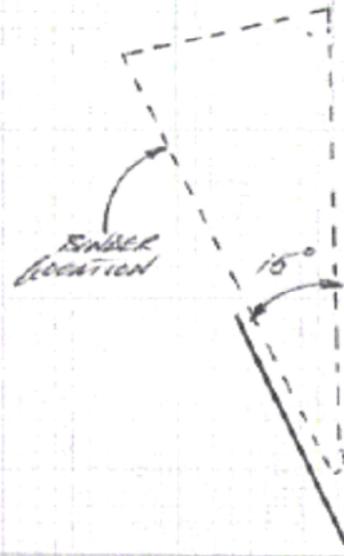
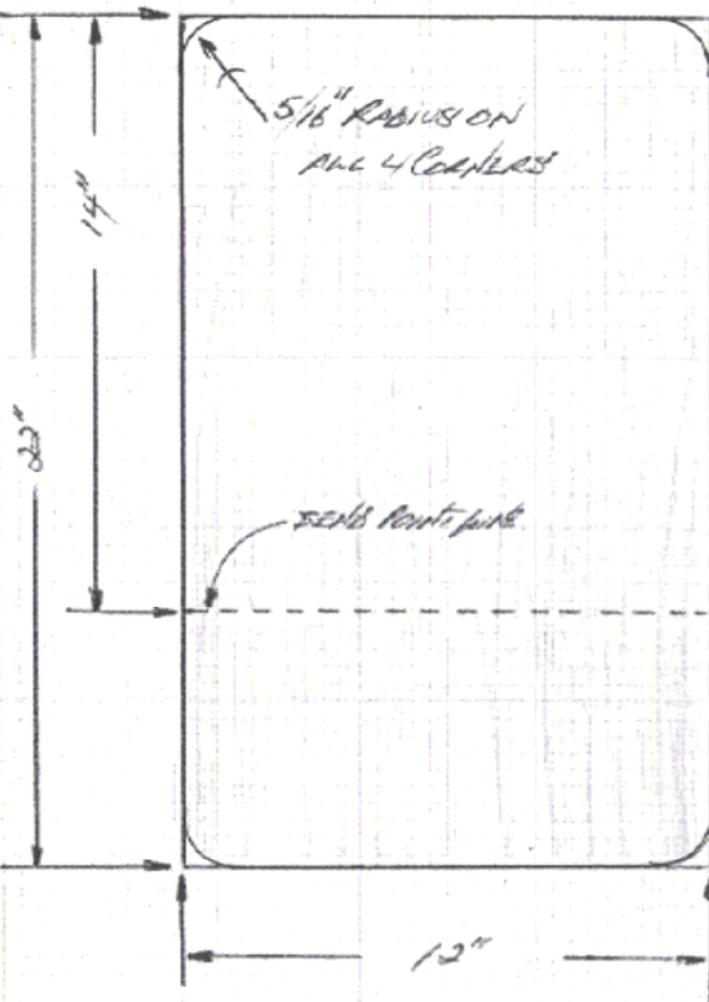
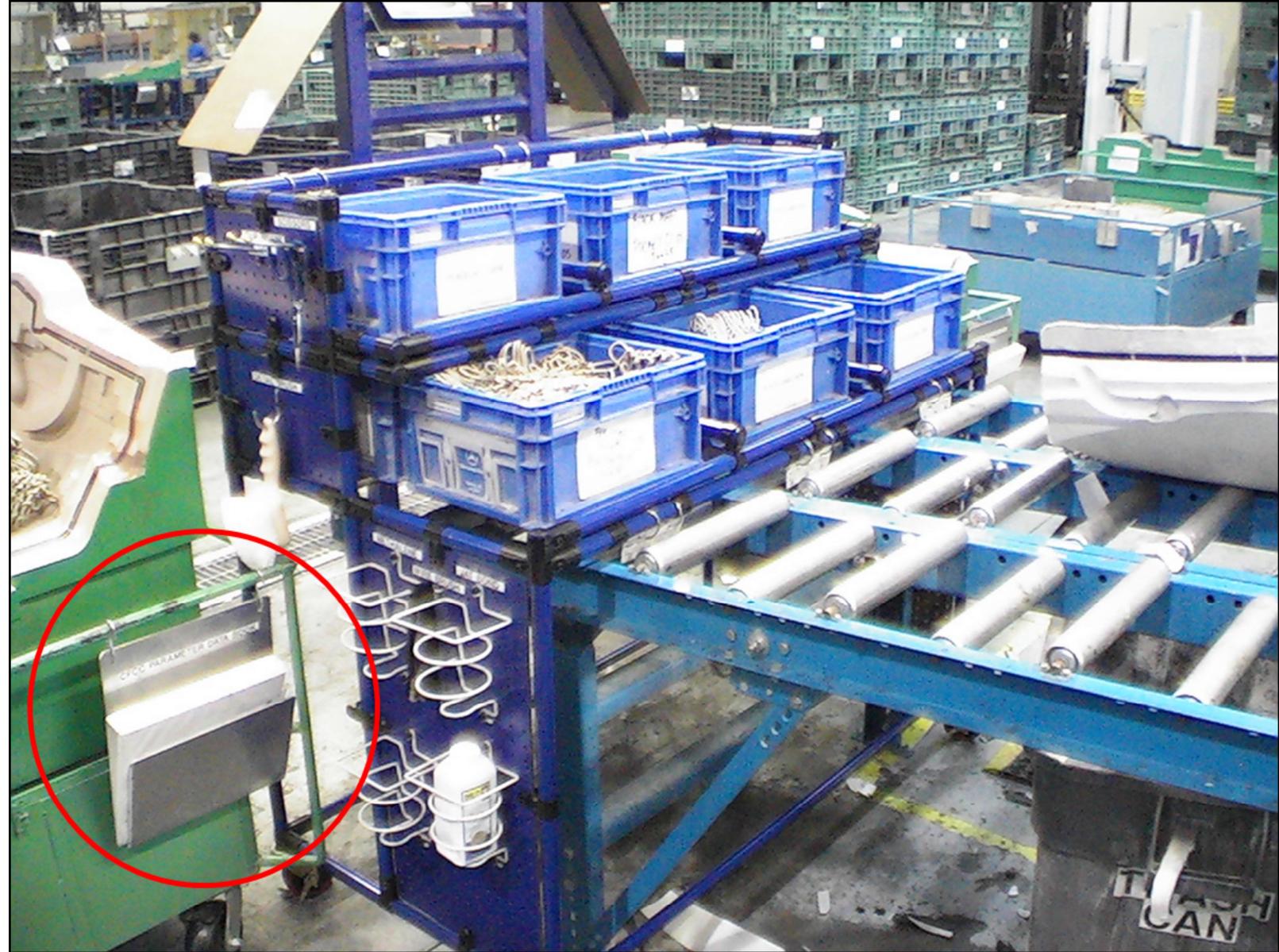


NAME: DOCUMENT BINDER HOLDER FOR CONTROL FIXTURES CONTROL CHARTS CLIP BINDERS
MATERIAL: $\frac{1}{8}$ " ALUMINUM SHEET 3003 GRADE. ALL EDGES & CORNERS OF SHARPNESS



With set in order you want to make things easy to store or put back in order with unbreakable set back in order being the goal. Here is an example of where I made a clip binder that contained information for quality inspection checks on a gauge fixture very easy to put back in order.

