



5S - FIVE DISCIPLINES FOR HIGH WORKPLACE PRODUCTIVITY

Presented by:
R.C.N.S.Ramachandra
Shinwa Lanka (pvt) ltd.



OBJECTIVES

- UNDESTAND THE BENEFITS OF WORKING IN A CLEAN ENVIRONMENT
- IDENTIFICATION OF 8 WASTE OF THE WORK PLACE
- DEFINE THE 5S PRINCIPLES
- EXPLAIN HOW TO APPLY THE 5S PRINCIPLES AND VISUAL TOOLS TO ENHANCE WORK PLACE ORGANIZATION
- DEFINE CRITICAL SUCCESS FACTORS FOR 5S IMPLIMENTATION



DIFFERENT TYPE OF WORK PLACES

1. THIRD CLASS

2. SECOND CLASS

3. FIRST CLASS



1. THIRD CLASS WORK PLACE

Third Class: people throw trash around and no one cleans it up





2. SECOND CLASS WORK PLACE

Second Class: people throw trash around and someone else picks it up





3. FIRST CLASS WORK PLACE

**First Class: no one throws
trash around and everyone works
to keep things clean**



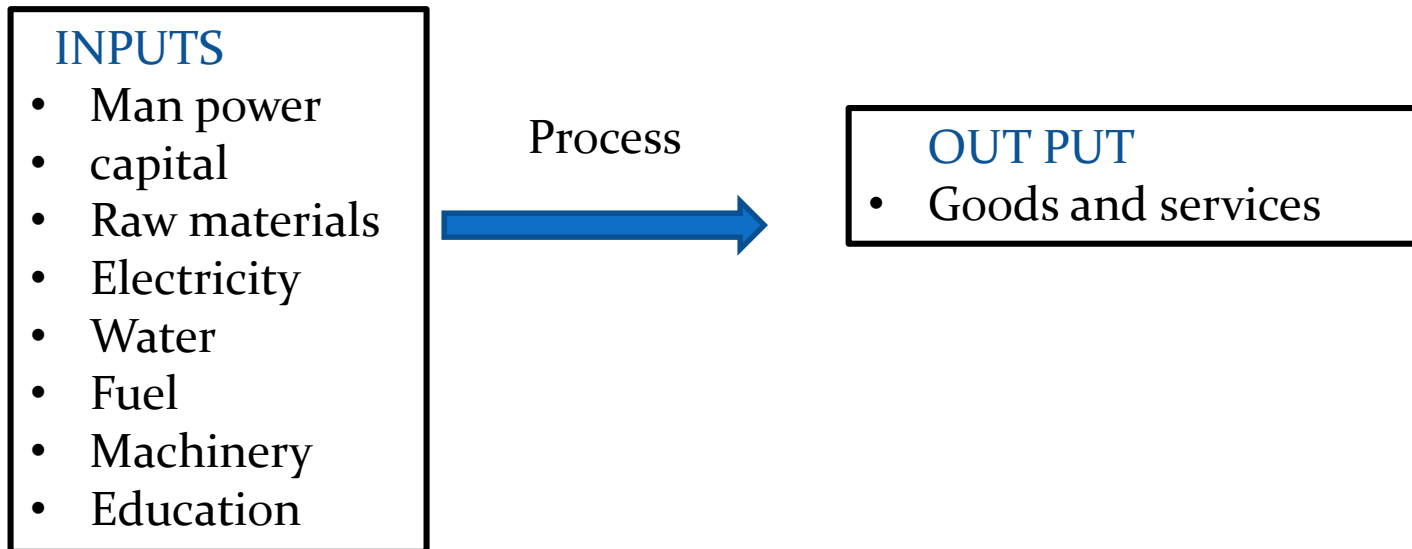


WHAT IS PRODUCTIVITY

PRODUCTIVITY

- IS AN AVERAGE MEASURE OF THE EFFICIENCY OF PRODUCTION
- THIS CAN BE EXPRESSED AS THE RATIO OF OUTPUT TO INPUT USED IN THE PRODUCTION PROCESS

$$\text{PRODUCTIVITY} = \frac{\text{OUT PUT}}{\text{INPUT} + \text{WASTE}}$$





WHAT IS WASTE ?

