

Review Paper on Implementation of 5 S in Different Organizations

Vikram Singh¹, Pankaj Jain², Aman Arora³

¹(Mechanical Engineering, Aryabhata College Of Engineering & Research Centre, Ajmer, India)

²(Mechanical Engineering, Aryabhata College Of Engineering & Research Centre, Ajmer, India)

³(Mechanical Engineering, Aryabhata College Of Engineering & Research Centre, Ajmer, India)

Corresponding author: Vikram Singh

Abstract : This Paper Describes The Methods And Techniques Of 5s Which Are Used To Increase The Efficiency Of All Processes In The Industry. The Main Goal Is To Reduce The Losses In The Industry And The Implementation Of The 5s System. It Can Be Seen That Due To The Introduction Of The 5s Rules, There Are Big Changes In The Company, For Example: Improve Cost, Increase Effectiveness And Efficiency In The Process, Efficiency Of The Maintenance And Repair Of Machines, Safety, Accuracy, And Quality And Pollution Control, According To The Decisions. 5s Methodology To Analyze The Processes Running On The Workplace. And Permits For Setting Up 5s Well-Organized, Clean, High-Impact And High-Quality Workplaces. Research Clearly Shows That Workers' Training Is Very Important About The 5s Rules. The Essential Thing Is To Break The Activities On Some Major Steps And To Maintain Continuous Improvement. This Method Can Be Used In All Companies, Resulting In The Effective Organization Of The Workplace.

Keywords - Quality Improvement, 5s Implementation, Improves Efficiency, Reduction Of Cost, Elimination Of Wastes Etc.

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I. INTRODUCTION

5S Is A Technique That Originated From Japan, And It Was First Developed By Heroyuki Hirano. There Are Five Words In 5S Seri (Sorting), Seiton (Set In Order), Seiso (Shine, Clean Up), Seiketsu (Standardize) And Shitsukue (Sustain). 5S Technique Is Included In "Kaizen" Which Means "Changes For Better" Allows For Increased Efficiency And Productivity. 5S Technologies Is A Structured Program To Achieve The Total Organization Cleanliness, And Standardization In The Workplace. The Advantage Of 5S Techniques Is Improvement In Productivity, Quality, Health And Safety. 5S Is Given In The Form Of The Period:

SEIRI: To Remove All Unwanted, Unnecessary And Unrelated Materials In The Workplace:

SEITON (Set In Order) Everything In This Stage Is Put In An Assigned Location So That It Can Be Quickly Accessed Or Retrieved And Returned Immediately To The Same Place.

SEISO (Shine / Cleanup): This Is To Clear The Workplace And To Give It 'Shine'

SEIKETSU (Standardization): It Defines Standards, So That Personnel Should Maintain Cleanliness And Hygiene.

SHITSUKE (Sustain): This Last Phase Is About 'Discipline'. It Maintains Discipline And The First 4S Should Be Understood As The Nature Of The Problem, The Previous Work, The Purpose And Contribution Of The Paper In The Beginning Of The Paper To Practice It As A Way Of Life. The Content Of Each Section Can Be Provided To Easily Understand The Paper.

II. 5S METHODOLOGY

1.1 SORTING:

The Essential And Nonessential Materials Available In The Workplace Should Be Arranged According To Size, Arranged In Groups And Classified [2]. Through The Proper Sorting It Can Be Identified The Materials, Equipment, Tools, And Necessary Information For Realization The Tasks [6, 13]. Sorting By The Tools That Are Often Used Are Placed Within Easy Reach, And Those That Are Not Used Frequently [8]. This Leads To Fewer Hazards And Less Clutter To Interfere With Productive Work [7, 9].



The 1S Rules Proceedings [6]:

A) On The First Stage One Should Answer To So-Called Control Question.

- Are Unneeded Things Causing The Mess In The Workplace?
- Are Unneeded Reminders In The Workplace Of Materials Thrown Anywhere?
- Do Tools Or Reminders Of The Workplace Materials To Production Lie On The Floor In?
- Are All Needed Things Sorted, Classified, Described And Possess The Own Place?
- Are All Measuring Tools Classified Properly And Kept?