The clip binders were always going missing and could not be found when needed. This holder is simply a piece of 1/8 AWG aluminum with a 15° degree bend in it with two mounting holes drilled in them. You could literally just drop these binder back in order from a height of 18" inches. The next slide shows them in stalled using S hooks on the afore mentioned quality inspection gauge. I use this technique many, many times to great success...



Picture showing the clip binder holder in place on a quality inspection gauge fixture. It doesn't get any easier than this. Failure to set this back in order, you have a discipline problem and that's another story for another day...



This picture is of a 10' feet long by 5' feet wide magnetic whiteboard. They maybe a little on the expensive side but they are versatile. I used this board time and time again for different projects. This project was for training improvement of line operators.

All the notices, labels, documents holders and headers - which I made - are affixed to the board using magnetic tape so, changing to different projects and using the board as a notice board, storyboard or dashboard was a snap to do. The only thing that was not magnetic was the boarder line which I used black electrical insulation tape which was easy to apply and remove.

2:55

5s = "Mess"

ALFMEIER

What is 5s? 5s is a methodology based on a series book called "The Five Pillars of the Visual Workplace" which was written by a Japanese industrial expert Hiroyuki Hirano. Taken from 5 Japanese words that begin with the letter S which are: Seiri which means "Organized Cleanse", Seiton which means "Organized Cleanse", Seiso which means "Cleanliness", Seiketsu which means "Standardized Cleanse" and Shitsuke which means "Discipline" or known better by the adaptations of a English words that begin with the letter S which are: Sort, Set in order, Shine, Standardize and Sustain. The 5s philosophy focuses on effective workplace organization and standard work procedures. It simplifies the work environment, reduces waste and non-value added activities while improving quality, efficiency and safety.

What is the goal of 5s? The goal of 5s is to create a company culture that perpetuates workplace organization through orderliness, cleanliness and visual management.

The 5s universe circle closed loop

5s Slogan Submitted By Alfmeier Associate: Johnny Rogers

There are many different ways of sustaining your 5S program, you can do this through the following – Visual awareness posters – Ask why 5 times – Demonstrate good examples of 5S at work – Monthly 5S audits – Develop a consistent message to reinforce using 5S language – Recognition and rewards – Hold competitions and suggestions – Single point lessons – Regular training – Keep up red tag and 5S patrols.

I have done all of these and in this one picture I held a plant wide competition for all employees to come up with a company slogan for our 5S initiative. First prize selected by the company directors wins \$250.00 dollars and your name immortalized in the right hand bottom corner on 6 strategically placed 5' feet by 5' feet posters to the fact under the one gauge everyone in the plant uses - clocks... it's a subliminal reminder...

The winner was the slogan '5S = No Mess'.

Whatever you do its your leadership that sustains it. I have had many people in my lean career ask me what has 5S got to do about getting product out the door. My answer is a simple, yet a very powerful one give me any chronic problem or a customer complaint that we are facing and I guarantee you I can trace it to a 5S condition. So far silence has been my challenge from those that ask such questions.

SORT	No procedures of SORT in use in target area:- Items not needed for production and clerical operations in target area. Dead stock, out of use equipment and tooling in target area No inventory and finished goods levels are balanced. No direct/in-direct materials show evidence of FIFO. Out of date/unnecessary/irrelevant information in target area. Excessive direct/in-direct materials transport and/or	0
	Some procedures of SORT in use in target area:- Some items not needed for production and clerical operations in target area. Some inventory and finished goods levels are balanced. Some direct/in-direct materials transport and/or storage containers show evidence of FIFO. Some out of date/unnecessary/irrelevant information. Some excessive direct/in-direct materials transport and/or storage	1
	Most procedures of SORT in use in target area:- Most of target area has items only needed for production and clerical operations. Most of target area inventory and finished goods levels are balanced. Most direct/in-direct materials transport and/or storage containers in target area show evidence of FIFO. Most of target area has only direct/in-direct materials transport and/or storage	2
	All procedures of SORT in use in target area:- All of target area has items only needed for production and clerical operations in it. Inventory and finished goods levels are balanced. All direct/in-direct materials showing evidence of FIFO. All the target area has only relevant and necessary information and is up to date.	3
SET IN ORDER	No procedures of SET IN ORDER in use in target area:- No items organized. No placement indicators for in-process items, materials and tools. No aisleways marked. No signboards/visual controls. No dedicated storage locations for inventory items. No items are set in order for ease of finding, using and returning.	0
	Some procedures of SET IN ORDER in use in target area:- Some items organized. Some placement indicators for in-process items and tools. Some aisleways marked. Some signboards/visual controls in use. Some dedicated storage locations for inventory items. Some items are set in order for ease of finding, using and returning.	1
	Most procedures of SET IN ORDER in use in target area:- Most items organized. Most placement indicators for in-process items and tools. Most aisleway marked. Most signboards/visual controls in use. Most inventory items have dedicated storage locations. Most items set in order for ease of finding, using and returning.	2
	All procedures of SET IN ORDER in use in target area:- All items organized. All placement indicators for in-process items and tools. All aisleway marked. All signboards/visual controls in use. All inventory items have dedicated storage locations. All items are set in order for ease of finding, using and returning.	3
SHINE	No procedures of SHINE in use in target area:- No objective evidence that process excess/environmental and/or people generated trash cleaning has been done in/on/around target area. No 5S Shine job cycle standards established. No action taken to rectify gas and liquid leaks. No cleaning tools and materials available for use.	0
	Some procedures of SHINE in use in target area:- Some objective evidence that process excess/environmental and/or people generated trash cleaning has been done in/on/around target area. Some 5S Shine job cycle standards established. Some action taken to rectify gas and liquid leaks. Some cleaning tools and materials available for use.	1
	Most procedures of SHINE in use in target area:- Most of target area shows objective evidence that process excess/environmental and/or people generated trash cleaning has been done in/on/around target area. Most cleaning 5S Shine job cycle standards are established. Most gas and liquid leaks have been rectified. Most cleaning tools and materials available for use.	2
	All procedures of SHINE in use in target area:- All of target area shows objective evidence that process excess/environmental and/or people generated trash cleaning has been done in/on/around target area. All 5S Shine job cycle standards are established. All gas and liquid leaks have been rectified. All cleaning tools and materials are available for use.	3