WHAT IS **WASTE** ?

08 WASTE OF THE WORK PLACE

1. **OVER PRODUCTION**: Produce more than what the customer need.
2. **WAITING**: Employee waiting for another process or a machine or a tool or instruction.
3. **MOTION**: Extra physical or mental motion that doesn't add value.
4. **EMPLOYEE TALANT**: Not using employee full intellectual contribution
5. **TRANSPORTATION**: Moving product from one place to another that doesn't add value
6. **OVER STOCK**: Building & storing extra services / products that customer has not order
7. **EXCESSIVE PROCESSING**: Adding excess value when the customer doesn't require it
8. **DEFECT/CORRECTION**: Reprocessing or correcting work

WHAT IS 5S ?

A METHOD OF CREATING A CLEAN AND ORDERLY
WORK PLACE THAT ENHANCE THE MENTAL
SATISFACTION OF ALL EMPLOYEE.



What is the purpose of 5S?

Immediately make problems visible

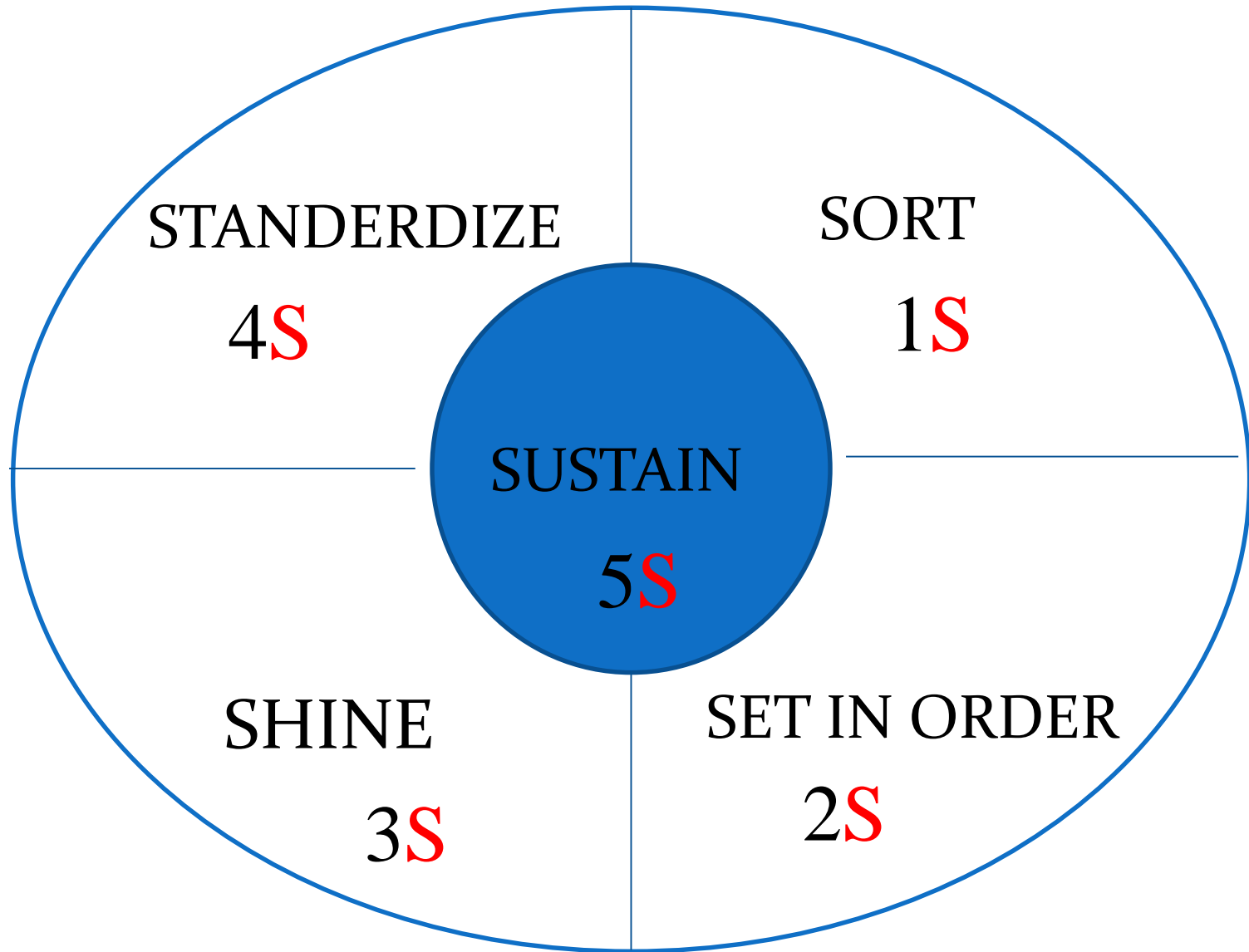
WHAT CAN 5S DO ?