On The Basis Of The Solution To The Above Questions It Is Easy To Estimation Of The Workplace In Terms Of The 1S Rule So Bedding Material Of The Workplace. If Any Question Answer Is Yes, Then It Have To Do Sorting Of Things, Which Are At Workplace.

B) On The Second Stage First Have To Review Of All Things Which Are In The Workplace And Arranged Them As Per The Definite System. As Per Carried Out Sorting It Eliminate From The Workplace The Things, Which Were Found “Unneeded”.

BENEFIT:

- Improvement Of Process By The Reduction Of Costs,
- Stock Reducing,
- Better Utilization Of Working Area,
- Minimize The Problem Of Losing Tools,

2.2. SET IN ORDER:

This Means That To Prepare Essential Items Sequentially And Sequentially So That It Can Be Used Easily And Remain In The Original Place After Use [1, 14]. For The Regular Workplace, The Main Objective Is To Reduce The Time Gap While Searching For Materials For Better Efficiency [2, 10]. The Main Objective Is To Reduce The Movement Of The Worker During Operation. [8] Especially The View Of The Workplace Is Important For Example. Paint Helps To Show The Storage Space In The Flooring, Machinery, Raw Material Or Transportation Manner, Drawing Sizes Makes It Possible To Quickly Put Them On Consecutive Places, To Identify Color Label Materials, Spare Parts Or Documents [6].

Tools, Equipment And Materials Should Be Systematically Arranged For Easy And Most Efficient Access. There Should Be A Place For Everything, And Everything Should Be In Place [7, 9] Applying The 2S Rule [7]:

It Should Perform The Separation Of Things And Mark The Locations Of Their Storage. The Things Used In The Fields Should Always Be Divided On Them, Which Should Be:

- In The Near Reach (1 Degree Sphere),
- Accessible (2 Degree Sphere),
- In The Hand Range (3 Degree Sphere)

According To The 2S Rule, For The Assessment Of The Workplace, In Order That They Are Prescribed, These Things Satisfy The Following Control Questions:

- Is The Location (Location) Of The Main Clauses And The Place Of Storage Clearly Marked?
- Are Tools Different On Regular Equipment And Specialist Equipment?
- Are All Transport Panels Stored On Proper Heights?
- Is There Anything In The Field Of Equipment Against Fire?
- Is There Any Irregularity, Cracks Or Other Difficulties For Any Operator's Movement?

Occasionally Things Should Be Used And Rarely On The Workplace, But Should Be Used Directly In The Area. From Their Distance And Place Of Work, The Location Should Be Dependent On The Frequency Of

Using These Materials Or Equipment. The Storage Space Should Be Marked As A Way To Make Their Quick Recognition Possible. It Can Be Used Colored Lines, Hints Or Device Boards.

BENEFIT:

- Improve The Process (Increase In Effectiveness And Efficiency),
- Minimizing Demand Time For Essential Items,
- Safety Improvement

2.3. SHINING:

To Realize Effective Functions, It Is Necessary To Work On A Clean And Regular Basis And To Create A Living Environment. The Reason For This Is That Dust, Dirt And Waste Are The Source Of Unhealthiness, Indiscipline, Inefficiency, Defective Production And Work Accidents [2, 10]. Cleaning Should Be A Daily Activity, The Workplace Should Be Cleaned At Regular Intervals. [9] To Help Identify The Dust Lane Factory Floor, Often Painted In Bright Colors And Enhances The Light Sources Within The Plant [8].Applying The 3S Rule [9]: In The First Stage Of Receipt, The 3rd Rule Is The Renovation Of The Workplace. It Is Believed That "First Cleaning" Compels Two Of The Previous Rules To Be Used To Check For Accuracy. The Use Of 3S Rules Depends On Everyday Cleaning And Cleanliness In The Workplace. It Is Executed By The Operator Of The Given Workplace. According To The 3S Rule, For The Workplace Estimate, Which Is Cleaning The Workplace, Serve The Following Control Questions:

- Do The Stains, Dust Or Metal Residues Of The Oil, On The Machine, Machine, Floor, Are Found Around The Situation?
- Is The Machine Clean?
- Are The Lines, Pipe Etc. Clean, Will They Demand Repairs?
- Is The Oil Pipeline Outlet Is Not Full Of Dirt?
- Are The Sources Of Light Clean?