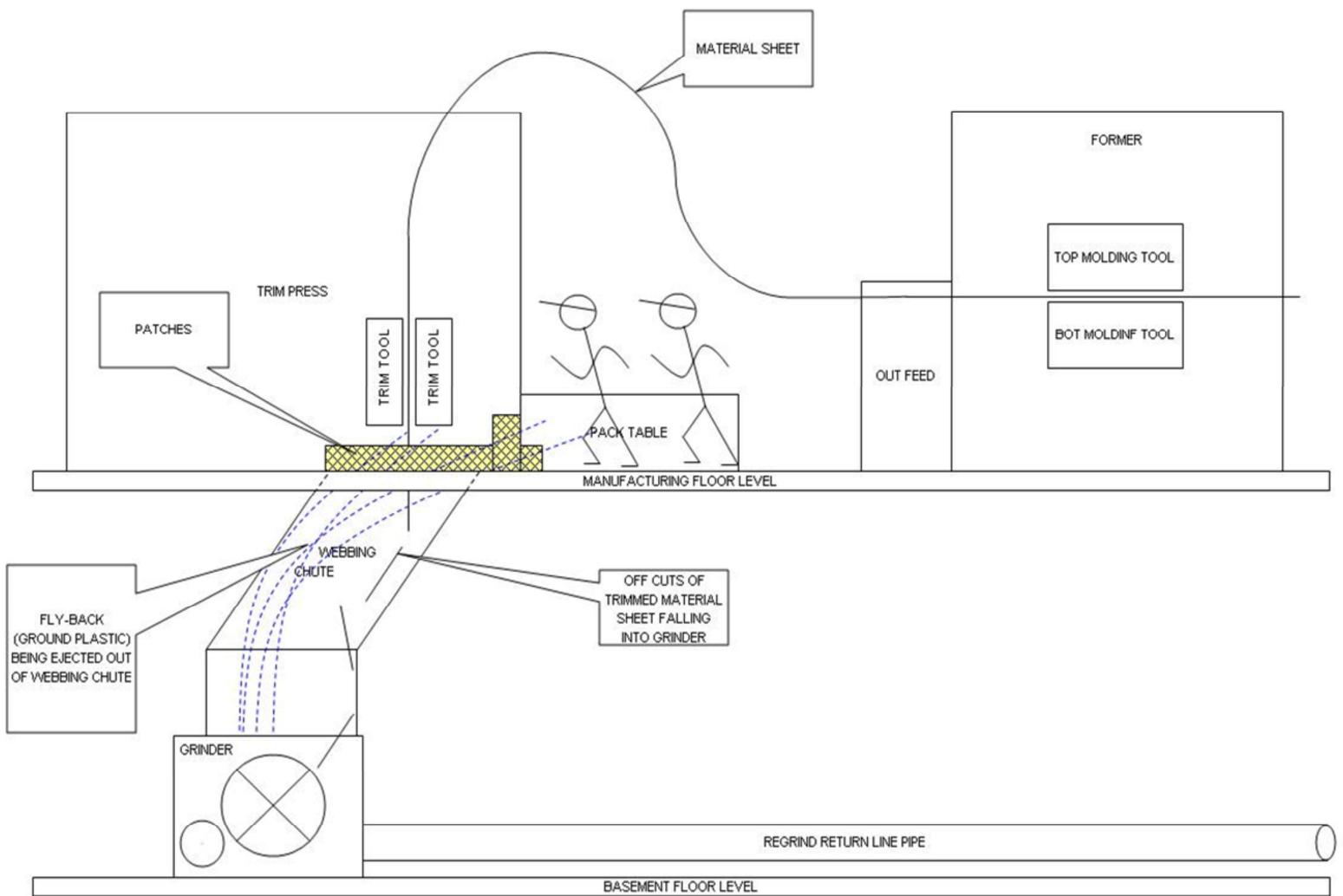
5S grammar and auditing... You can't hold competitions everyday to sustain 5S and money alone as a motivator will not last long in any organization. 5S needs to be written into everyone's job description The best way to sustain 5S is regular auditing with immediate corrective actions taken - that's the leadership part...

This is a 5S audit criteria of my own composition from Sort to Sustain. It Really doesn't showcase my engineering skills, but rather my understanding of English language as I had to compose those superlatives and declensions to make sense to an auditor in a criteria of grading observable evidence.

STANDARDIZE	No procedures of STANDARDIZE in use for the first 3 pillars of SORT, SET IN ORDER and SHINE in target area:- No objective evidence of work instructions and documentation in use. No 5S job cycle documentation in target area. No procedures of 5S standards in conformance and/or compliance.	0
	Some procedures of STANDARDIZE in use for the first 3 pillars of SORT, SET IN ORDER and SHINE in target area:- Some objective evidence of work instructions and documentation in use. Some 5S job cycle documentation in target area. Some procedures of 5S standards in conformance and/or compliance.	1
	Most procedures of STANDARDIZE in use for the first 3 pillars of SORT, SET IN ORDER and SHINE in target area:- Most objective evidence of work instructions and documentation in use. Most 5S job cycle documentation in target area. Most procedures of 5S standards in conformance and/or compliance.	2
	All procedures of STANDARDIZE in use for the first 3 pillars of SORT, SET IN ORDER and SHINE in target area:- All objective evidence of work instructions and documentation in use. All 5S job cycle documentation in target area. All procedures of 5S standards in conformance and/or compliance.	3
SUSTAIN	No procedures of SUSTAIN in use in target area:- No objective evidence of management commitment. No signs of target area leadership to promote 5S conditions. No associates motivated. No associates have been trained in 5S and do not know their 5S job cycles. No objective evidence of corrective actions taken from last audit observations and/or findings.	0
	Some procedures of SUSTAIN in use in target area:- Some objective evidence of management commitment. Some signs of target area leadership promote 5S conditions. Some associates motivated. Some associates have been trained in 5S and some know their 5S job cycles. Some evidence of corrective actions taken from last audit observations and/or findings.	1
	Most procedures of SUSTAIN in use in target area:- Most objective evidence of management commitment. Most signs of target area leadership to promote 5S conditions. Most associates motivated. Most associates have been trained in 5S and most know their 5S job cycles. Some evidence of corrective actions taken from last audit observations and/or findings.	2
	All procedures of SUSTAIN in use in target area:- All objective evidence of management commitment. All signs of target area leadership to promote 5S conditions. All associates motivated. All associates have been trained in 5S and all know their 5S job cycles. All objective evidence of corrective actions taken from last audit observations and/or findings.	3