1. MAKE YOUR WORK PLACE MORE PLEASANT
2. IMPROVE RHYTHM & EASY TO WORK
3. IMPROVE THE QUALITY OF PRODUCT OR SERVICE
4. IMPROVE EMPLOYEE SAFETY
5. IMPROVE THE PRODUCTIVITY & PROFITABILITY
6. REDUCE WASTED TIME & MATERIALS
7. IMPROVE EFFICIENCY & MORAL OF WORKERS
8. REDUCES MAINTENANCE & DOWN TIME
9. SIMPLIFIES THE WORK ENVIRONMENT
10. LEAD TO BETTER CUSTOMER SATISFACTION

PRINCIPALS OF 5S

- | | |
|-------------|----------------|
| 1. SEIRI | - SORT |
| 2. SEITON | - SET IN ORDER |
| 3. SEISO | - CLEAN |
| 4. SEIKETSU | - STANDARDIZE |
| 5. SHITSUKE | - SUSTAIN |

	PRINCIPLES	GENERAL DESCRIPTION
1S	SEIRI- SORT	Remove what is not needed & keep what is needed
2S	SEITON- SET IN ORDER	Arrange needed items in order for easy access
3S	SEISO- SHINE	Keep the things clean & tidy, no trash or dirt in the work place
4S	SEIKETSU- STANDERDIZE	Establish standards and guidelines to maintain a clean work place
5S	SHITSUKE- SUSTAIN	Do things spontaneously without being told or order. make 5S a habit & teach others to adhere to established standards.





HOW DO WE APPLY 5^S ?



APPLICATION OF SEIRI (SORT)

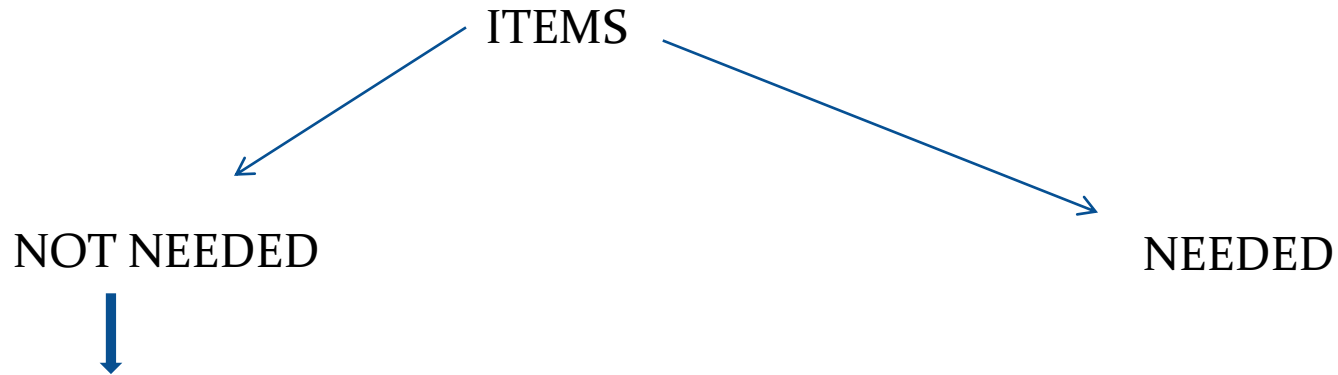
1. APPLICATION OF SEIRI(SORT)