BENEFIT:

- Increasing "Efficiency Of Machines,
- Accuracy Of Equipment,
- Efficiency,
- Clean Workplace, Easy To Check,
- Quick Notice About Losses (Potential Sources Of Damage),
- Improve Work Environment, Eradication Of Accidents "For Reasons

2.4. STANDARDIZE:

To Set Standards Of Best Practice In The Workplace And To Ensure That The Standards Have Been Compiled And It Is Undertaken That The Workplace Is Clean And Streamlined At All Times [1] Necessary To Continue These Good Practices At The Workplace Systems Are Created. Worked As Procedures And Instructions And Implemented Standards Were Allowed To Place Orders On The Workplaces. The Standard Should Be Very Clear, Clear And Easy To Understand [6, 10]. Basic Housekeeping Standards Are Applicable Everywhere In The Facility.

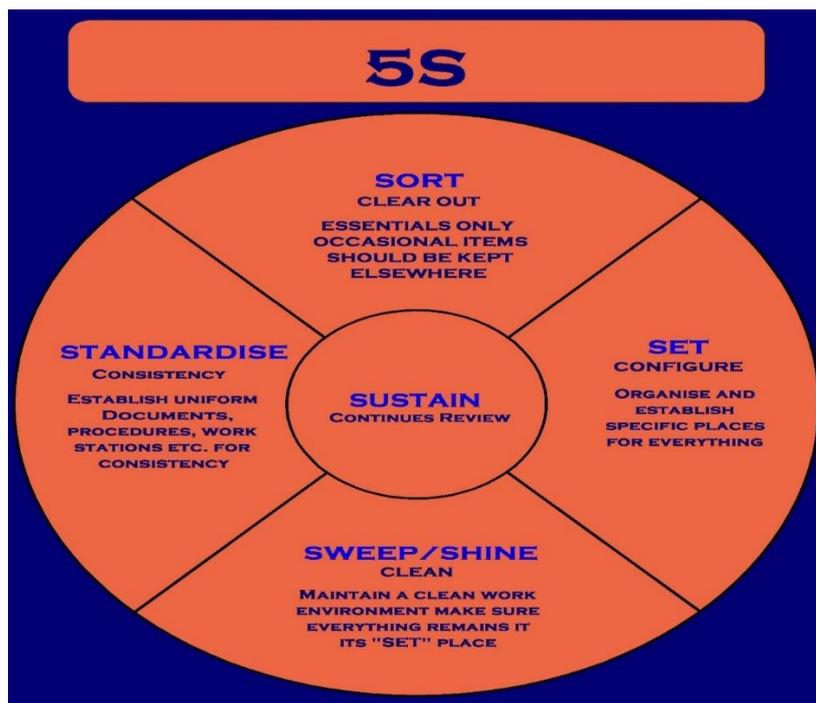
Everyone Knows What The Responsibilities Are. Housekeeping Duties Are Part Of Routine Work Routine [7] After Some Time They Need To Practice In A Sequential Way, Set Them In Order And Clean And Follow Them [8]

To Implement 4S Rules (Standardization) [1]:

- To Maintain High Level Of Housekeeping?
- Have You Been Given Attention To Keeping The Workplace Clean And Tidy?
- The Workplace Is Clean But Not Completely Clean?

BENEFIT:

- Increasing And Decreasing The Security Of Industry Pollution,
- Completing Procedures That Define The Curriculum Of Processes



2.5. SUSTAIN:

Disciplined Training To Train Staff For The Practice Of 5 S Systems, So That The Habits And Culture Within The Organization [1, 14] Are Done By The Leaders Who Work Here, Through Direct Training To The Directors, Importance Should Be Understood And The Knowledge Of Personnel About 5S Should Be Updated Through The 5S Boards To Be Established At The Workplace [2]. To Maintain Standards And Keep The Day After Day In Safe And Efficient Order, Year After Year [7].

