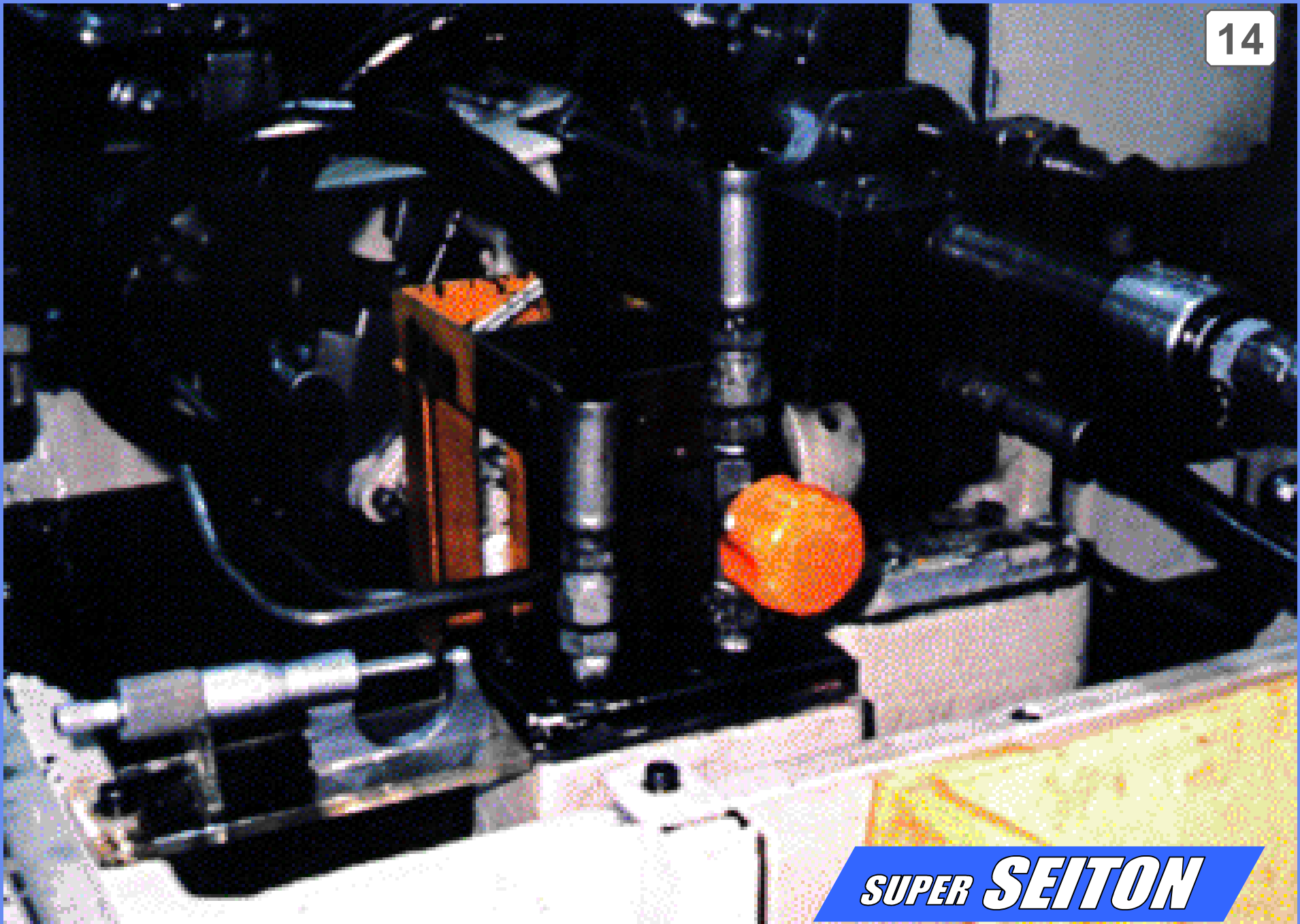
DRILL SIZE : 3.9	LIST NO : DIN
MAX. DIA. : 3.898	MIN. DIA. : 3.884
AIM. DIA. :	BACK TAPER :



