5S Seiketsu - Standardise

The forth stage in 5S, Standardise; conformity in what we do.

Stages of 5S

- Seiri – Sort (Clearing)

  - clearly separating necessary from unnecessary, and remove unnecessary

- Seiton – Set in order (Configure)

  - visually arrange and identify items for ease of use and retrieval

- Seiso - Shine & Check (Clean & Check)

  - keep the workplace clean (not pretty) to allow problems to be identified

- **Seiketsu - Standardise (Conformity)**

  - continually monitor the level of clearing, organising and cleaning

- Shitsuke - Sustain – (Custom & Practice, Consensus)

  - work towards a shared set of values regarding clearing, organising and cleaning

- Safety

  And the 6th S:

  - improve through better clearing, organising, cleaning and visual control

Why standardize?

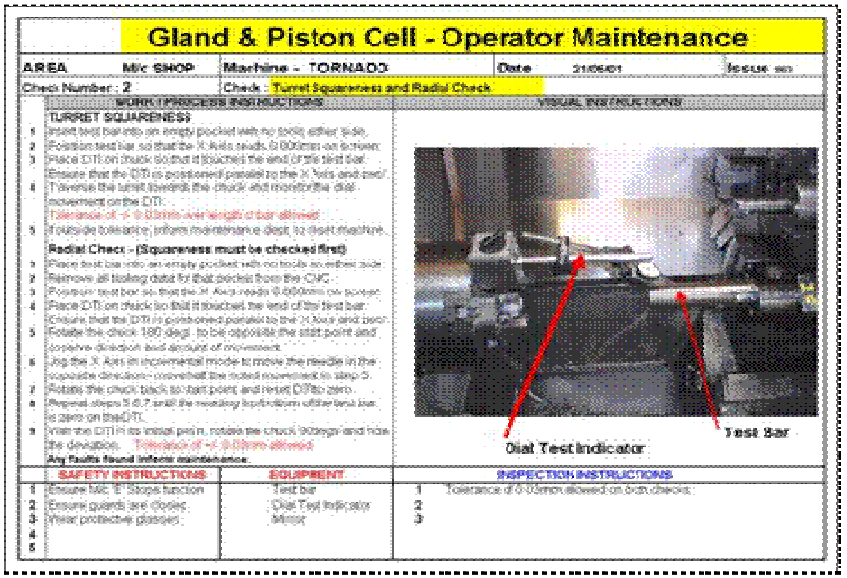
- It makes 5S routine.
- Sustains all improvements.
- Builds on the improvements already made.
- Maintains agreed procedures.
- Ensures we don’t fall back into our old ways.

How do we standardize

- Document standard ways of working
    - Standard Operating Procedures (SOP)
- Standardize labeling, signage and flow
- 5S audits

Standard work

- Document the current agreed way of doing a process.
  - Provides a baseline for improvement
  - Reduces variation between people/shifts
- Use text
- Camera
- video



Gland & Piston Cell - Operator Maintenance

AREA: Mic SHOP | Machine - TORNADO | Date: 21/06/01 | Issue: 001

Check Number : 2 | Check : Turret Squareness and Radial Check

WORK / PROCESS INSTRUCTIONS | VISUAL INSTRUCTIONS

TURRET SQUARENESS

1 Insert test bar into an empty pocket with no tools either side.
2 Position test bar so that the X Axis reads 0.000mm on screen.
3 Place DTI on chuck so that it touches the end of the test bar. Ensure that the DTI is positioned parallel to the X Axis and zero.
4 Traverse the turret towards the chuck and monitor the dial movement on the DTI.
Tolerance +/- 0.03mm over length of bar allowed.
5 If outside tolerance, inform maintenance dept. to rectify machine.