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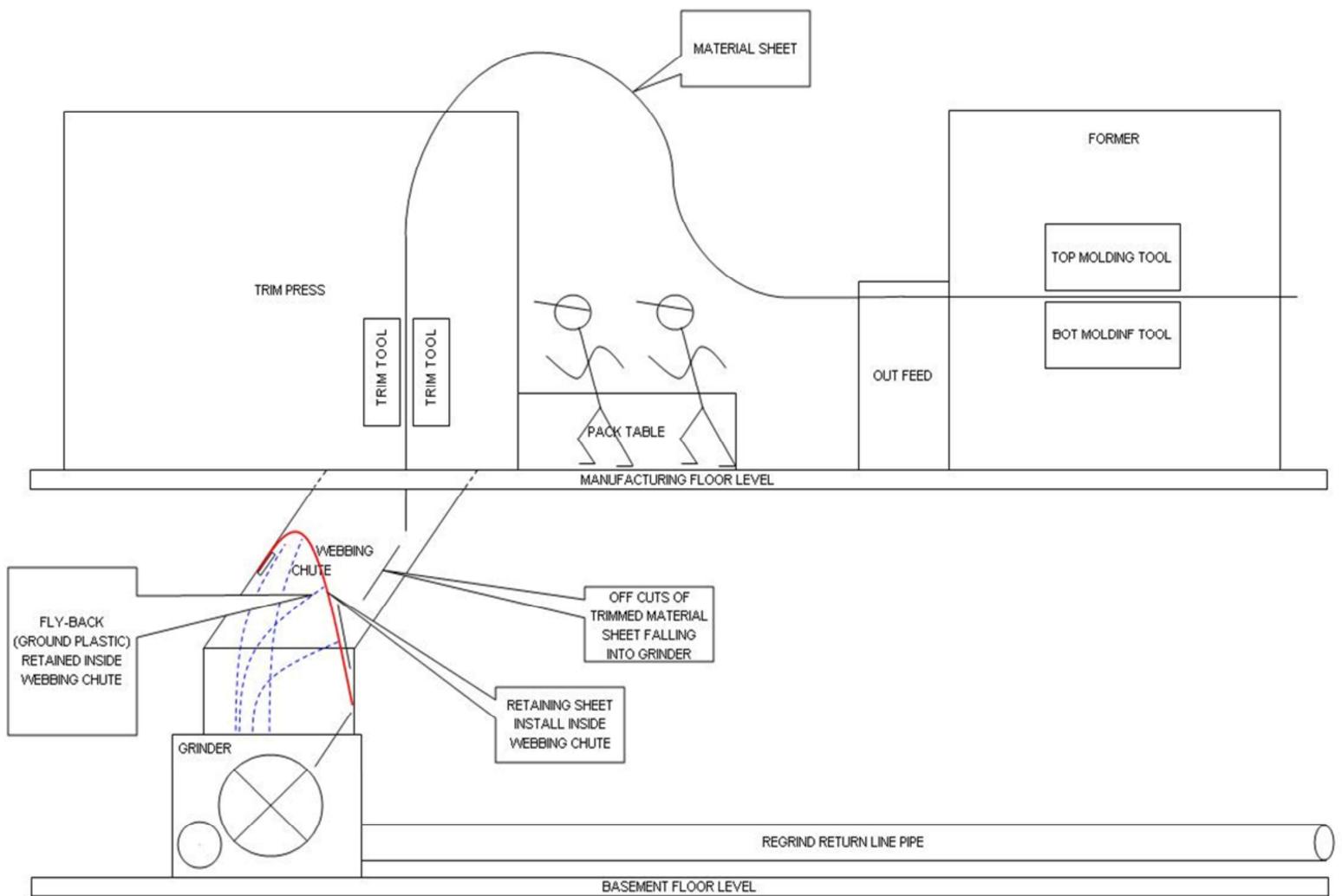
5S auditing continued...



Another example of controlling the source of contamination. This diagram shows a thermo forming process in which excess plastic sheet is ground up and reused in the same process. We were having problems with pieces of ground plastic being flung back out of the webbing chute by the grinder. This was a cause for concern primarily because it posed a contamination hazard of getting into the finished product.

Current efforts to prevent 'fly-back' as it is called, concentrated on trying to stop the effect of it being ejected out from the top of the webbing chute by means of patching - using plastic sheets and sheet metal - holes, slots, gaps and other openings between the top of the webbing chute to where it meets with the bottom of the trim press.

This was only partially effective, plastic pieces would still be ejected out through openings that were not possible to patch over with covers. One of our customer's own 2nd party audit wrote this up as a major finding so, something more had to be done.



My solution was to attack the source - down inside the webbing chute. So, I purchased some rubberized sheeting material that had a re-enforced woven substrate that was thin, but very durable. We installed a 6' feet by 8' feet sheet section directly inside the webbing chute is shown in the above diagram red line.

This was far and way more effective at preventing 'fly-back'.



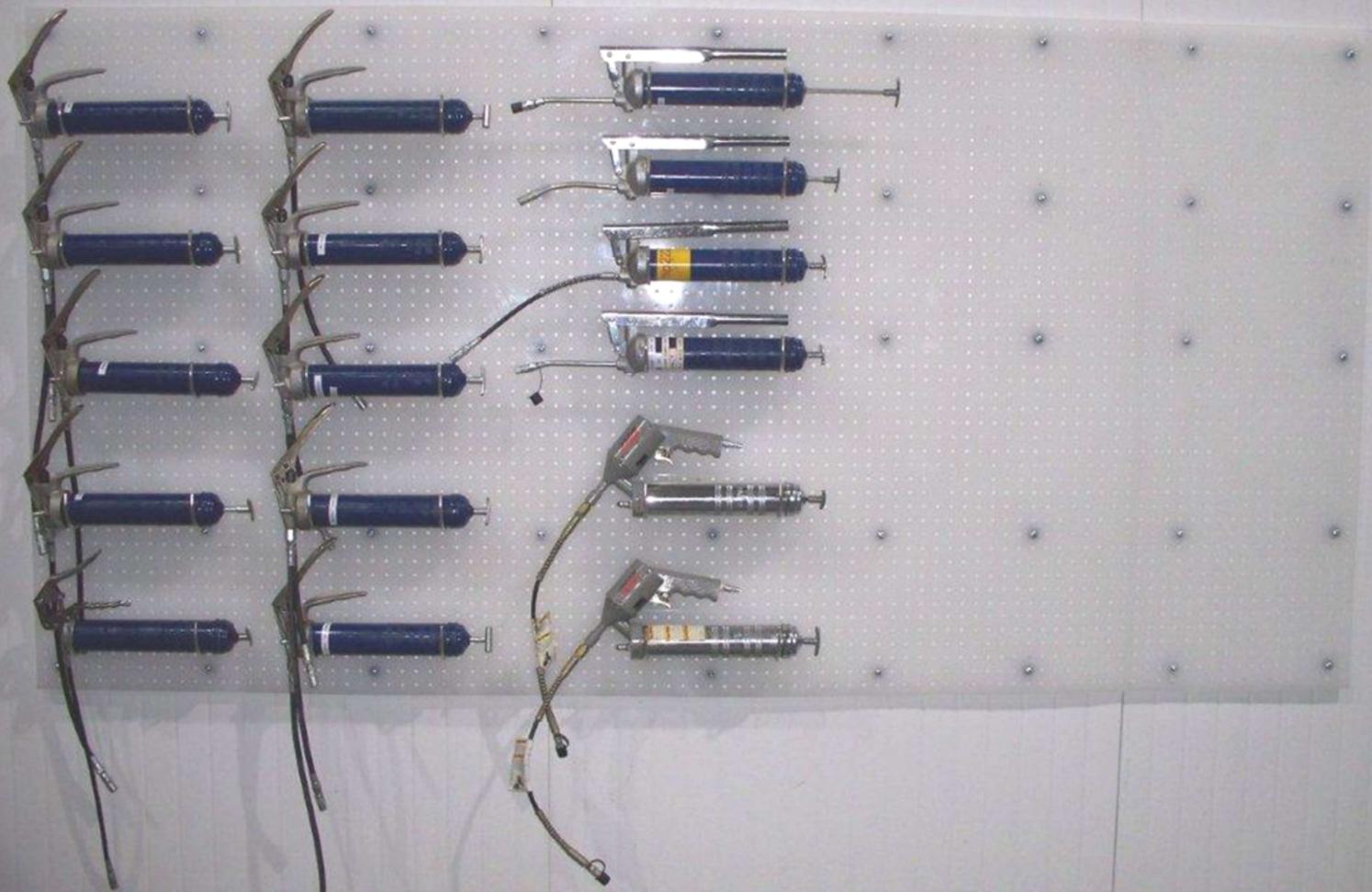
You may have gathered by now viewing my other volumes on 5S that I am a big proponent of pegboard use. I am not a fan of cabinets, lockers and other closed off storage devices, except where absolutely necessary. I prefer visual management, ease of finding items, ease of using items and ease of putting items back in place, that's 5S in full effect.

