

Tuesday, June 4th

# Safety in the Palm of Your Hand

H+M's Guide to Hand and Power Tool Risk Mitigation
Presenters: Jay Bice & Ariel Schrader





## **History of H+M Tool Safety**

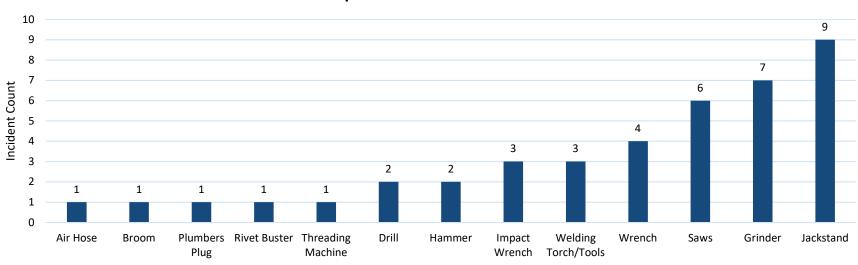
**Tool-related Incidents** *2015-2019* 

41

### **Causal Factors:**

- PPE Use/Selection
- Tool Misuse
- Body Positioning
- Lack of training

#### **Top Offenders 2015 - 2019**



### Introduction of the Tool Booklet

### What's included?

- H+M's Mission, Vision & Values
- General Tool Safety Guidelines
- Quarterly Tool Inspection Color Guide
- Risk Matrix & PPE Glossary
- 21 Specific Tools
  - Photo
  - Hazards
  - Required PPE
  - Safeguards





### Risk Matrix & PPE Glossary



### Personal Protective Equipment required (PPE): Icon Glossary

Impact		Probability						
Hazard Injury Severity Type		A - Very Unlikely A sporadic combination of factors required for an incident to result	B - Unlikely A rare combination of factors would be required for an incident to result	Cou	C - Possible Ild happen when Iditional factors re present but erwise unlikely to occur	D - Likely Not certain to happen but an additional factor may result in an accident		
1. Slight	Slight health effect/injury (First Aid)	A1	B1		C1	D1		
2. Minor	Minor health effect/injury (RW or MT)	A2	B2		C2	D2		
3. Major	Major health effect/injury (LT)	А3	В3		C3	D3		
4. Severe	Permanent Total Disability or single fatality	A4	B4		C4	D4		
5. Disastrous	Multiple serious injuries or fatalities	A5	B5		C5	<b>D</b> 5		
Gı	reen (Low)		Blue (Medium)		Orar	nge (High)		

Classification	Risk Reduction Techniques					
Low	Manage for continuous improvement. May be acceptable; however, review tool use to see if the risk can be reduced further.					
Medium	The task should be evaluated to take the hazards involved into consideration. Risks should be reduced as low as reasonably as possible prior to tool use (i.e. substitute tool with a lower risk tool where possible (Angle Grinder vs Bench Grinder), inspect the tool before use, wear appropriate PPE, etc.)					
High	Supervisor approval required. Tool use should only proceed with appropriate management authorization after consultation with the HSE Department.					



Face Shield



**Body Protection** 



**Hearing Protection** 



Respiratory Protection



**Foot Protection** 



Hard Ha



**Cut Resistant Gloves** 



Safety Glasses



### Angle Grinder



### Risk: Medium (C3)





- · Kickbacks causing severe cuts
- Loud noises
- Flying particles and debris from a shattering disc
- · Electrical shock
- Dust
- Rotating Blade

### **Required PPE**









Standard PPE

Hearing Protection

Fitted Clothing (i.e. Shirt tucked in)

Face Shield

### **Required Safeguards**

- · Tool must not have lock-on switch
- · Handle and Guard must be installed
- Tool must be protected with GFCI
- Grinding disc must meet RPM or exceed grinders RPM
- Select the right wheel for the job
- Do not wear loose or dangling garments or jewelry