'90 12 27

**SUPER SEITON**





***SUPER SEITON***



**SUPER SEITON**

2 2'90

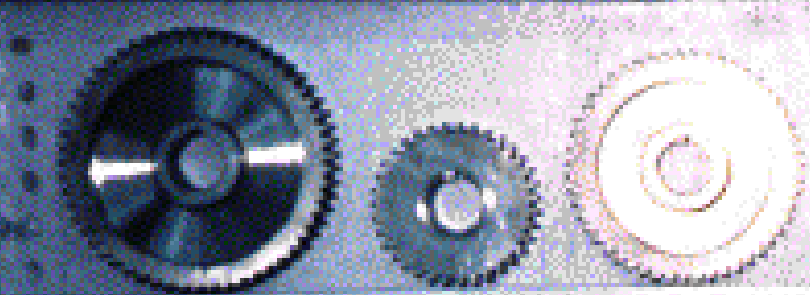




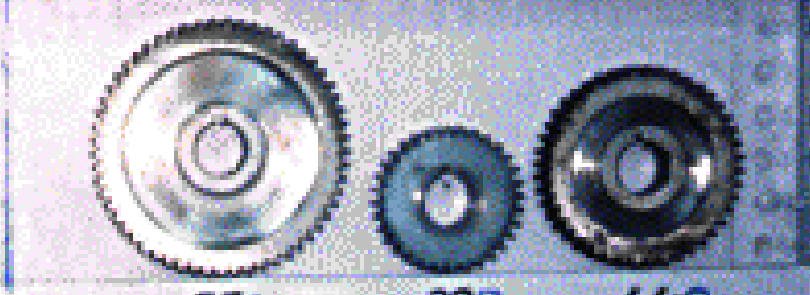
15mm 64A — 34B — 50C



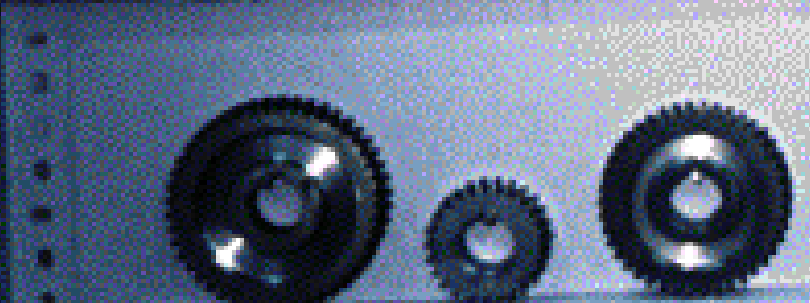
5/8(21)16mm 72A — 40B — 49B



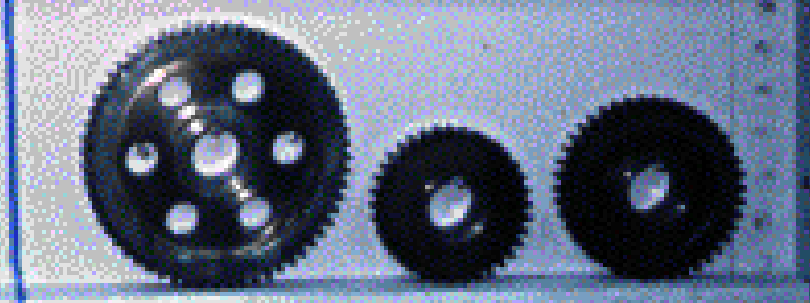
1/6(22)17mm 57A — 35B — 43C



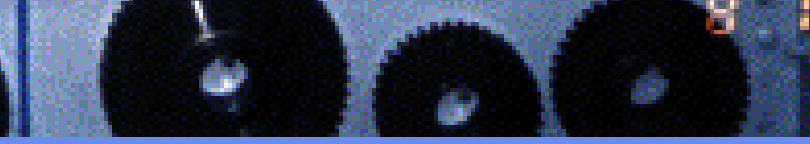
1/6(21)17mm 57A — 32B — 44C



3/4(24)19mm 46A — 26B — 42C



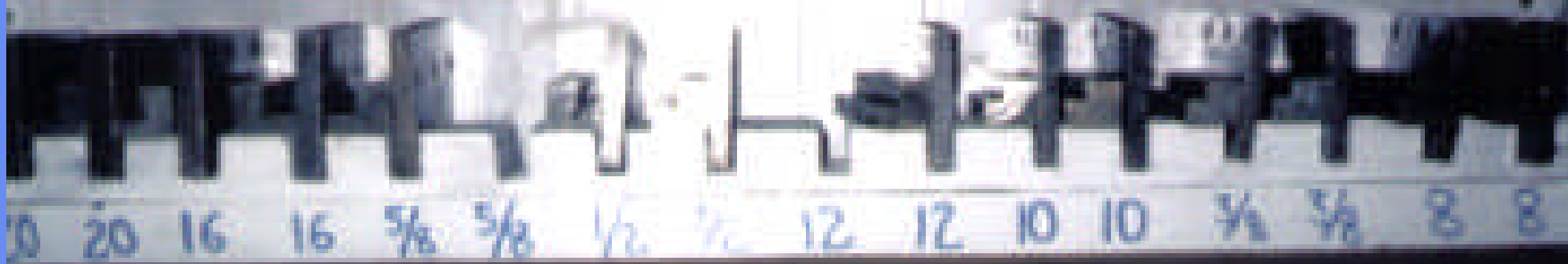
20mm 60A — 34B — 40C



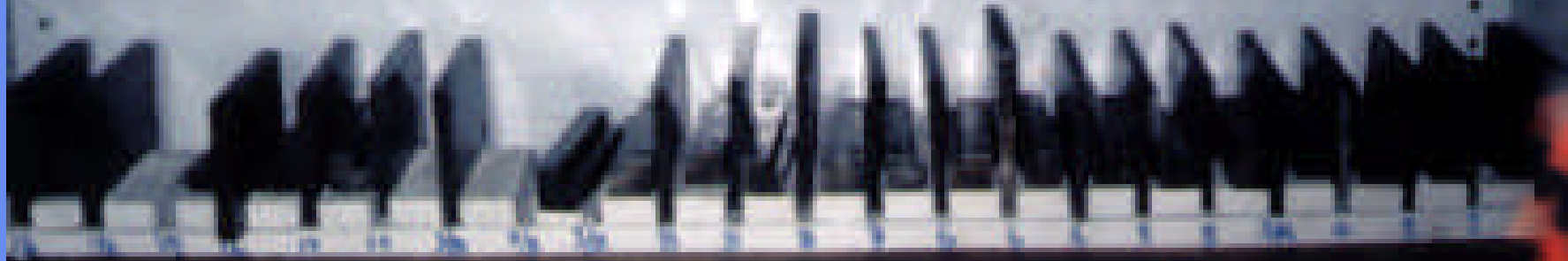
8 18 '89

**SUPER SEITON**

# 'S' WHEEL ADAPTOR



# KEEP CLEAN AND TIDY



2 2'90

**SUPER SEITON**

COLLECT



354 381 381 435 490 490 517 517 544 544

590 599 653 653 707 707 762 762 816 877



190 245 270 435 326 354 381 490 517 544 599 653

**SUPER SEITON**









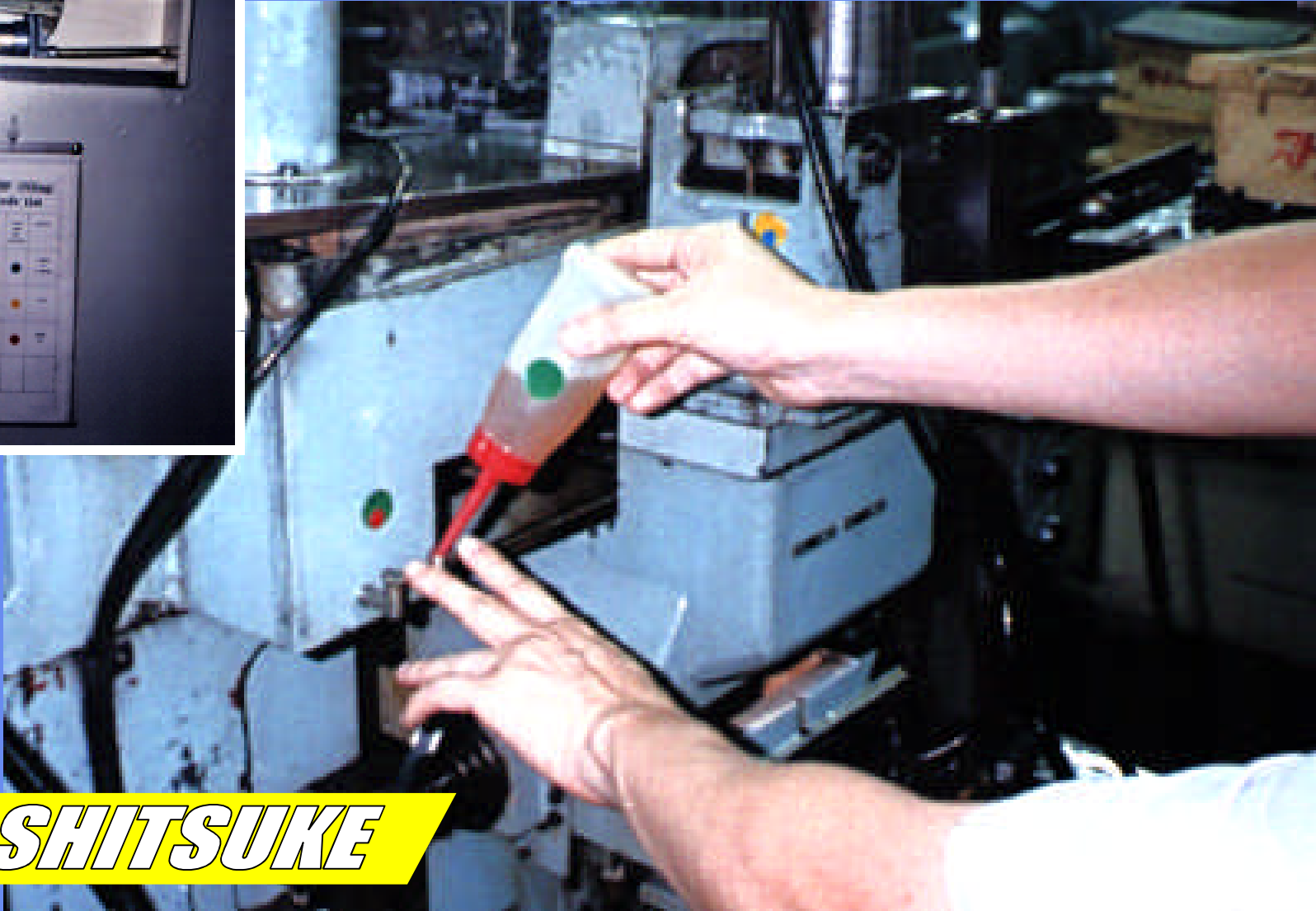






***SUPER SEISO***

***SUPER SEITON***



***SUPER SHITSUKE***







***SUPER SEIKETSU***

'89 5 30

***SUPER SEISO***

***SUPER SEIKETSU***

89 5 30



89 5 30



***SUPER SEITON***



CHECKING BY HANDECRIF																	
PREDICTION	DIVISION																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
D & F																	
COATING																	
INSPECTION																	
MAINTENANCE																	
D & D																	
TYPE																	

