



BILLING CODE: 4510-26-P

DEPARTMENT OF LABOR

Occupational Safety and Health Administration

[Docket No. OSHA-2019-0004]

Gestamp West Virginia: Grant of Permanent Variance

AGENCY: Occupational Safety and Health Administration (OSHA), Labor.

ACTION: Notice of Permanent Variance.

SUMMARY: In this notice, OSHA grants a permanent variance to Gestamp West Virginia from the provisions of the OSHA standard that regulate the control of hazardous energy (lockout/tagout).

DATES: The permanent variance specified by this notice becomes effective on [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER] and shall remain in effect until OSHA revokes this permanent variance.

FOR FURTHER INFORMATION CONTACT: Information regarding this notice is available from the following sources:

Press inquiries: Contact Mr. Frank Meilinger, Director, OSHA Office of Communications, phone: (202) 693-1999; email: meilinger.francis2@dol.gov.

General and Technical Information: Contact Kevin Robinson, Director, Office of Technical Programs and Coordination Activities, Directorate of Technical Support and Emergency Management, Occupational Safety and Health Administration, U.S. Department of Labor; phone: (202) 693-2110 or email: robinson.kevin@dol.gov.

SUPPLEMENTARY INFORMATION:

Copies of this Federal Register notice: Electronic copies of this *Federal Register* notice are available at <https://www.regulations.gov>. This *Federal Register* notice and other relevant information are also available at OSHA's webpage at <https://www.osha.gov>.

I. Notice of Application

On July 30, 2018, OSHA received a variance application from Gestamp West Virginia LLC ("Gestamp" or "the applicant") from the provision of the OSHA standard that regulates the control of hazardous energy ("lockout/tagout" or "LOTO") for their South Charleston, West Virginia facility. Specifically, Gestamp sought a variance from the provision of the standard that requires "all energy isolating devices needed to control the energy to the machine or equipment shall be physically located and operated in a manner as to isolate the machine or equipment from the energy source(s)." (29 CFR 1910.147(d)(3)). Gestamp also requested an interim order pending OSHA's decision on the application for a variance (Document ID No. OSHA-2019-0004-0002).

According to the application, Gestamp makes parts for the automotive industry. Gestamp uses a Trumpf laser cell to trim excess metal from automotive parts and burn holes into those parts. The laser operates using a stream of monochromatic coherent light to emit very high levels of energy to cut metal parts. The laser trimming process occurs within a fully enclosed machine structure (cell), which contains the laser that is mounted onto a multi-axis transport to allow the laser to cut at a variety of angles; a turntable to load the rough parts to be cut using the laser; a water chilling system used to cool the laser; and numerous engineering controls that prevent unauthorized access to the interior of the cell. When actuated, the turntable rotates to the inside of the machine and presents the parts to the laser. The laser system functions in a robotic manner, with axes of motion to cut the metal parts. The laser is managed by a Human Machine Interface

(HMI), an interface by which the operator inputs commands to and receives information from the laser cell machine.

The laser trimming process creates a byproduct of chaff, dust, dirt, chips, and slugs that must be cleaned from the machine enclosure cell frequently to enable the laser to function properly. The cleaning is performed by operators and/or maintenance personnel inside the cell and involves sweeping up the byproducts and debris left on the floor of the cell during the operation. These cleaning activities occur at the end of each shift and typically require about 15 minutes to complete.

Gestamp asserts that without frequent cleaning, the laser system would not function properly. Further, the applicant asserts that while the laser has the capability of being de-energized and isolated as required by OSHA and ANSI standards, frequent powering down and locking out of the laser greatly reduces the performance and overall life of the laser because it takes anywhere from 30 minutes to several hours to power back up after being completely shut down, which reduces the efficiency of the laser. The applicant notes that powering down the laser to perform cleaning activities requires the addition of auxiliary lighting, which would involve the use of extension cords and portable lights, potentially introducing fall and shock hazards. Additionally, the applicant notes that the primary electrical disconnects are not designed or intended for frequent cycling and would increase the risk of arc flash hazards to employees.