7









# Implementation

### **JSA Incorporation**

#### JOB SAFETY ANALYSIS

H+M JOB#:	
-----------	--

Plant/Location:				Permit #:	Date:	Time:		
Superintendent:				Na	me of Person Comple	eting Form:	129 50	
Muster Location:			Facility Emergency #:		Wind Direction	on: Temperature:		
Task Summary:				DESCRIPTIONS			500	
		fined Spaces · De	molition · Falls · E	lectrical ·		vironmental · Excavations	: · Flammables · Lifting ons about Extra Hazardous Work.	
PPE Requirements			Tools & Equi	pment		Permits/Instructions	Signs/Tagging	
Lanyard / SRL/Harness		Ladder (Step / Extension / A-Frame)		Scaffol	ld	Hot Work	Locks/Tags	
(Circle all that apply)	120	Hand Tools (Hammer, Wrench, etc.)		Forklift		Safe Work	Hard Barricade	
Hard Hat		Powered Drill / Hammer Drill		Crane		Confined Space	Caution Tape	
Safety Glasses		Welding Torch		Generator		Excavation	Danger Tape	
Goggles / Monogoggles	s	Grinder (Angle / Bench / Pencil)		Excavator / Backhoe		One Call	Radioactive Tape	
Hearing Protection		Port-a-band		Light Plants		SDS Reviewed?	Warning Signs	
Steel Toed Boots		Saw (Circular / Band / Sawzall / Chainsaw)		Extension Cords / GFCI			Specify signs required:	
Cut Resistant Gloves		Cutoff Saw / Metabo		Pipe Stand (3 Leg / 4 Leg)		Scaffold Inspected?		
Face Shield		Imp*Wrench		Skid Steer		LOTO Verified?	1MITTO	
COVID Mask / Dust Mask		Air Compressor		Compactor (Jump. Jack / Roller)		<ul> <li>Heavy Equipment</li> </ul>	SOW TO S	
Air Purifying Mask (Half / Full)		Threading Machine		Shoring Equipment		Inspected?	SAFFTY	
Tyvek		Fire Extinguisher Flagger / Spotter		Aeria: C I G Rigging / Come-a-long		- Tools / Equipment	HM	
H2S / LEL Monitor						Inspected?		
	14.000				entification		NO.	
Slips, Trips, Falls		nt Stress	Repetitive Move		Tool Kickback	Poor Communication	Vibration	
Struck By / Impact		emical Exposure	Dehydration	III	Falling Objects	Stuck in Between	Poor Body - Signing	
	Electrical Shock		PROPERTY CONTRACTOR OF THE PROPERTY OF THE PRO		Line of Fire	Working at Heights	High Noise Levels	
Pinch Points		MONOTON I	Sharp Objects				1	
Manual Handling	Poo	or Lighting	Weather Conditions		Overhead Work	Burns (Thermal/Chemica	I) Flying Objects & Debris	
□ Fallows □ Liffing Equipment			Door Housekeeping		Coille	T Fire ( Consider	77	

### HHM

General Foreman /Foreman APPROVAL Signature:

#### JOB SAFETY ANALYSIS

H+M JOB# :

		JOB STEPS		
		formation should include the specific equip		
	dentification section	on the first page, recommendations to elin		
Jobs Steps In Sequence		List Work Area Hazards	How Will	You Control The Hazer 6?
			<b>+</b>	
			5 13	
tify that I have reviewed the above safe	work plan and under	stand all of its components. If conditions chang		w safe work plan must be complete: 19
	<u>'</u> ——	13		
	8	14		20
=======================================	9	15		21
12	10	16		22
	11	17		23
	12	18		24

### Angle Grinder



#### Risk: Medium (C3)

#### Hazards



- Loud noises
- Flying particles and debris from a shattering disc
- Electrical shock
- Dust
- Rotating Blade

#### **Required PPE**









Standard PPE

Hearing Protection

Fitted Clothing

Face Shield

#### **Required Safeguards**

- · Tool must not have lock-on switch
- · Handle and Guard must be installed
- · Tool must be protected with GFCI
- · Grinding disc must meet RPM or exceed grinders RPM
- · Select the right wheel for the job
- Do not wear loose or dangling garments or jewelry

### **Benefits & Results**

- Increased Worker Competency and Awareness
- Higher Quality JSAs
- Reduced tool-related incidents