**SUPER SEISO**

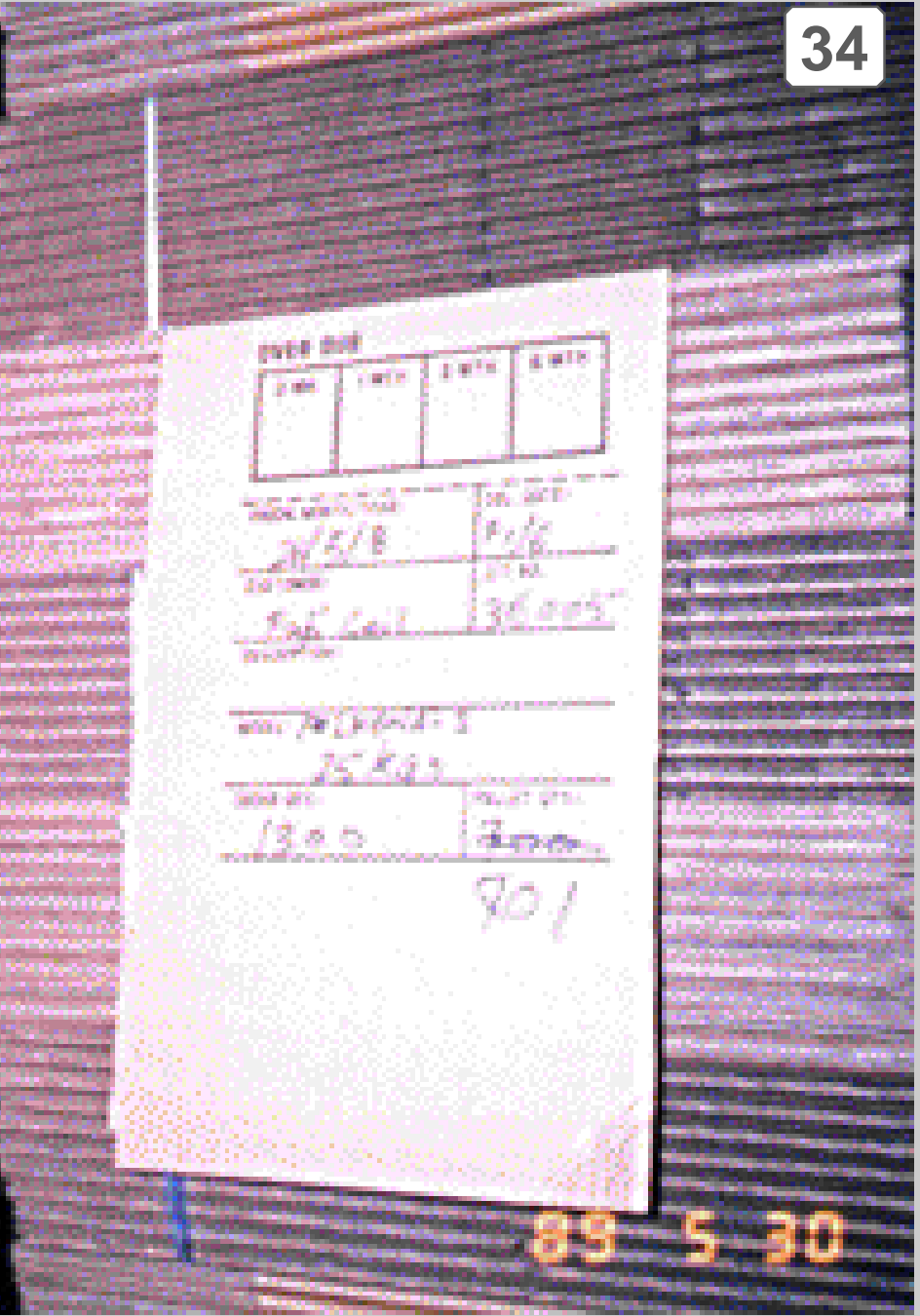




*SUPER SEITON*

*SUPER SEISO*

89 5 30



89 5 30





***SUPER SEITON***

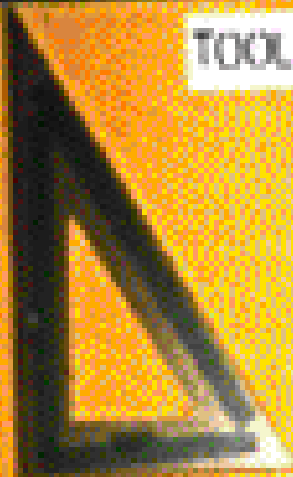
89 5 30



***SUPER SEIKETSU***

89 7 20

TOOLS & DRAWING EQUIPMENT



**SUPER SEITON**

99 9 28











**5S**

ไทม์ไลน์ผลลัพธ์บนเครื่องพิมพ์ จำกัด

**S1**  
เครื่องพิมพ์



**S2**  
เครื่องพิมพ์



**S3**  
เครื่องพิมพ์



**S4**  
เครื่องพิมพ์



**S5**  
เครื่องพิมพ์



แม่พิมพ์ไม่มีสิ่งสกปรกตกค้าง

จัดกำหนดการระบายสีตามลำดับ

ความสะอาดสถานที่และเครื่องใช้

หากทำได้เป็นนิสัยให้ยอมรับได้จริงๆ

7 5 '93



***SUPER SEISO***

***SUPER SEIKETSU***





**SUPER SEITON**

# ***SUPER SEIRI***









***SUPER SEISO***





# A หลักการปฏิบัติงาน 5 ส

1. สะสุม (SEIRI)	คือ การแยกของดีที่ถือการออกอากาศของดีไม่ต้องการ และของดีของดีไม่ต้องการทิ้งไป
2. สะสุม (SEITON)	คือ การจัดวางสิ่งของต่าง ๆ ในสิ่งทำงานให้เป็นระเบียบ เพื่อความสะดวกและปลอดภัย
3. สะอาด (SEISO)	คือ การทำความสะอาดเครื่องจักร - อุปกรณ์ และสถานที่ทำงาน
4. สุขภาพ (SEIKETSU)	คือ สุขภาพคนตลอด สะอาดตา ทุกลูกส่งขณะ และรักษาไว้ดีตลอดไป
5. สร้างนิสัย (SHITSUKE)	คือ การอบรม สร้างนิสัยในการปฏิบัติ ตามระเบียบวินัยอย่างเคร่งครัด