- Segregate what is needed, needed later & not needed
- Segregate needed items by frequency of use
- Discard what is not needed. Ex : Red tagging
- **SPACE IS MONEY**

Conti;

1. APPLICATION OF SEIRI (SORT)



Conti;

1. APPLICATION OF **SEIRI** (SORT)

➤ ITEM - NEEDED

DEGREE OF NEED	FREQUENCY OF USE	STORAGE METHOD
LOW	<ul style="list-style-type: none">➤ things you have not used in the past year➤ Things you have used once in the last 6-12 months	<ul style="list-style-type: none">➤ Thraw them out / Store at a separate place➤ Store at a distance
MEDIUM	<ul style="list-style-type: none">➤ Things you have only used between 1-6 months	<ul style="list-style-type: none">➤ Store in a central place in the work place
HIGH	<ul style="list-style-type: none">➤ Things used once a week➤ Things used daily➤ Things used hourly/ frequently	<ul style="list-style-type: none">➤ Store near the work site➤ Store near to user or carry on with the person

Conti;



FROM WHERE WE CAN START SORTING ?

- 1.START IN YOUR PURSE, HAND BAG,YOUR BUNCH OF KEY,
2. YOUR TABLE TOP, DRAWER,SHELVES, FILING CUPBOARD
- 3.YOUR OFFICE ROOM,STORES & THEN WHOLE WORKING PLACE,

FILE CUPBOARD BEFORE AND AFTER SEIRI



BEFORE



AFTER

BEFORE



AFTER





Before

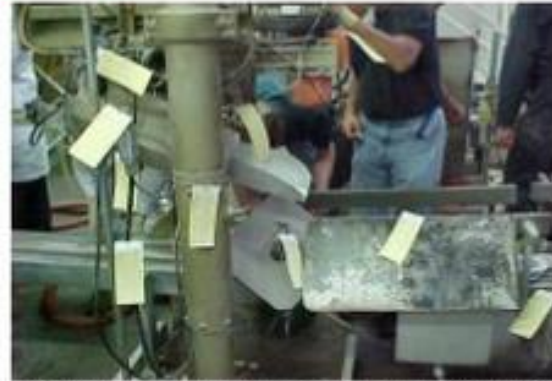


After

Examples of Reg Tagging Event



5S sort event: Red tagging on items which are unwanted or to be removed.



Above: Tagging (common called 'fuguai tagging') of production equipment during initial cleaning in TPM activities. **Below:** Tag is removed only after repair is made.





APPLICATION OF SEITON

(SET IN ORDER / ORGANIZE / NEATNESS)

2. APPLICATION OF **SEITON** (SET IN ORDER / ORGANIZE / NEATNESS)



- Once we cleaned up all the items we don't need ,
we need to organize what we left.
- Arrange essential items in order for easy access & readily
retrieved.
- **A certain place for every thing**
- Every thing in its place after used
- Use of visual tools like color code, label, numbering etc.
- Use FIFO system
- **TIME IS MONEY**

2S : Set In Order - Examples



2S : Set In Order - Examples



5S on desk top drawer



Cabinet filing with labels



Files are color-coded and neatly arranged on desk



Organized book shelves

Office Desk – Before & After 5S



An office desk before and after conducting 5S Sort and Set In Order. Clutter and unused items have been removed leaving only what is needed.

PROCESSING FACTORY-SHINWA LANKA



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3. APPLICATION OF SEISO (SHINE / SWEEPING)

3. APPLICATION OF **SEISO** (SHINE / SWEEPING)



- Eliminate the sources of dirt
- Clean as a form of inspection
- Clean everything inside and out
- Cleanliness should be part of daily work
- Daily follow up cleaning is necessary to sustain improvements
- Establish a 5-10 min time period for cleaning per day
- Daily inspect the cleaning of work place by the in charge.
- Arrange a Sramadana day for cleaning of whole work place
1-2 times per year.
- Before start daily working cleaning is must on your work place
- **CLEANLINESS IS MONEY**

STEPS APPROACH TO CLEANING

MACRO → common areas : walls, ceiling, lights, storage area, shelves, filing cupboards, toilets etc.