It Is Also Important To Understand The Need To Perform Routine Inspections Of The Use Of 5S Rules. This Inspection Has Been Done With The Help Of The So Called Checklist And Based On The 5S Radar Graph, Which Works For The Assessment Of The Workplace. Achievement Of 5 S Rules Is Inspected Once In A Month, Which Is Implemented By The 5S Rule-Control Team [3] Implementing Team

BENEFIT:

- Increasing Awareness And Morale,
- Decrease In The Amount Of Mistakes That Arise Due To Unnecessariness,
- According To The Decision,
- Improvement In Internal Communication Processes,
- Improvement In Inter-Human Relations

III. Advantages Of 5s Implementation

Successful Implementation And Execution Of 5S Principles In Various Organizations Have Resulted In The Following Benefits As Per The Following.

- The Concept Of 5S Is Very Simple And Easy To Understand By Everyone Because It Only Requires Knowledge Of Traditional Discipline And High Commitment. This Exercise Can Be Applied At All Levels.
- 5S Teamwork Promotes Discipline And Increase The Sense Of Responsibility And Compassion For The Company.
- 5S Keep Clean, Productive Work Environment And Secure World Class Delivery System.
- The Commitment To Continue Management And Participation For The Successful Implementation Of 5S Practices Is The Cornerstone Of All Citizens.
- 5S Is Required To Maintain An Excellent Service Delivery Performance
- Internal Audit Assessment Generally, The Organization Will Take The Consistent Repairs Of The Quality And Effectiveness Of The Services Distributed To The Customers. In Order To Obtain And Maintain The 5C Certification, The Activities Have Been Planned To Prepare The People To Face The Real 5S Audit By MPC And The Audit Is Ongoing.

The First Paragraph Under Each Heading Or Subheading Should Be Flush Left, And Subsequent Paragraphs Should Have A Five-Space Indentation. A Colon Is Inserted Before An Equation Is Presented, But There Is No Punctuation Following The Equation. All Equations Are Numbered And Referred To In The Text Solely By A Number Enclosed In A Round Bracket (I.E., (3) Reads As "Equation 3"). Ensure That Any Miscellaneous Numbering System You Use In Your Paper Cannot Be Confused With A Reference [4] Or An Equation (3) Designation. (10)

IV. REVIEWS OF PAPER:

Shahryae Sorooshian Etal (2012) They Have Experienced The Implementation Of A 5S Program And The Paper Contains A Presentation Of The Real Case Study, Especially The Power Of Compensation On The Choice Of Implementation Of 5S On The Impact Of 5S On Some Basic Work Environment Problems This Letter Is A Representation Of Basic Information With The Pros And Cons About The Concept Of 5S [1]

Darya Sewim Corkut Atal (2009) This Study Involves 5S System To Ensure Order And Discipline In The Companies And Has Been Reviewed In Full Details About Ensuring The Simplest And Even Smallest Details Of Supervision And Them Under The Selection Of The Assembly Department, The Research Has Been Done Under The Material. As A Pilot Department For 5S Activities, Which Is Applicable In A Boat Manufacturing Company? 5S Activities Have Been Organized During 28 Weeks In The Legislative Assembly Of The Company. The Results Obtained Have Been Evaluated And It Was Found That The Weekly Results Of The Company Results From A Starting Point To Better Than The Initially All Employees Hung On The 5S Acceptance Board Within The Company, The Role Of Playing An Efficient Role In This Process The 5S Approach Played Is Not A Study To Cover A Certain Period, But It Requires Standardization Of Rescue And Release All The Improvements There Is A Method To Keep. [2]

J. Michaelska Atal (2007) In This Paper, The 5S Implementation Results Include Reduction In Efficiency, Safety And Pollution In The Industry. In The Research Proceedings, It Is Clearly Shown That Training Of Workers About 5 S Rules Is Very Important. Important Work Is To Split Activities On Some Main Steps And To Maintain Continuous Improvement.

