Visual Key Points – Food Industry

Strengthening operator learning by making Key Points visual at Gannon Vietnam

Gannon Vietnam, a UHT beverage contract packer
Oscar Roche, 2010-11

Brief

If you master the tiniest item of the highest importance, you will achieve greater results. *"Toyota Talent"*

Learning was taken from theory in the classroom via manuals and PowerPoints to learning on the factory floor. The factory floor is where an operator is most comfortable and will learn the right way quickest. Learning the right way quickly means less mistakes, less downtime, therefore less cost.

Production Managers and workplace trainers, or training department managers, will learn from this case study how the principle of Visual Key Points contributed to the provision of capable operators and QC staff in a shorter time period.

Those operators involved in the development of the visual devices had to be "encouraged" to consider their outputs often several times over to eliminate "judgement based on experience". It is "judgement based on experience" that takes time and costs money.

Source for information: *Gannon Vietnam, Bin Hoa City, Vietnam*

INTRODUCTION

The packaging area in the UHT factory had up to 6 machines running 20 hours a day producing approximately 800,000 packs. The plant was having occasional quality failures directly attributable to a particular element of pack integrity. FTQ (First Time Quality) was lower than standard. Combined with this was a need to reduce operator training time from 6 months as was the current standard. Such a reduction in training time would reduce labour cost, and itself increase quality.

CONTENT

Visual Workplace Australasia ran workshops and coaching and mentoring in 2009 with a focus on developing a training system that would provide capable operators and QC staff in a shorter time period.

As a consequence of this focus, one of the workshops was "Visual Key Points", 3 sessions in total:

- Output – Visual devices based on "Key Points". Key Points were the "How" of tasks identified via a previous workshop being Visual Standard Work. (Visual Standard Work was our precursor to TWI Job Instruction.)
- Outcomes – Awareness of the concept and strength of the Visual Workplace; Key Points strengthened using visual devices where strengthened means easier to train to.

A key driver throughout the workshop and follow up mentoring was …

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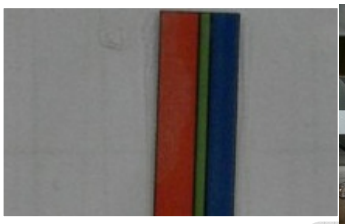
The program was measured via 2 indicators:

- Training time reduction.
- Improved in FTQ results (First Time Quality).

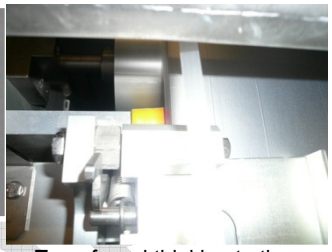
During the workshop and follow up coaching and mentoring:

- The participants identified the critical "pack integrity" test done every 15 minutes on each of the machines as a key task. Test fail meant significant increased risk of quality failure:
    - The stated limit was 60:40 split of 2 distances the total distance being about 6mm. The assessment against the limit was done via the naked eye.
    - It was impossible for the human eye to make a correct assessment over such a small distance.
    - Thus "pass/fail" was based on judgement from experience … high risk of "error".
    - The skill was deemed to be hard to transfer to "new" staff.

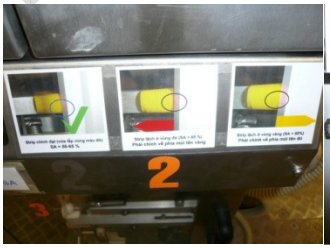
Then the group developed the following …



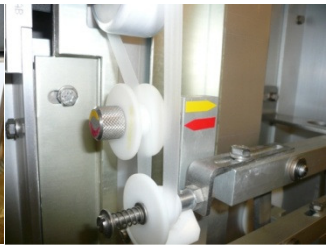
Simple template 6mm wide set up with the 60:40 split plus tolerance. Operator laid pack against this template. "Inside" green zone was a pass.



Transferred thinking to the machine.
Step 1 – Visual "position indicator" on the machine".



Transferred thinking to the machine.
Step 2 – Visual standard and visual instruction on the machine.



Transferred thinking to the machine.
Step 3 – Visual position adjustment on the machine.

5 months after the workshop operator training reduced to 3 months and FTQ had increased to above standard.

CONCLUSION

The pictures you see above were not the first ideas that came up. They are actually the 4th or 5th iteration of the thinking … that is what we look for, continuous development / improvement. Now (2012) they have developed further. The colours of the template link with the colours on the machine. This further strengthens the Key Point and thus makes training easier, quicker and more likely to be effective. Effective is "quality achieved first time".