5 ส เพื่อคุณภาพของเรา ตัวอรรถศรี ๆ

***SUPER SEITON***

50



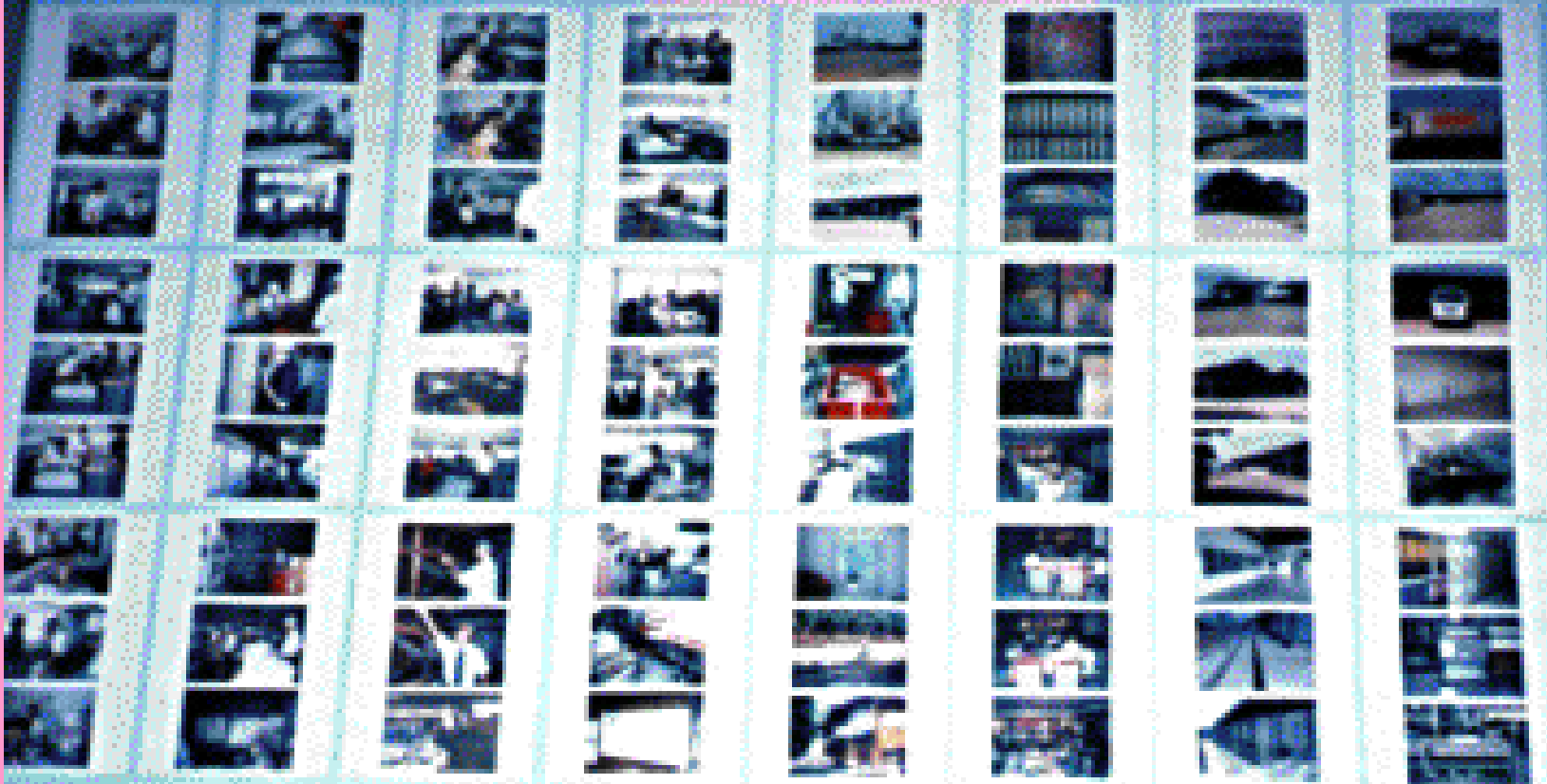


***SUPER SEITON***



***SUPER SEITON***

ଶାନ୍ତନୁପାତ୍ରୀମାନଙ୍କ ଚିତ୍ର



ଶାନ୍ତନୁପାତ୍ରୀ

ଶାନ୍ତନୁପାତ୍ରୀ

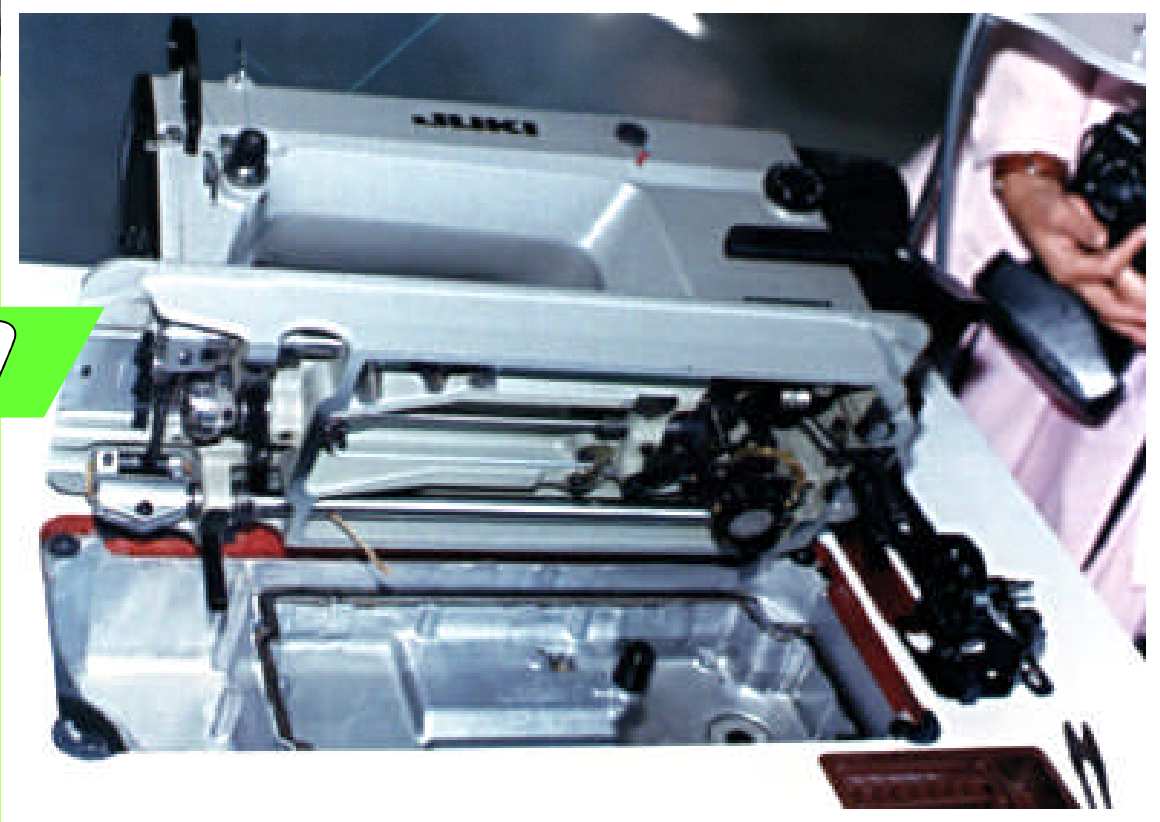
ଶାନ୍ତନୁପାତ୍ରୀ

ଚିତ୍ର



Here is a need for  
**SEISO** ●

***SUPER SEISO***





Here is a need for  
**SEITON**



*SUPER SEITON*