INDIVIDUAL → Individual work stations : chairs, drawers, computers, cabinets, shelves etc.



MICRO → measuring instruments : micrometers ,gauges ,calipers etc.



3. Shine - The area is cleaned as the work is performed (best) and/or there is a routine to keep the work area clean.

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Cleaning instruments



Waste bins



hand brush



Floor brush



4. APPLICATION OF SEIKETSU (STANDARDIZE / MAKE CONSISTENT)

4. APPLICATION OF **SEIKETSU** (STANDARDIZE / MAKE CONSISTENT)

- Sort ,Set in order and Shine are properly maintained
- **Establish standards & guideline**
- Use visibility tools
- **Everyone should knows exactly what his/her responsibilities are to keep above 3**S** s.**
- Move on to all workplace area & implement best practices through out the work place
- The place will degenerate back to where we were pre 5s if we don't standardize.



5. APPLICATION OF SHITSUKE (SUSTAIN / SELF DISCIPLINES)

5. APPLICATION OF SHITSUKE (SUSTAIN / SELF DISCIPLINES)

- Make 5S is a habit and is continually improved
- Inspect before and after working
- Keep encouraging and recognizing those who participate and never ignore those who slacken
- Use information boards to provide recognition to the team & to visitors what has achieved
- Use the results of 5S audits to drive continuous improvement
- Once the premises first 4S established they become the new way to operate & do not allow a gradual decline back to the old way of operating

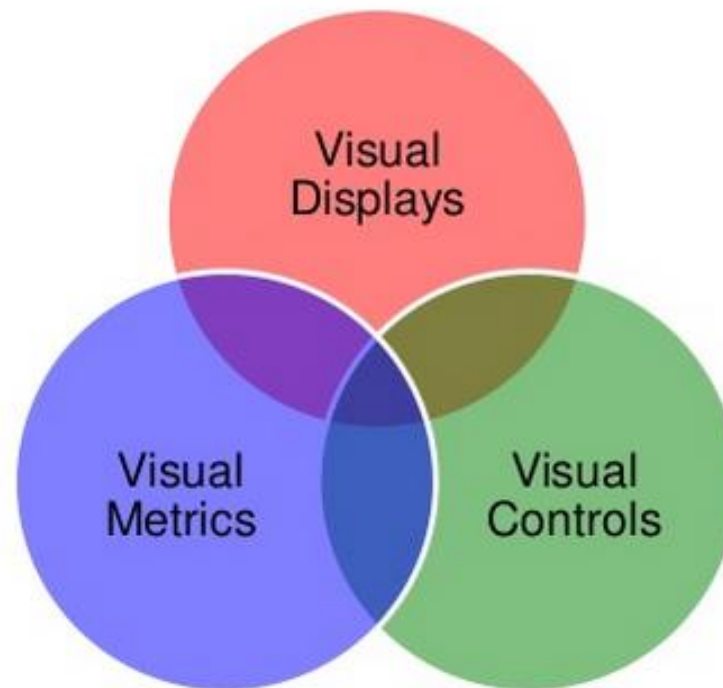
What is Visual Management?



- **Visual management** is a technique where information is communicated by using **visual signals** instead of texts or other written instructions
- Examples include signs, labels, photographs, trend charts and displays

Note: Visual management IS NOT decoration

Three Types of Visual Management



Pockets for documents

[illegible]

A red fire extinguisher is mounted on a wall. Above the extinguisher is a sign with the Japanese text '消火器' (Fire Extinguisher) and the English text 'FIRE EXTINGUISHING'. The sign also features some smaller text and illustrations. The extinguisher has a black handle and a red body.

Filing labels

	井上、Noe、 河野、橋倉	MED	PWG	ICE	CS
入社					
退社					

Staff movements 新がされていることを確認して下さい。

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Examples of 5S Visuals



Stocking fixtures

Mark your shelves, flow racks, totes, and other stocking fixtures with industrial labels that are large enough to read at a glance.



Rejects or materials on hold for QA

Mark parts and products that need to be inspected, or that have been inspected and have been rejected as defective. It is recommended the color orange be used to indicate that inspection is needed before use; red can be used to indicate if the product has been rejected.