Here are a few more slides of my use of pegboards that I have built to date. I like to use polypropylene as my choice of pegboard material as it is very durable. It's available in different sizes or you can buy the largest size available that I know of which is 4' X 8' and cut it to size.

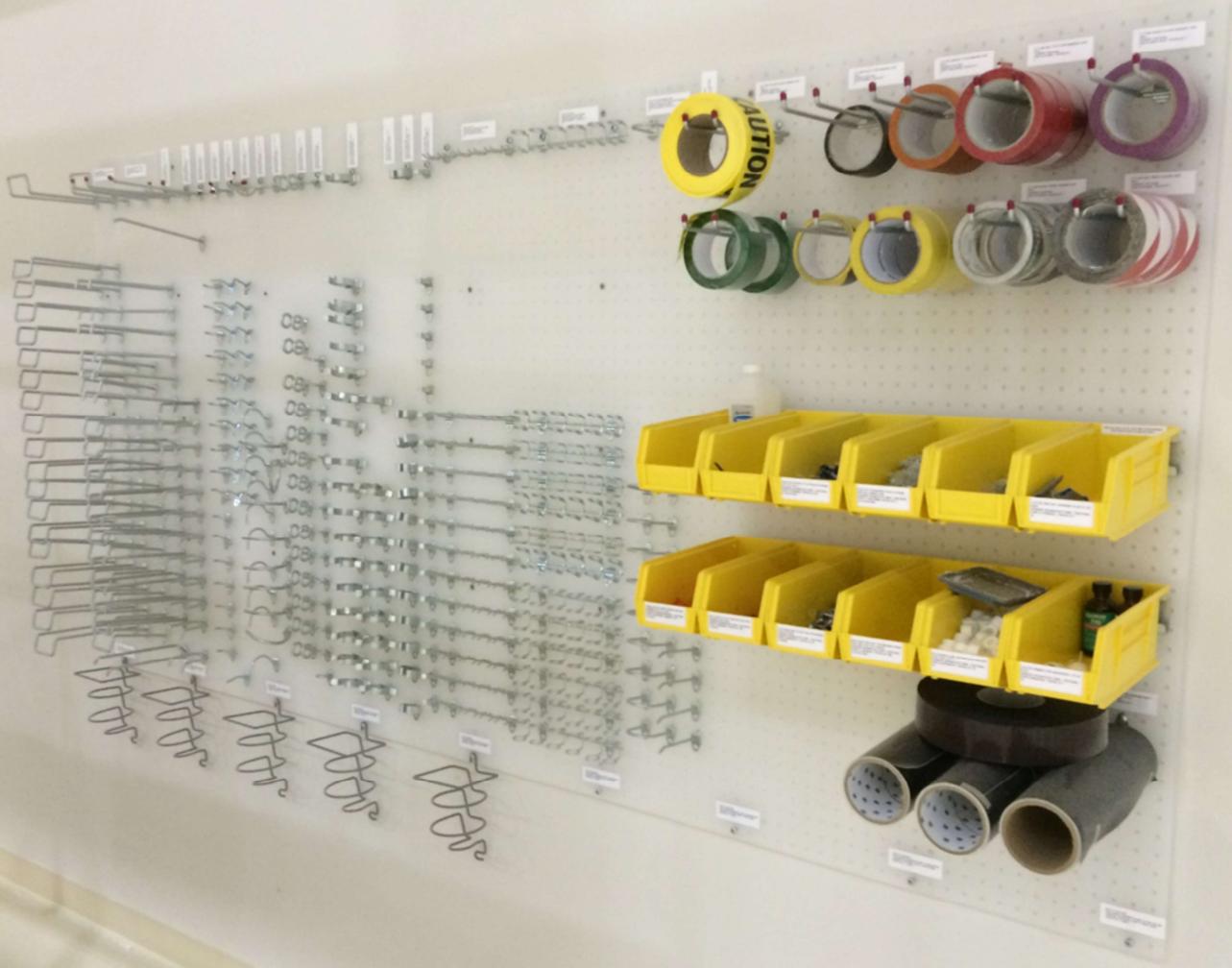
I built this pegboard to store tools and basic supplies for regular rebuilding of male and female circular cutting blades.



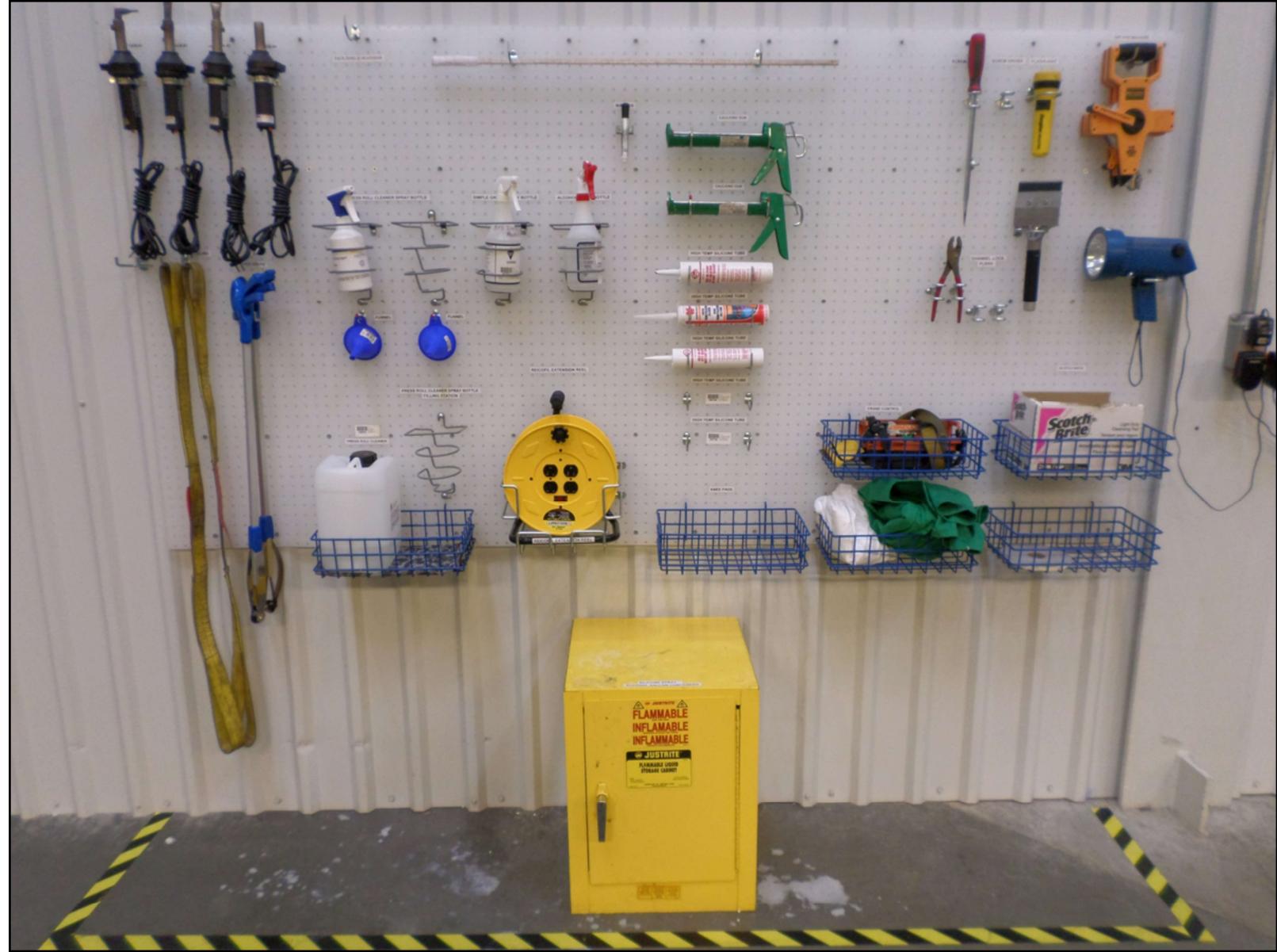
Again my use of polypropylene pegboards this time for a re-sharpening kanban board for male and female circular blades. Note the visual management posters to the left and right sides of the pegboard to illustrate the identification of blades and proper location of both types of blades and if they were dull (red dots locations to be re-sharpened – left side of pegboard) and sharp (green dots re-sharpened – to right side of pegboard).