STAYO

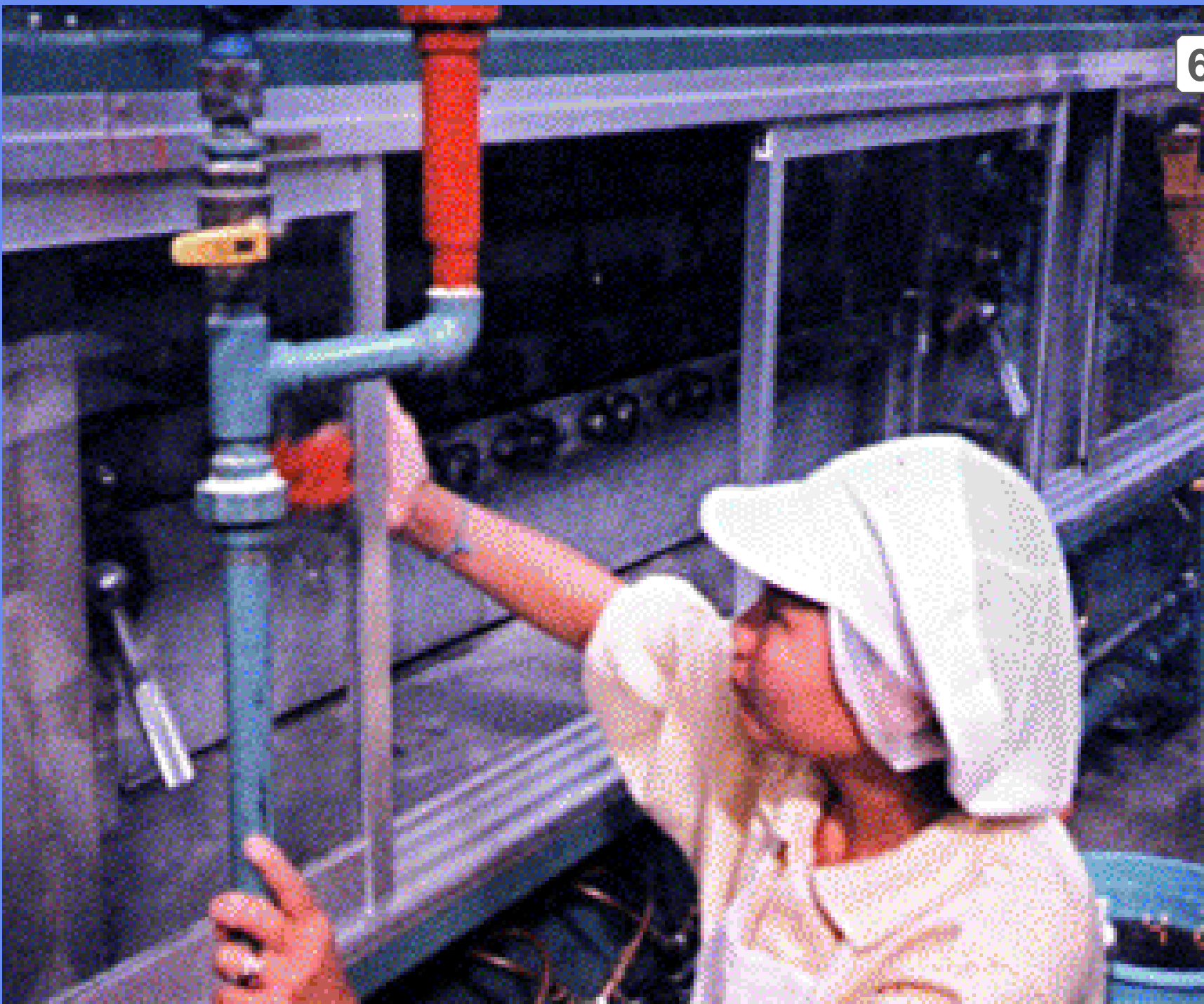
STAYO

58



П-У











***SUPER SEIRI***

***SUPER SEITON***



**SUPER SEISO**



***SUPER SEISO***





***SUPER SEISO***



***SUPER SEISO***

***SUPER SEITON***





***SUPER SEITON***





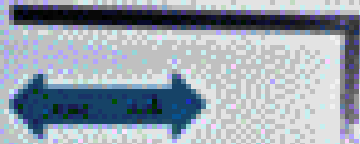
***SUPER SEISO***

***SUPER SEIKETSU***

29 193

Small yellow label in the top left corner.