It Is Also Important To Understand The Requirement Of Regular Inspections To Use 5S Rules. This Inspection Has Been Done With The Help Of The So-Called Checklist And Based On The 5S Radar Graph, It Works On The Basis Of Work Estimation. [3]

Arsh Ghodarati Atal (2013) The Purpose Of This Letter Is To Determine Performance Factors And Characteristics In Industrial Organizations And To Identify The Effectiveness Of 5S Implementation On Organizational Performance. Survey Method Is Used And Data Is Collected Throughquestionnaire Distribution Among Five Target Organizations Implementing 5S Techniques. The Target Organization Is Selected From Different Industries And Diverse Fields Of Work.Results Of This Research, Obtained From The Comparative Measurement Of Organizational Performance Before And After Implementation Of 5S, Show That Despite The Type, Size, Production Or Service Of The Organization, 5S Is An Effective Tool For Improving Organizational Performance.As A Result, 5S Techniques Using The Comparative Measurement Between The Organization's Performance Before And After The SSS Implementation By 5S Implementation, To Achieve Continuous Improvement And High Performance For The Organization's Objectives, To Identify The Effectiveness Of 5S Implementation On Organization Performance Has To Firmly Support. Excel Software Has Finally Concluded That 5S Has A Positive Impact On The Overall Performance And Can Improve The Quality, Efficiency And Productivity Of The Industrial Organizations. [4]

Jose H. Ableenido-Ros Atl (2010) The Results Of This Paper Have Been Applied To Some Mexican Organizations With The Purpose Of Understanding Their Implementation Experience, Empirical Relationships And The Challenges Associated With 5S Exercises. 5S Exercises Are Used As The Basis For Advanced Quality And Continuous Improvement Philosophy And Organization Measures Profit From The 5S Implementation Such As Quality Improvement.5S Practice Is Meaningful For Production And Service Organizations And Is Universal For All Organizations. The Biggest Challenge Is To Include 5S Exercises In Every Person's (Life's) Life. [5]

Pro. S. B. Khedkar Etal (2012) This Research Has Been Dealt With The Implementation Of 5S Method In SP Plastic Industry MDC, Hinga Road, Nagpur. 5S Implementation Affects The Trainers And Industry Workers Who Work Within The Selected Location. By Following The 5S Method, This Research Effort Shows Significant Improvements For Safety, Productivity, Efficiency, Morale And Housekeeping. Research Uses Revised Documents Before And After The Pictures. [6]

Ravinder Kumar Panchal Etal (2012) The Workshop Adopted In The 5S And This Paper Was Focused On Its Implementation In The Production Industry. 5 S Rules Bring Great Changes In The Company, For Example: "Decrease In Cost, Increase In Effectiveness And Efficiency In The Process, Maintenance And Improvement Of Machines", Efficiency, Safety And Industry Pollution And Deficiency Of Waste [7]

Marko Milosevic Atal (2013) This Letter Explains The Methods And Techniques Of Lean Concept Used To Increase The Efficiency Of All The Processes Of The Company. Also Show Results Of The Level Of Implementation Of This Method In International And Domestic Production Companies. It Can Conclude That Big Companies Pay More Attention To The Concept Of "Lean" Because Both Productivity And Satisfaction Of Their Employees. [8]

Harsh Lingarddi Etal (2013) This Paper Contains Studies And Changes In The Workplace Of The Manufacturing Industry For The Implementation Of 5S. This Strategy Helps Reduce The Time Of Manufacturing And Also Enhances The Work Area.