Inside and outside of drawers, cabinets and toolboxes

All drawers, cabinets, toolboxes, and other organizers should be marked on the outside to clearly indicate what is contained within. Also mark the inside of your storage compartments to clearly identify where each item is properly stored.

Source: Brady 50 Lean Visuals Pocketbook



Tiger marking

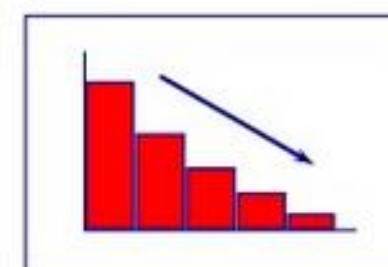
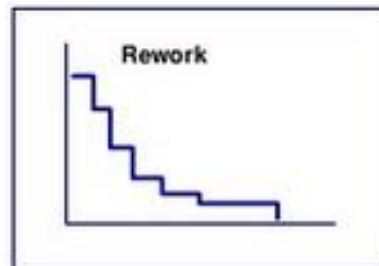
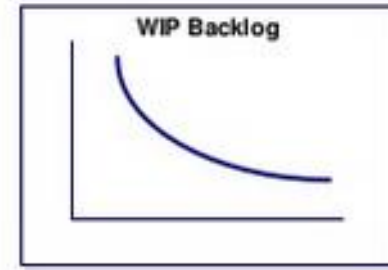
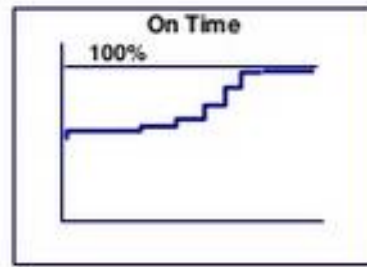
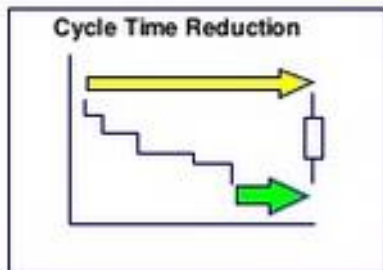


Out line marking

Visual Metrics

- Visual metrics allow everyone to “know the score” and they make out-of-standard situations immediately obvious
- Enables everyone to ‘see’ how we’re performing
- Helps highlight problems, or variances from standard
- Encourages employee involvement and open discussions

Visual Metrics – Example



Why Visual Controls?

- The purpose of visual controls is to create an **error-proofed** environment to promote easy adherence to **standards**

Examples of Visual Control



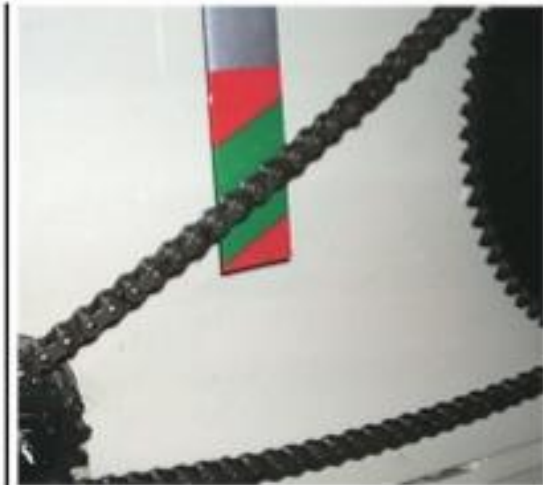
Gauge labels

Adding a simple gauge label enables any employee to easily detect abnormalities at a glance and at a distance. Without the label, only a trained inspector would know if the temperature or pressure setting is correct.



Oil level indicators

Placing a green and red striped label behind the oil sight tube helps operators quickly detect when oil levels are too high or too low.



Drive tension guides

Drive tension guides help operators inspect for proper tension on the drive system. Using red and green color blocks, these visuals indicate when a chain or belt needs to be tightened or replaced.