Red header box with text: **مجلس القضاء الاعلى**



Black header box with text: **مجلس القضاء الاعلى**



**SUPER SEITON**



***SUPER SEITON***





***SUPER SEITON***



***SUPER SEISO***





**SUPER SEIKETSU**

**SUPER SEIRI**

**SUPER SEITON**

**SUPER SEISO**

78





***SUPER SEIRI***

***SUPER SEITON***

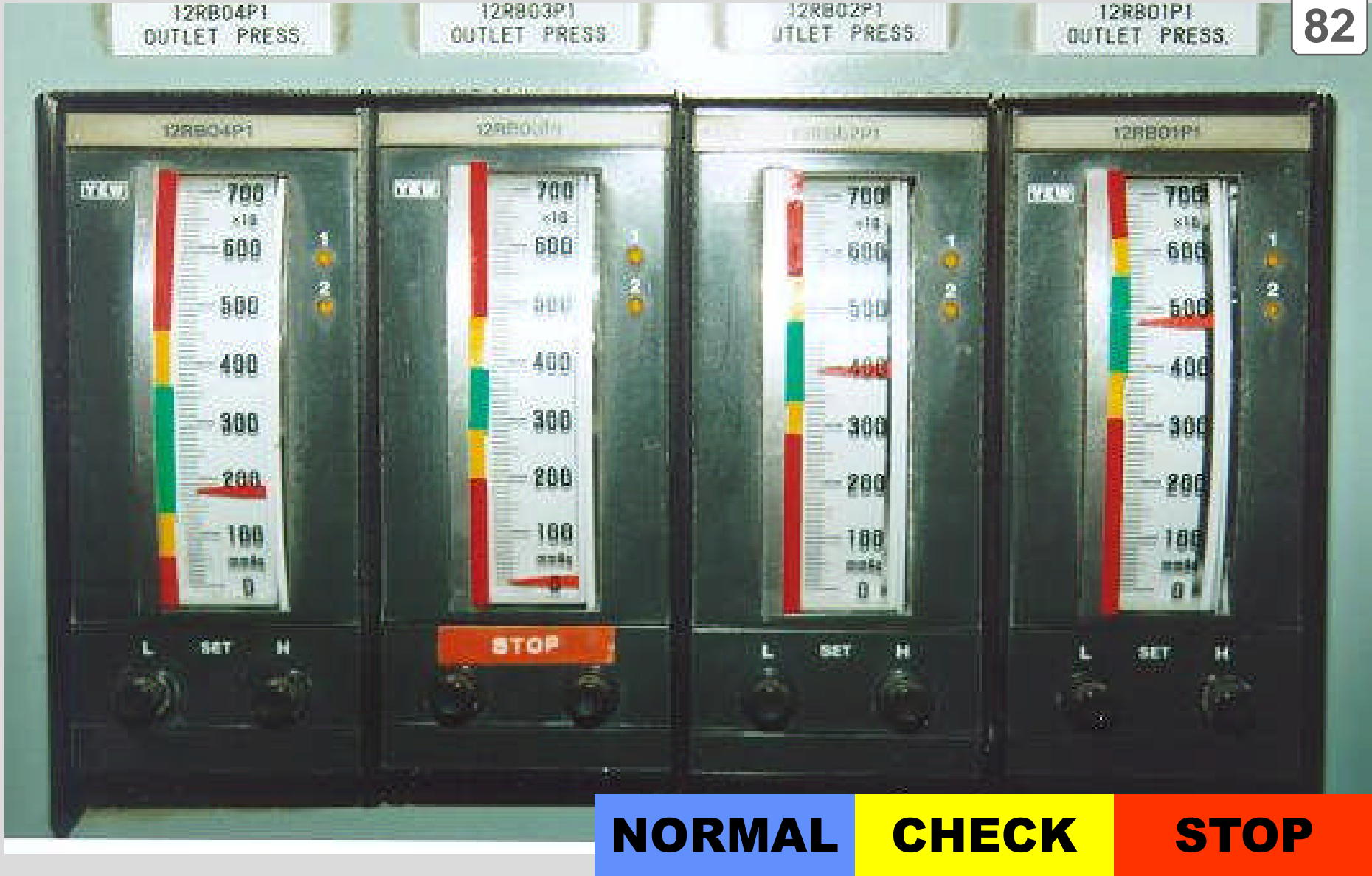


***SUPER SEITON***



***SUPER SEITON***





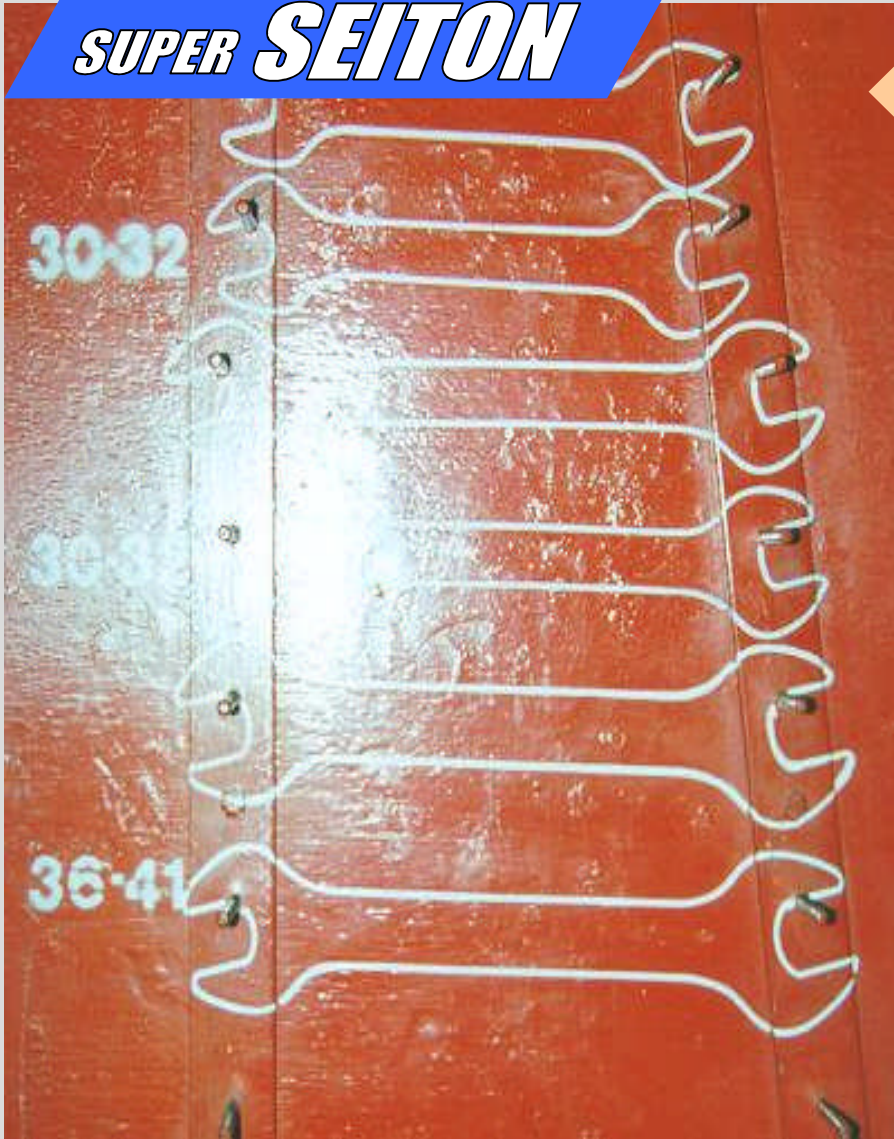