The Solution Found By The 5-S Approach Reduces Many Types Of Waste In The Production Process And Ultimately Helps In The Development Of The Organization. An Inspection Process Has Been Performed On The Basis Of 5 S Check Lists And The Results Have Been Analyzed To Confirm The Great Changes Such As Increased Efficiency In Production And Quality, Improvements In Safety. [9]

P. M. Rosasara Atal (2012) In This Letter, The Implementation Of The 5S Method In The Krishna Plastics Company, Udayodnagar, Amreli, Gujarat Has Been Explained. Of The Various Lean Manufacturing Techniques Available, 5S Provides Good Potential For Improved Improvement. Ten Weeks Of Study Is Done In The Company. After The Implementation Of 5S, The Results Show That The Efficiency Of The Production System Has Increased From 67% To 88.8% In A Week. [10]

Mohamed Rasuli Diageji Atal (2013) This Paper Contains Research Done In Iran's Tabriz-IDEM Company, To Collect The Necessary Data, They Have Used Three Types Of Questionnaire, Which Each Person Examines The Respective Area. The Results Show That The Company Has Successful Activities In Executing And Implementing The 5S, Ergonomics And Executing TPM And Their Relationship Is Also Meaningful. [11]

R.T. Salanek Atal (2011) In This Letter, The Aim Of Spare Part Management Is To Ensure The Availability Of Parts With The Help Of Various Management Techniques Like 5S System, Canaban System And Separate Cages, For Maintenance In The Shortest Possible Time. 5S Helps In Understanding The Real Condition Of Parts In The System Store Department. It Also Helps Spare Parts Effectively Provide Satisfactory Results. The Result Shows That The Reduction Of Search Time Is Improved And The Inventory Cost Is Also Controlled Which Is Accomplished Through The 5S, Kanan And Kaizen Systems. Search Time Is Less Than 10 - 15 Minutes To 6 To 8 Minutes [12]

Gharoge Dalai Ital (2008) Is A Continuous Improvement Strategy In This Paper, Aimed At Improving Manufacturing Process Oriented And Getting Out Of Auto Car. Using "5S" Rules, Improving The Quality Of Auto Car, Coordinating Aspects Of The Organization's Low Level And Helping With Better Management. After The Exit Quality, The Implementation Of The "5S" Strategy Improves [13]

Kaushik Kumar Atal (2012) In This Letter, The Steps Taken For The Implementation Of The 5 S Stress The Benefits Of The Organization. Successful Execution Of The 5S Requires Why Everyone Is Using It And Why The Results Are Expected, It Can Be Very Nervous In The Form Of Familiar (Though Unnecessary) Removal And Reconstruction Of Processes [14]

V. CONCLUSION

Studies Show That Efficient Implementation Of These Paper 5S Techniques Shows That Productivity Of The Manufacturing Company Will Improve Later. 5 S Improves The Performance Of The Environment And In This Way The Construction Area Is Mainly Related To Reducing Waste. It Is To Promote Sanitation In The Storage Of Raw Materials And Finished Products. 5S Implementation Leads To Improvement Of Organization In Many Ways, For Example. The Implementation Of The Rules Of The 5 S System Leads To The Following Effect In Relation To Quality Improvement:

- Visible Results Within Less Time (2-3 Weeks)
- Used In The Order And Discipline Of Workers, Draws Attention About The Changes In Labeling Which Is Going To Happen,
- Lack Of Physical Efforts, Fewer Accidents During Production Process,
- Increase Of Workers "Professional Training, Better Organization Of Activities

Acknowledgements

The Recommendation To Implement 5S

- A. To Make 5S Practices More Effective, The Company Needs Top Management To Fully Support This Activity. To Make Effective Management For Effective Management, They Should Be Shown The Product's Quality Demonstrations Of This Approach.
- B. The Organization Should Arrange Benchmarking With Other Companies, Who Are Successful And Provide A Reference On A Regular Basis With A Member Of The Quality Team, Who Will Help Companies Understand Their Vision And Mission.

C. Participation Of All Employees In All Departments Of Program 5S. All Employees Should Understand That For Five Good Reasons 5S Program Should Be Practiced At The Workplace Because It Can Reduce High Cost With High Efficiency High Productivity, High Efficiency Can Do This. Delivery On Time Will Be Ensured And As A Result, It Is A Safe Workplace

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