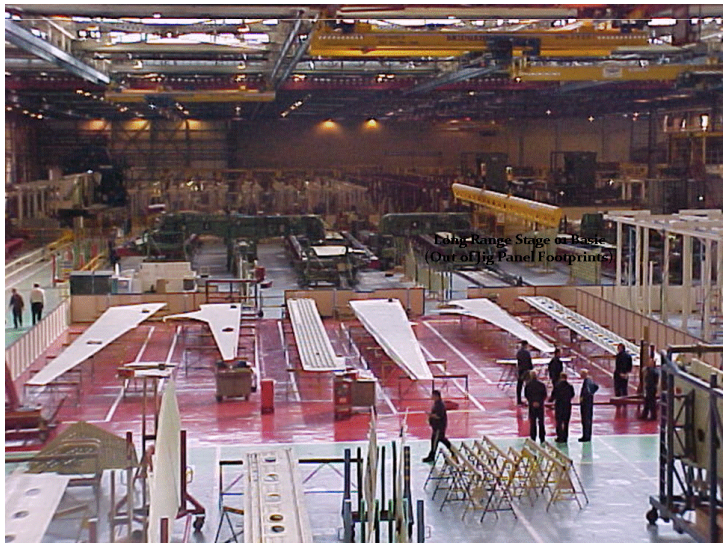
Radial Check - (Squareness must be checked first)

1 Place test bar into an empty pocket with no tools as either side
2 Remove all tooling data for that pocket from the CNC
3 Position test bar so that the X Axis reads 0.000mm on screen
4 Place DTI on chuck so that it touches the end of the test bar. Ensure that the DTI is positioned parallel to the X Axis and zero
5 Rotate the chuck 180 degs. to be opposite the start point and opposite direction and amount of movement
6 Jog the X Axis in incremental mode to move the needle in the opposite direction - overhalf the noted movement in step 5
7 Rotate the chuck back to start point and reset DTI to zero
8 Repeat steps 5 & 7 until the reading both sides of the test bar is zero on the DTI.
9 With the DTI in its initial pos'n, rotate the chuck 360degs and note the deviation. Tolerance of +/- 0.03mm allowed.
Any faults found inform maintenance.

	SAFETY INSTRUCTIONS	EQUIPMENT	INSPECTION INSTRUCTIONS
1	Ensure Isol. E Stops function	Test bar	1 Tolerance of 0.03mm allowed on both checks
2	Ensure guards are closed	Dial Test Indicator	2
3	Wear protective glasses	Mirror	3
4			
5			

Standardize flow and signage

- Common methods to show where work enters and leaves a cell.
- Standard methods for identifying components and tool locations



- 5S is a highly visual tool – everything should be obvious.

5S Audit

- Independent audit of an areas adherence to 5S
- Capture current state – use color Photographs
- Create simple audit sheets – With Score
- Conduct audits

Example checklist:

Engineering Ltd
Workplace Organisation Audit

Filling Line Seven	**Pass / Fail**
1 (max) pallet of bottles in defined location at scrambler	
1 (max) pallet of collapsed boxes in stacked in defined location	
IBC 1 under mix stand in defined location	
IBC 2 next to IBC 1 in defined location	
1 litter bin in defined location at labeller, not overflowing	
Batch number table surface clear, except magnifying glass	
All handtools on shadowboard at filler	
Head calibration board on peg and filled in and up to date	

Date: Auditor: Score: out of = %

5S auditing

- **Q: Can you write a clear and fair checklist?**
  - those being measured cannot fail or pass for anything ambiguous (eg locations, quantity, cleanliness, etc) - there should be no "shades of grey"

  If not, revisit "Organising" to visually clarify groundrules and expectations or rewrite the checklist

- **Q: Do those being audited agree the audit is fair and reasonable?**
  - have they seen the audit? They can almost certainly devise a better one!

- **Periodically re-audit (eg weekly, fortnightly) and cross-check using auditors from other areas to form auditing group**

- **Give immediate verbal feedback from audit, display results on noticeboard, and chart against past results**

- **Identify problem areas and set targets for improvement**
  - for example, can a lack of cleanliness be prevented through controlling contamination?

What is the next stage of 5S?

- The hardest step of 5S is that of Shitsuke or Sustaining.

- We need to ensure that we maintain and continuously improve on the gains that we have made through the first 4 steps of 5S

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