SUTTER CORE MACHINE REPORT

Identification			
Company/Project	**[Name Removed]**	**Status/Revision**	Preliminary Rev_0
Asset/ID Number	Sutter Core Machines 20,21	**Date**	07-19-2017
Auditor Name	Ken Hackworth	**Auditor Signature**	

Photos

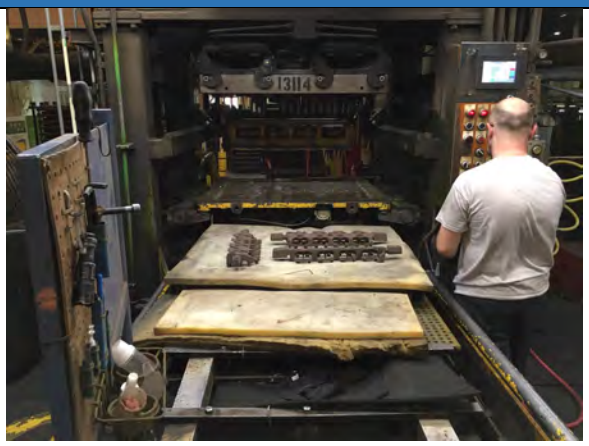

Photo 1: Machine Overview

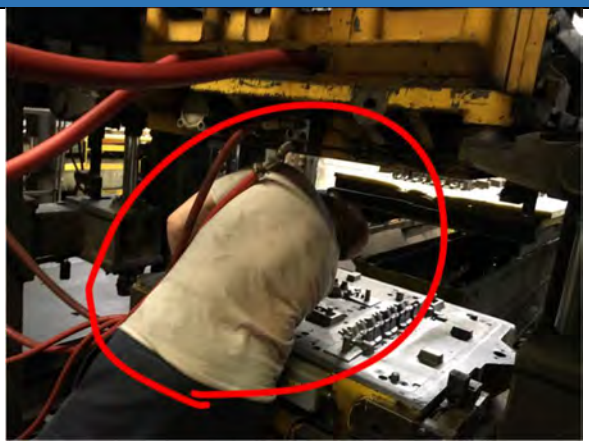

Photo 2: Observation

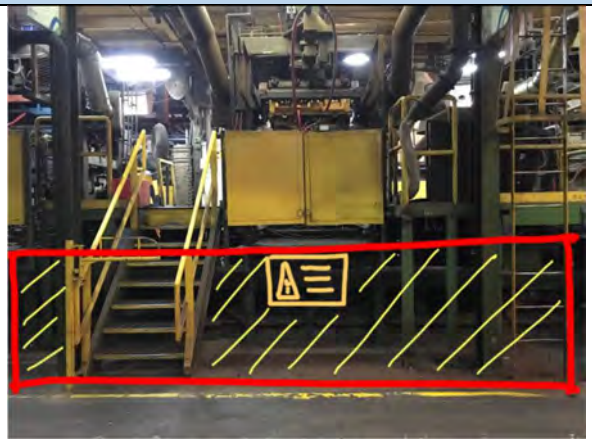

Photo 3: Observation

Photo 4: Observation

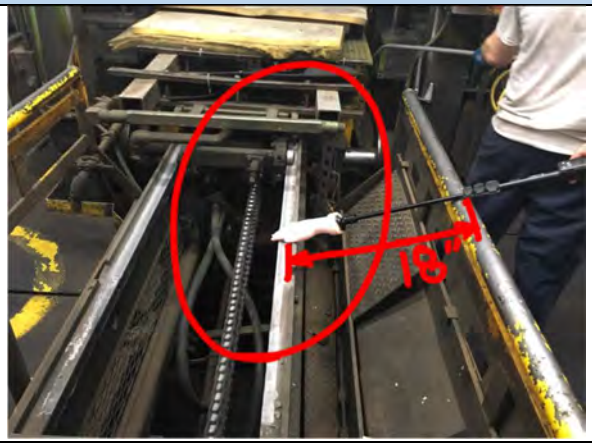

Photo 5: Observation

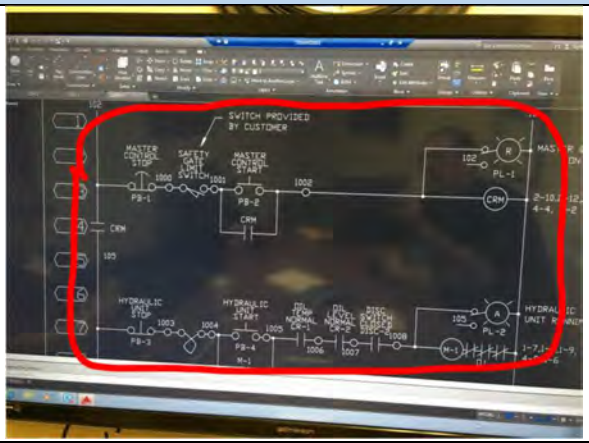

Photo 6: Observation

Evaluation Criteria	
Criteria	**Observation**
Applicable U.S. Codes and Standards	OSHA 29 CFR 1910.219, ANSI B11.TR6, ANSI B11.0, ANSI B11.19, ANSI / NFPA 79, OSHA 29 CFR 1910.212