Everyday Visual Controls



PROCESSING FACTORY-SHINWA LANKA



PROCESSING FACTORY-SHINWA LANKA

SECTION OF GRADING			
DATE	2016-02-01		
PRODUCT	P/NO	P/NO	P/NO
H/ON	36		
H/L			
H/L - IQF			
T/ON			
P/D			
SEA PRAWN			

SIZE GRADING TABLE HEAD-LESS (ML & SS)			
GRADE	MIN(L)	MAX(L)	PCS PER BLOCK(S) (R/L)
6/8	53.5	75.0	29-32
8/12	36.5	53.5	41-48
13/15	28.5	35.5	58-60
16/20	21.5	28.5	74-80
21/25	17.0	21.5	94-100
26/30	14.5	17.0	115-120
31/40	10.5	14.5	147-160
41/50			
51/60			
61/70			
MINIMUM	MINIMUM	MINIMUM	MINIMUM
MAXIMUM	MAXIMUM	MAXIMUM	MAXIMUM

SIZE GRADING TABLE HEAD-LESS (P/D BLOCK)			
GRADE	MIN(L)	MAX(L)	MAX PCS PER BLOCK(S) (R/L)
6/8	53.0	75.0	41
8/12	37.0	53.5	58
13/15	28.5	35.5	74
16/20	22.0	28.5	94
21/25	18.0	21.5	115
26/30	15.0	17.0	147
31/40	11.0	14.5	188
41/50			
51/60			
61/70			
MINIMUM	MINIMUM	MINIMUM	MINIMUM
MAXIMUM	MAXIMUM	MAXIMUM	MAXIMUM

SIZE GRADING TABLE HEAD-LESS (ROSE)			
GRADE	MIN(L)	MAX(L)	MAX PCS PER BLOCK(S) (R/L)
6/8			
8/12	37.0	40.0	48
13/15	30.0	32.0	60
16/20	22.0	24.0	80
21/25	18.0	20.0	100
26/30	15.0	16.9	120
31/40			
41/50			
51/60			
61/70			
MINIMUM	MINIMUM	MINIMUM	MINIMUM
MAXIMUM	MAXIMUM	MAXIMUM	MAXIMUM

SIZE GRADING TABLE HEAD-LESS COUNT - P/D PCS			
GRADE	MIN(L)	MAX(L)	MAX PCS PER 1.0000 PACE
6/8			
8/12			
13/15			
16/20			
21/25			
26/30			
31/40			
41/50			
50/70	6.5	9.0	232
MINIMUM	MINIMUM	MINIMUM	MINIMUM
MAXIMUM	MAXIMUM	MAXIMUM	MAXIMUM

SIZE GRADING TABLE HEAD-LESS COUNT - T/ON PCS			
GRADE	MIN(L)	MAX(L)	MAX PCS PER 1.0000 PACE
6/8			
8/12			
13/15			
16/20			
21/25			
26/30	14.5	17.0	97
31/40	10.5	14.5	130
41/50			
51/60			
61/70			
MINIMUM	MINIMUM	MINIMUM	MINIMUM
MAXIMUM	MAXIMUM	MAXIMUM	MAXIMUM



HOW TO SUSTAIN 5S

HOW TO SUSTAIN 5S

- GET MANAGEMENT COMMITMENT
- GET EVERYONE INVOLVED
- GET AUTHORIZATION FROM MANAGEMENT FOR 5S ACTIVITY
- PROMOTE 5S IN THE ORGANIZATION
- GEMBA WALK BY CEO
- CONDUCT MONTHLY REVIEW BY 5S COMMITTEE
- USE 5S AS PLATFORM TO LAUNCH TO OTHER CONTINUOUS IMPROVEMENT PROGRAMME . EX: KAIZEN



CRITICAL SUCCESS FACTORS FOR 5S

CRITICAL SUCCESS FACTORS FOR 5S

- WILLING TO BE CHANGED, TRAINED AND LEARNT
- TOP MANAGEMENT COMMITMENT
- INVOLVEMENT OF ALL STAFF
- SUFFICIENT RESOURCES, MAN POWER, ADMIN, TRAINING, PUBLICITY
- REGULAR 5S AUDIT AND MANAGEMENT REVIEW
- RECOGNITION AND REWARDS FOR GOOD 5S PRACTICES



THANK YOU