Use of the polypropylene pegboard again, this time for storing 'setting in order' grease guns.



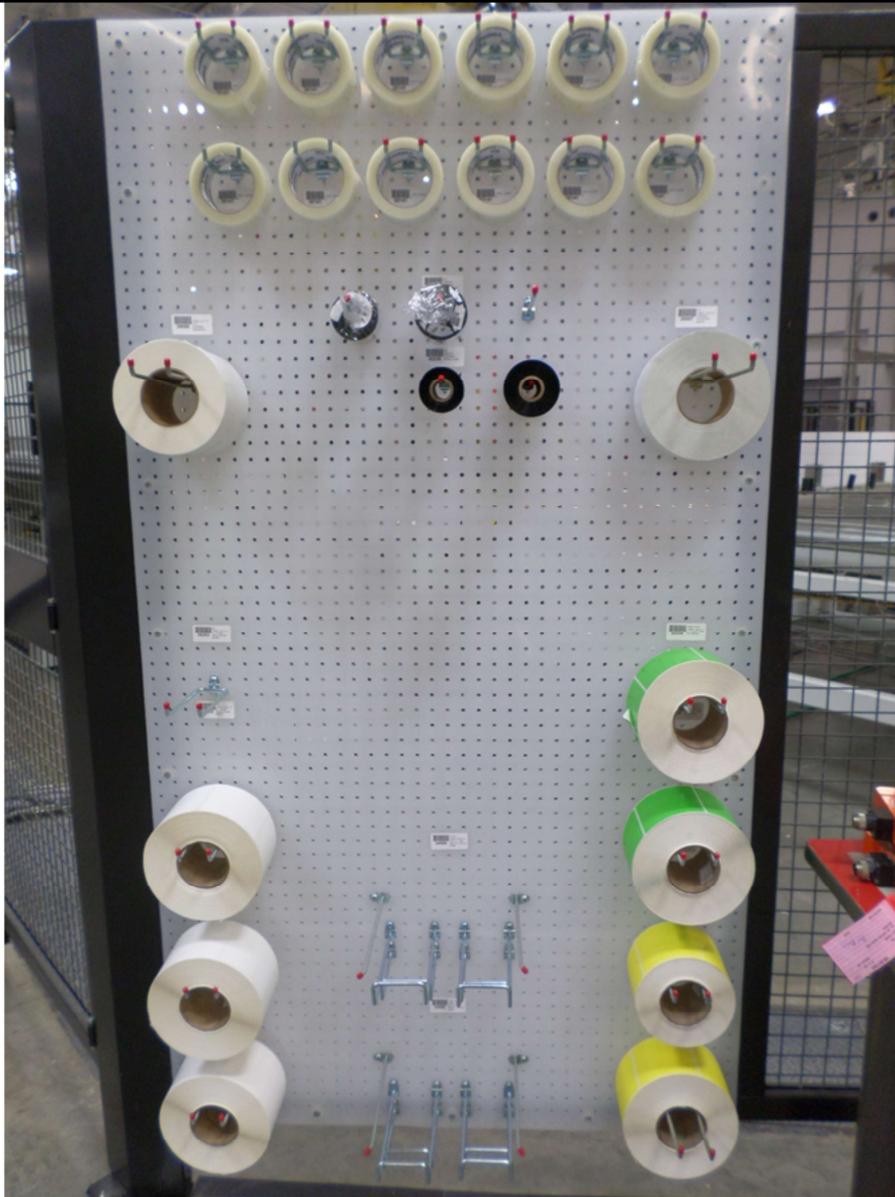
Another 8 feet X 4 feet 5S supply board that I designed and installed. I think I have installed over a 100 pegboards and whiteboards in my lean times...



Some examples of my use of pegboards. Line side equipment tools and supplies..



Some examples of my use of pegboards. Line side equipment tools and supplies..



Some examples of my use of pegboards. Line side tape, printer labels and other supplies...



Some examples of my use of pegboards...



Some examples of my use of pegboards. PPEs and forklift truck service supplies...



Some examples of my use of pegboards. SMED mobile tool board...

Pic. 1.



Some examples of my use of pegboards. SMED mobile tool board...

Pic. 2.



Some examples of my use of pegboards. SMED mobile tool board...

Pic. 3.



This came out of a Kaizen event for raw materials flow. We had a problem of excessive line side inventory to the point of use of protective packaging headers.

We calculated the daily consumption rate to the pitch and then converted consumption rates of header to inches in height and set the thresholds to colored 2" tapes levels on the wall to the line side storage.

Green = 8 hours of continuous use available. Yellow = 4 hours of continuous use available. Red = 2 hours of headers left radio material handlers (water spider) to replenish on next coupled route. I configure heights and installed tapes.

Pic. 1.