Machine Guarding Checklist	
Question	**Answer**
Requirements for all Safeguards (OSHA Basics of Machine Safeguarding)	
Do the safeguards prevent contact with the point of operation, ingoing nip points, rotating parts, flying chips, and sparks?	No
Do the safeguards prevent workers' hands, arms, and other body parts from contacting dangerous moving parts?	No
Are all hinged, adjustable, or removable guards interlocked with a safety switch?	No
Do the safeguards ensure that no object will fall into the moving parts?	No
Do the safeguards permit safe, comfortable, and relatively easy operation of the machine?	No
Can the machine be oiled without removing the safeguard?	N/A
Mechanical Hazards - Point of Operation (OSHA 1910.212)	
Is there a point-of-operation safeguard provided for the machine?	No
Does it keep the operator's hands, fingers, body out of the danger area?	No
Are all safeguards in place, with no evidence of tampering or removal?	No
Is the machine equipped with effective safeguards (unlikely to bypass)?	No
Power Transmission Apparatus (OSHA 1910.219)	
Do the safeguards prevent contact with any unguarded gears, sprockets, pulleys, or flywheels?	No
Do the safeguards prevent contact with any exposed belts or chain drives?	No
Do the safeguards prevent contact with any exposed set screws, key ways, collars, etc.?	No
Are Start, Stop, and Emergency stop controls within easy reach of the operator?	Yes
If there is more than one operator, are separate controls provided?	N/A
Are safeguards provided for all hazardous moving parts of the machine including auxiliary parts?	No
Control Reliability (ANSI B11.19 / NFPA 79)	
Are all safety devices approved for safety (rated PLd or PLe)?	No
Are all safety circuits wired dual channel?	No
Are all relays and contactors in the safety circuit force guided?	No
Are the safety relays or contactors the final switching elements (not going to PLC)?	No
Does each safety relay or contactor have feedback signals wired back to the safety relay/controller?	No
Is hazardous motion stopped by redundant relays, redundant contactors, or safety drives with safety rated stop (STO, ST1, etc.) signals?	No
Non-mechanical Hazards	
Are administrative controls in place to safeguard workers from noise exposure exceeding 85 dBA?	N/A
Have special guards, enclosures, PPE, or administrative measures been provided to prevent access to surface temperatures meeting or exceeding 140 deg. F?	N/A
Hazardous Energy Control - Partial Checklist (OSHA 1910.147)	
Does the client have a program for control of hazardous energy sources (lockout/tagout)?	Yes
For this machine, do procedures exist for shutting down, isolating, blocking, and securing (locks/tags) energy?	No
For this machine, are all energy-isolating devices accessible and capable of being operated in a manner that isolates the machine or equipment from the energy source(s).	Yes

Machine Safety Report

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MACHINE SAFETY SPECIALISTS

Observations

Observed Hazards	Crushing / Impact, Failure to Stop Moving Parts, Unintended / Unexpected Start-Up
Existing Safety Devices	Awareness Barriers, Emergency Stop Devices (Palm / Push Buttons or Rope / Cable Pulls), Supervision, Personal Protective Equipment
Additional Observations	No safety rated devices found in control panel. Safety systems are not control reliable. Poorly guarded machine. Verify prints to determine if OEM guards have been removed. No blocking devices or methods of removing potential energy were observed.
Video? Yes	

Affected Persons	Operators	Maintenance	Visitors	Other
	Yes	Yes	Yes	

Estimated Risk with Existing Safeguards — **Estimated Risk Level:** [redacted]

Injury Severity	**S3: Serious**		**Exposure**	**E0: Prevented**		**Avoidance**	**A3: Not Possible**	
	S2: Moderate			**E2: High**			**A2: Not Likely**	
	S1: Minor			**E1: Low**			**A1: Likely**	

Notes:

One or Any Combination of Risk Reduction Measures that will Acceptably Reduce the Risk Level May be Used.

Complementary Protective Measures May be Used in Conjunction with the Above Risk Reduction Methods but Shall not be Used as the Primary Risk Reduction Factor.

One or a Combination of Elimination, Substitution, and Safeguarding or SRP/SC is REQUIRED to Reduce Risks to an Acceptable Level.

Recommendations

Control Circuit? Yes

Risk Reduction Method(s)			Safety Circuit Integrity		
Design	**Safeguarding**	**Admin.Controls**	**PL**	**Category**	**ControlReliability**
	✓	✓	d	3	Yes

Actions/ Methods	Add Yellow Background to E-Stop(s)., Add/Repair guarding as needed to prevent ANSI scale reach., Hazards are within ANSI safety scale reach., Make all safety circuits control reliable. This requires dual channel circuits with monitoring/feedback and approved safety components (safety relays, safety interlock switches, etc.)., Lockout/Tagout (LOTO) training needed for operators, maintenance, and supervisors. Enforcement required., Add or improve documented personnel training.
Devices	Fixed Guards, Interlocked Guards (With or Without Locking Mechanism), Awareness (Safety) Signs., Emergency Stop Devices (Palm / Push Buttons or Rope / Cable Pulls), Safety Light Curtains (Screens) and Safety Single/Multiple Beam Devices, Safe Work Procedures, Supervision, Personal Protective Equipment, Area Scanning Presence-Sensing Safeguarding Devices, Safety Mat Devices, Safe-Location Safeguarding.
Comments	**1.** Crush points within easy reach while the machine is running. Add guarding as needed to prevent ANSI scale reach to hazards. **2.** OEM drawings observed showing extensive hard guarding. Verify applicability of this drawing and add guarding. OEM guarding may not be adequate for OSHA/ANSI compliance. Verify all hard guard designs with ANSI safety scale. **3.** Existing safety circuits are not control reliable. Upgrade all safety circuits to control reliable. **4.** Verify existing LOTO procedure as die blocks were not observed. Potential energy, and pneumatic energy sources do not appear to be addressed in routine procedures. Control reliability, when combined with compliant guarding and safe working procedures are an adequate alternative to LOTO for qualifying tasks. **5.** Crush hazards readily accessible under platform. Personnel report that below platform area is cleaned while existing or adjacent machines are running. We view this as a high-risk area. Add administrative measures for this area, such as signs, awareness barriers, documented training and supervision as interim measures until safeguarding plan is developed. **6.** Scissor lift must also be guarded.