OSHA initiated a technical review of Gestamp's variance application and developed a set of follow-up questions regarding the assertion that the alternative measures provide equivalent worker protection. On March 15, 2019, Gestamp provided supplemental materials to support the variance application including: a side by side analysis of the requirement of the standard and the proposed alternative (OSHA-2019-0004-0005), a safety work instruction outlining their proposed alternative (OSHA-2019-0004-0004), and a description of Gestamp's Lockout/Tagout Program (OSHA-2019-0004-0003). In

reviewing the application, OSHA evaluated the alternative energy control procedures identified in the variance application and the supplemental materials provided by Gestamp.

OSHA reviewed Gestamp's application for the variance and interim order and determined that they were appropriately submitted in compliance with the applicable variance procedures in Section 6(d) of the Occupational Safety and Health Act of 1970 (OSH Act, 29 U.S.C. 655(d)) and OSHA's regulations at 29 CFR 1905.11 ("Variances and other relief under section 6(d)"), including the requirement that the applicant inform workers and their representatives of their rights to petition the Assistant Secretary of Labor for Occupational Safety and Health for a hearing on the variance application.

Following this review, OSHA determined that the applicant's proposed alternative, subject to the conditions in the request and imposed by the Interim Order, provides a workplace that is as safe and healthful as those required by the OSHA standard. On August 5, 2020, OSHA published a *Federal Register* notice announcing Gestamp's application for a permanent variance, stating the preliminary determination along with the basis of that determination, and granting the Interim Order (85 FR 47422). OSHA requested comments on each.

OSHA did not receive any comments or other information disputing the preliminary determination that the alternative was at least as safe as OSHA's standard, nor any objections to OSHA granting a permanent variance. One comment was received (OSHA-2019-0004-0006) supporting Gestamp's application. This comment did not require a response from the agency. Accordingly, through this notice OSHA grants a permanent variance subject to the conditions set out in this document.

II. The Variance Application

A. Background

Gestamp's variance application and the responses to OSHA's follow-up questions included the following: detailed descriptions of the laser cutting process; the equipment used in the laser cutting process; the proposed alternative to completely isolating the laser during cleaning activities; and technical evidence supporting Gestamp's assertions that its alternative methods provide equivalent worker protection.

According to the information included in the application, Gestamp's laser is considered a Class 4 operation. Class 4 operations are defined by ANSI as "very dangerous to the eyes and skin, with a risk of fire and explosion."¹ No workers are allowed inside the laser cell while the laser is being used. Instead, the operator's station is located outside of the laser cell and the operator uses hand controls to activate the laser turntable. The laser cutting system is a fully enclosed structure, with the laser operating similar to a robot. The laser is affixed to the end of arm tooling within this fixed structure. Stamped parts are loaded into the cell and unloaded from the cell structure via a turntable from outside of the laser cell. When actuated, the turntable rotates to the inside of the machine and presents the parts to the laser. The turntable cannot rotate until the operator clears the light curtain, which is used as a safeguard blocking access between the turntable and the operator's station.

As noted above, the laser trimming process creates a byproduct of chaff, dust, direct, chips, slugs, and debris, and the laser system must be cleaned to enable the laser to function properly. The laser cell has access doors to enable cleaning and certain other necessary tasks to be performed inside the cell. The access doors utilize interlocked switches that disable hazardous motion of the turntable and laser energy when opened.

The machine enclosure of the Trumpf laser cell is protected by two entry/exit points: a far access door and a near access door. Each access door has an interlock switch that is

¹ ANSI B11.21 and ANSI Z136.1

integrated into the laser and machinery motions. When the door to the laser cell is opened, the release of laser energy is inhibited and the machine axes cannot move. Further, Gestamp added red mechanical latches (hasps) to the external side of each entry door that allow a lock or a group lockout hasp or lock to be affixed, thus locking the hatch in its location.