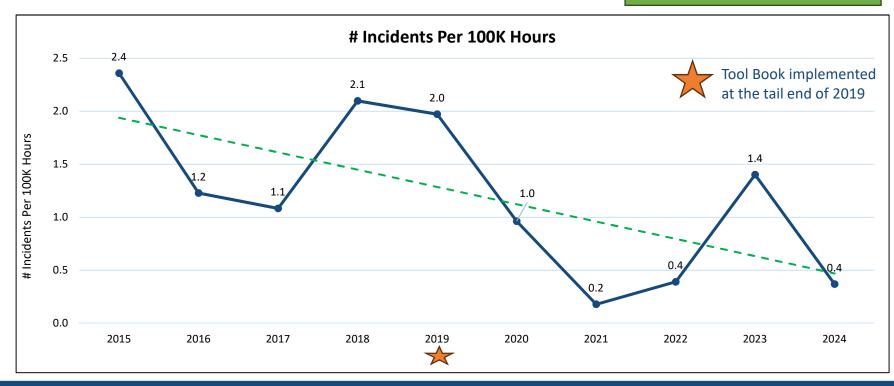
AVG Rate
Pre-Implementation
1.74

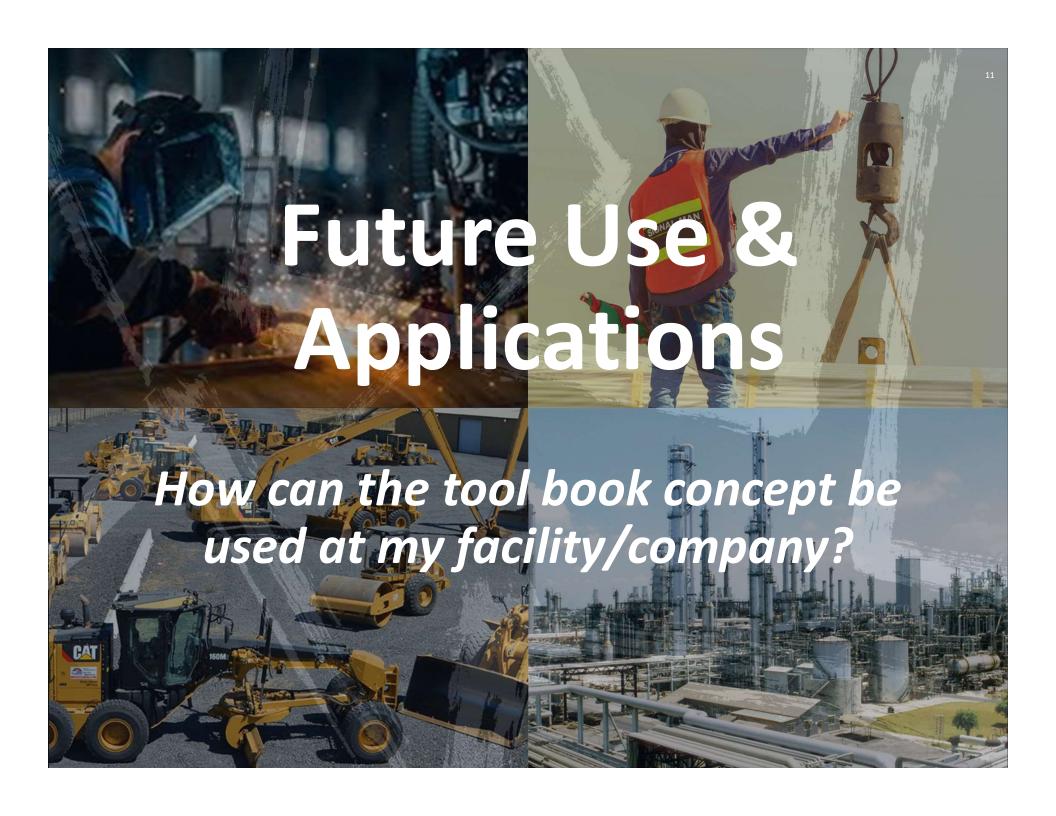
AVG Rate
Post-Implementation
0.74

(does not include 2024)

58% Reduction







# Q & A