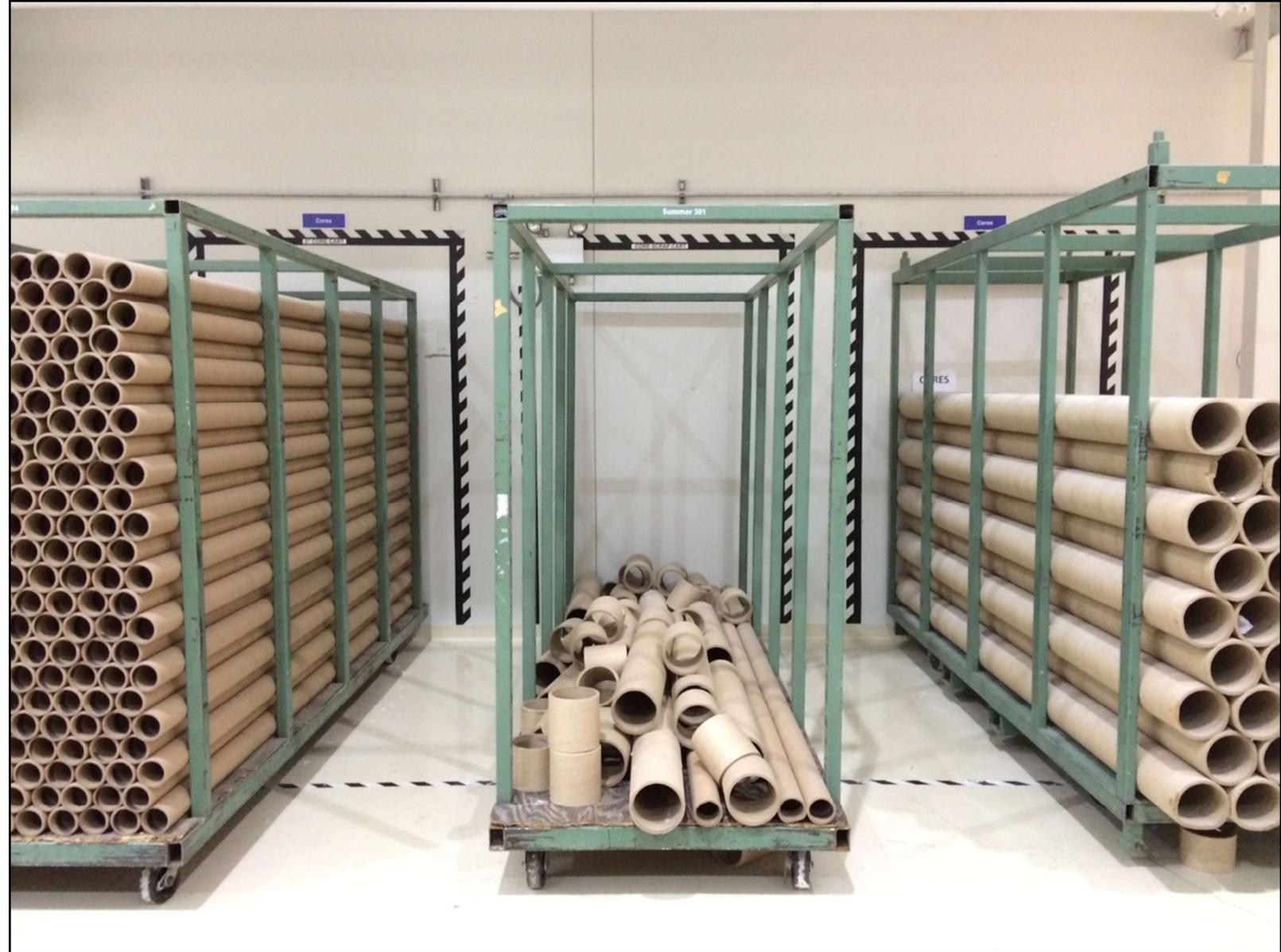


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Pic. 2. Alternate view.



Same thing here with a packaging parent material cores portable storage racks. The reason taping the wall instead of the floor instances is that it cannot be scrapped or peeled off by traffic albeit people, manual or power industrial vehicles...

Pic. 1.



Same thing here with a packaging parent material cores. The reason taping the wall instead of the floor instances is that it cannot be scrapped or peeled off by traffic albeit people, manual or power industrial vehicles...

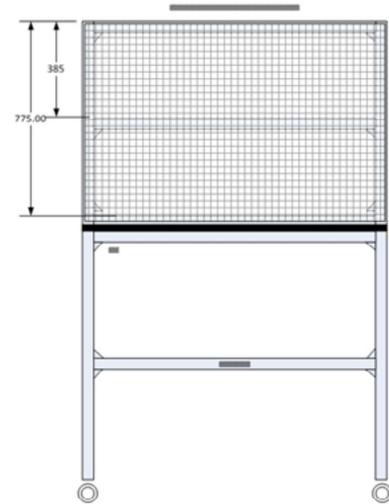
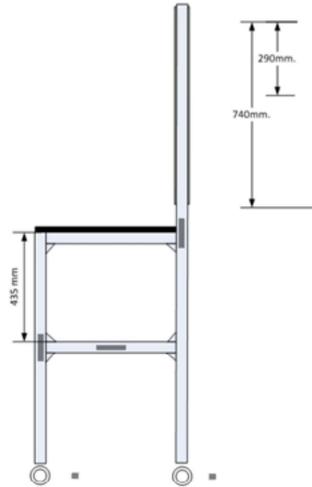
Pic. 2. Different production line that use the core portable storage racks.

PRODUCTION LINE # 1
5S JOB CYCLE FOR PRODUCTION LINE INJECTION MOLDING MACHINE AREA

DATED ON: / / BY:		5S PILLAR			5S JOB CYCLE FREQUENCY																	
NO.	PERSON/S RESPONSIBLE	SHIFT/S	5S JOB CYCLE TASK DESCRIPTION	SORT	SET IN ORDER	SHINE	STANDARDIZE	SUSTAIN	CONTINUOUSLY	HOURLY	PER SHIFT	DAILY	WEEKLY	MONTHLY	WHEN REQUIRED EX. FULLEMPY							
									DATE/TIME INITIALS COMPLETED													
1																						
2																						
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						
13																						
14																						
15																						

Went away with the paper 5S job cycles and designed these dry erase whiteboards made from Kometex. This way the information is more interactive with the person/s responsible for 5S condition for a particular target area. I designed it so that removable red dots are place in the 5S condition column and another red dot to call out the frequency of the task. The operation performs the task and then using a fine dry erase pen dates, times and initials the frequency box.

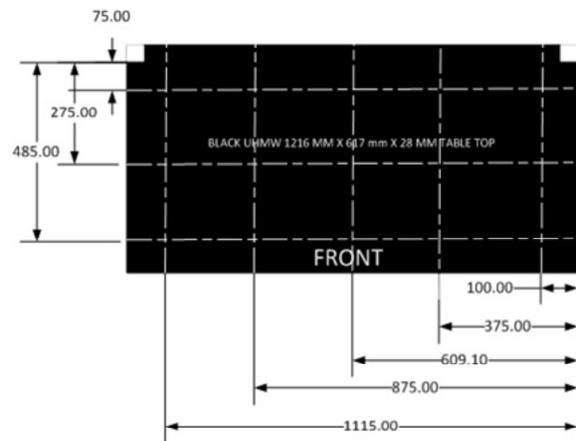
This is the MS Publisher draft version.



MATERIALS LIST	EXTENSION	DEM PART NUMBER	TOTAL
315 MM X 2 45 X 45 PROFILE	2048 MM	3842507125 6000	NEED X 3 6000 mm
915 MM X 2 45 X 45 PROFILE	1824 MM	3842507125 6000	
1125 MM X 2 45 X 45 PROFILE	7882 MM	3842507125 6000	PROFILE LENGTHS
1830 MM X 2 45 X 45 PROFILE		3842507125 6000	
X 30 45 X 45 GUSSET WITH FASTENERS		3842523542	
X 30 45 X 45 ROUND COVER CAP		3842523563	
X 2 END CAP ESD 45X45 & 45X45H BLK		3842517058	
X 4 END CAP WITH HOLE 45X45		3842523442	
X 30 10 MM T-SLOT COVER X 2000 MM LENGTH		3842346901	
X 2 LOCKING CASTER WHEEL 080 F ESD		3842541330	
X 2 CASTER WHEEL 080 ESD		3842541238	

FRED WEBBERKING	SC1 SLITTER OPERATOR INSPECTION TABLE W PEGBOARD			
	SIZE	P/SCM NO	DESC NO	REV
3 RD ANGLE PROJECTION	SCALE	1/16" = 1"	SHEET	1 OF 3

My own design of a line side inspection table with tool pegboards front and back. I draw this in MS Visio and later transferred it to the Bosch Profile design software.