**SUPER SEITON**



***SUPER SEITON***

**SUPER SEITON**

**TOOLS IN USE**



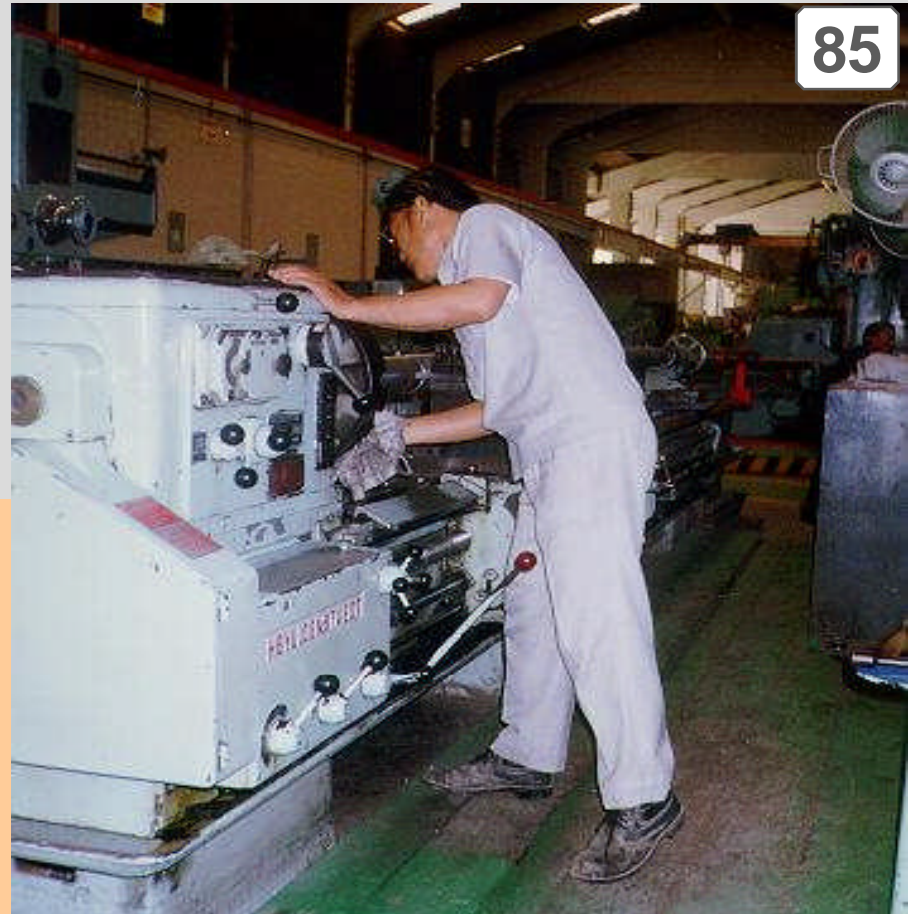
**TOOLS AFTER USE**



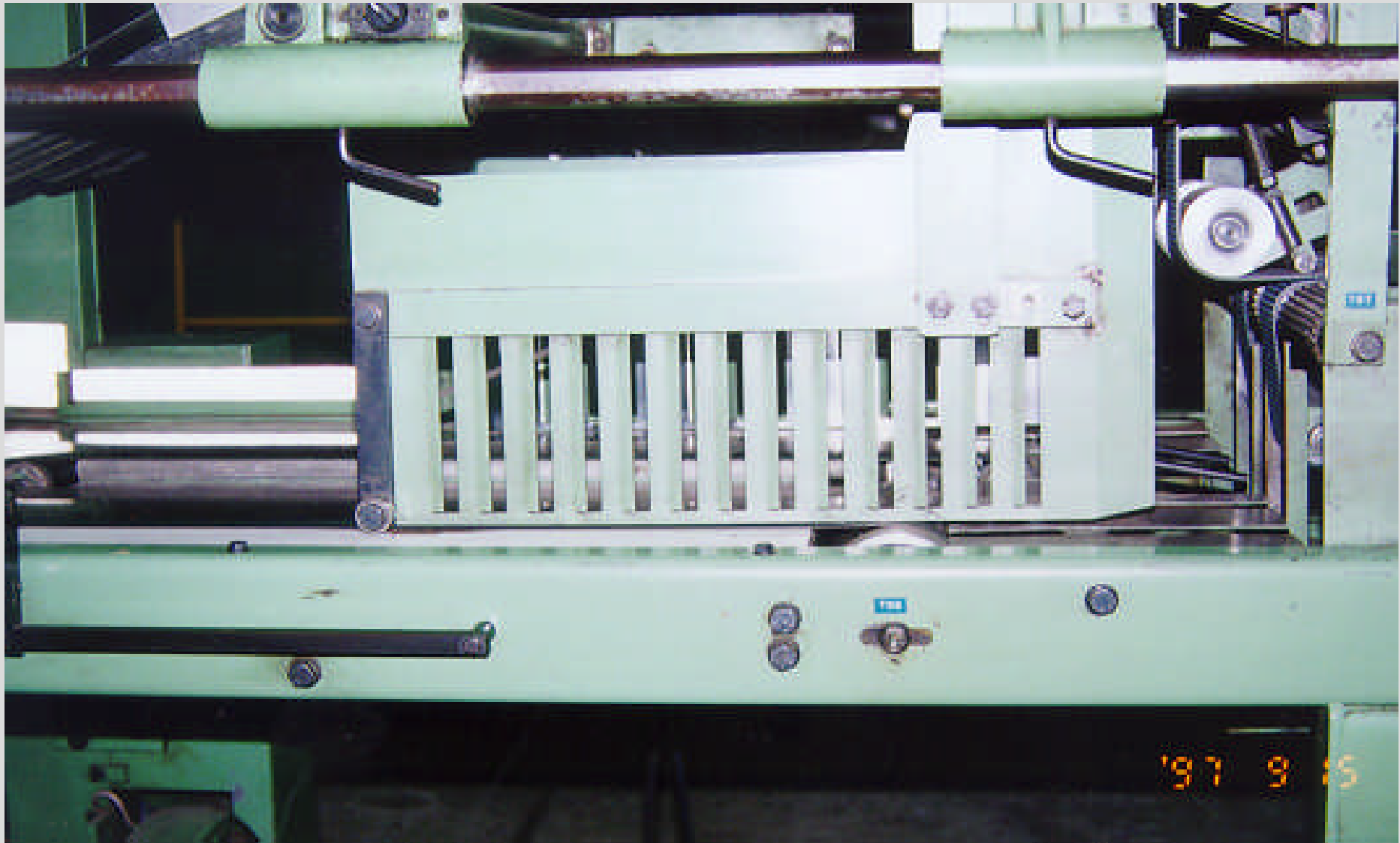
***SUPER SEISO***



85



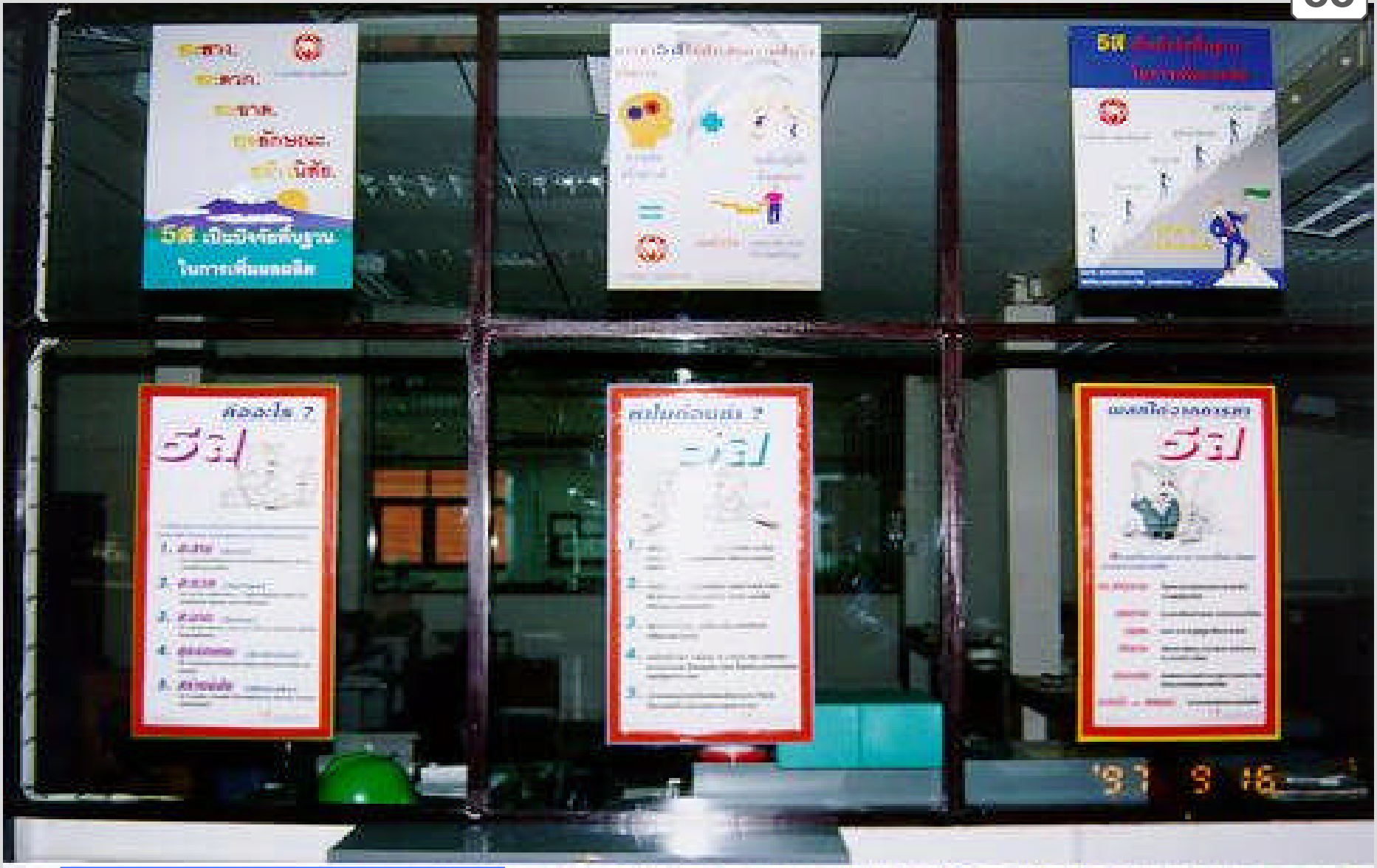
***SUPER SEISO***



**SUPER SEISO**



***SUPER SEIKETSU***



**SUPER SEITON**



25-29 สิงหาคม 2540



**สัปดาห์การทิ้งของ  
และสะสางแฟ้มเอกสาร**

ขอเชิญพนักงานการผลิตกลุ่มซิเมนต์และการค้าทุกท่าน  
พร้อมใจกันร่วมกิจกรรม ขอแรงสนับสนุนสัปดาห์การทิ้งของและสะสางแฟ้มเอกสาร  
ครั้งที่ 3/2540



พจนานุกรมการ TOC / 11111111-11111111 00

24-28 พฤศจิกายน 2540



ร่วมมือ.....ร่วมทำ 5ส.

**สัปดาห์การทิ้งของ  
และสะสางแฟ้มเอกสาร**

ขอเชิญพนักงานการผลิตกลุ่มซิเมนต์และการค้าทุกท่าน  
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ครั้งที่ 4/2540



พจนานุกรมการ TOC / 11111111-11111111 00

**SUPER SEITON**

**SUPER SHITSUKE**





***SUPER SHITSUKE***

# The End of the Presentation

Thank You Very Much  
for Your Participation

Kazuo Tsuchiya