My own design of a line side inspection table with tool pegboards front and back. I draw this in MS Visio and later transferred it to the Bosch Profile design software.

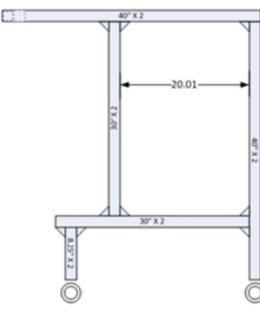
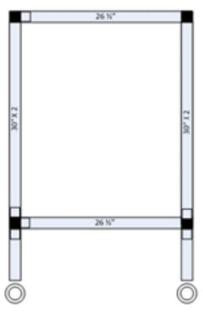
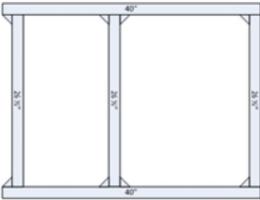
Cont.



My own design of a line side inspection table with tool pegboards front and back. I draw this in MS Visio and later transferred it to the Bosch Profile design software.

This finished deal... I draw up a bill of materials, ordered the materials, cut to size and assembled the table you see here. I can do this for you....

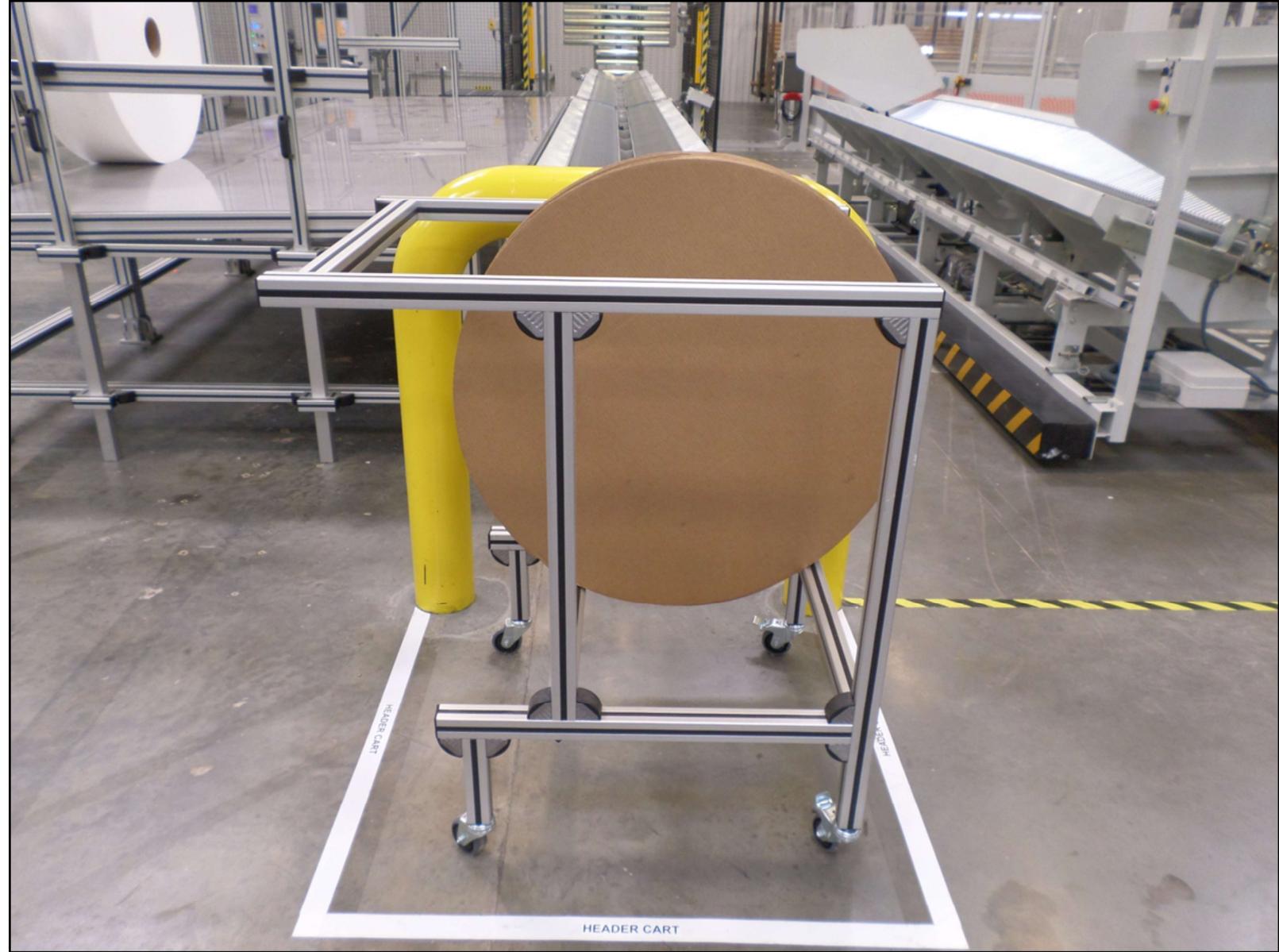
Still there after all these years...



MATERIALS LIST	EXTENSION	DEM PART NUMBER	TOTAL
80" X 2.45 X 45 PROFILE	80" (2032 mm)	3842507125	NEED X 2 6000 mm
40" X 2.45 X 45 PROFILE	80" (2032 mm)	-	PROFILE LENGTHS
30" X 2.45 X 45 PROFILE	60" (1524 mm)	-	
30" X 2.45 X 45 PROFILE	60" (1524 mm)	-	
26 1/2" X 3.45 X 45 PROFILE	53" (1346 mm)	-	
8 1/2" X 2.45 X 45 PROFILE	36 1/2" (927 mm)	-	
X 26 45 X 45 GUSSET WITH FASTENERS		3842523563	
X 26 45 X 45 ROUND COVER CAP		3842523563	
X 6 END CAP ESD 4545S & 4545SH BLK		3842517058	
X 4 END CAP WITH HOLE #5X45		3842523442	
X 24 DIMP T-SLOT COVER X 2000 MM LENGTH		3842146993	
X 2 LOCKING CASTER WHEEL D80 F ESD		3842541230	
X 2 CASTER WHEEL D80 ESD		3842541238	

FRED WEBBERKING		SC2 HEADER CART			
SIZE	3RD ANGLE PROJECTION	SCALE	1/16" = 1"	DWG NO	N/A
				SHEET	1 OF 2

My own design of a line side indirect materials storage cart. Again I designed this in MS Visio and later transferred it to Bosch Profile drafting software for pricing estimates on the bill of materials.



Installed cart line side to the production line.