In addition, Gestamp has implemented procedures to prevent the door from closing during laser cell cleaning activities, which could actuate the system. Gestamp requires all personnel entering the laser cell to individually lockout by placing their individual lock on the slide bar. Each employee entering the laser cell must remove his own personal key from his individual lock or hasp, take the key into the cell, and keep the key in his possession the entire time he is in the laser cell. If more than one employee enters the cell, one of the employees shall be designated the Leader of the cleaning crew. The Leader can only remove his lock after he has verified that everyone else in the cleaning crew has left the laser cell.

Gestamp contends that the alternative energy control procedures included in the application provide the workers with a place of employment that is at least as safe and healthful as they would obtain under the existing provisions of OSHA's control of hazardous energy (lockout/tagout) standard. Gestamp certifies that it provided employee representatives of affected workers with a copy of the variance application. Gestamp also certifies that it notified the workers of the variance application by posting, at prominent locations where it normally posts workplace notices, a summary of the application and information specifying where the workers can examine a copy of the application. In addition, the applicant informed the workers and their representatives of their rights to petition the Assistant Secretary of Labor for Occupational Safety and Health for a hearing on the variance application.

B. Variance from 29 CFR 1910.147(d)(3)

As an alternative means of complying with the requirements of 1910.147(d)(3), Gestamp proposed to use a comprehensive engineered system and appropriate administrative procedures. The applicant referenced ANSI/ASSE Z244.1-2016, clause 8, which states that “Lockout or tagout shall be used unless the user can demonstrate an alternative method will provide effective protection by persons. When lockout or tagout is not used, then alternative methods shall be used only after the hazards have been assessed and risks documented” as the basis for their alternative lockout method.

Gestamp asserted in the variance application that the cleaning task within the Trumpf laser cell is one that requires access to the machine in a manner that renders full lockout infeasible. Because the Trumpf laser cell is a Class 4 operation, no one is allowed inside the machine enclosure during laser operations. Gestamp also asserted in the variance application that because the cleaning task occurs on a frequent basis, regular powering down and locking out of the laser to perform the routine cleaning operations could damage the laser over time. Further, full lockout of the laser cell requires the use of auxiliary lighting sources, which could introduce fall and shock hazards into the cleaning operation. Additionally, the design of the Trumpf laser cell includes advanced control systems that prevent engagement of the laser while the laser cell is occupied. As an alternative energy control procedure, Gestamp has developed an engineered system that uses red mechanical latches attached to the external side of each door of the laser cell. The latches are secured to the frame of the machine with two metal screws and have a locking capacity that allows a lock or a group lockout hasp to be affixed; this latch prevents the door from closing and the laser from being able to be energized during laser cell cleaning operations.

Gestamp maintained that use of the proposed latch system provides a level of safety equivalent to what can be achieved by strict compliance with the standard at 1910.147(d)(3). According to Gestamp’s variance application, equivalent safety is

achieved by prohibiting the release of laser energy during cleaning operations utilizing a modified door latch that prevents unintentional re-energization of the laser. In the variance application, Gestamp provided the following step-by-step details of the safety procedures to be followed prior to and following cleaning activities:

Process to Enter Trumpf Laser Cell to Perform Cleaning Activities:

1. Communicate to the Operator and coworkers in the area that cleaning will take place. At the Human Machine Interface (HMI) screen, change the Series Production from “Continuous Job” to “Single Job.” Once the turntable has come to a complete stop, open one of the doors on the side of the laser cell by using the handle.
2. After the door is open, communicate the lockout to coworkers and move the red slide bar to prevent the door from being shut while inside. All personnel entering the laser cell must individually lockout, by placing their individual lock on the slide bar or hasp. If more than one person is to enter on either side, a lockout hasp must be used.
3. After locking out on the laser cell, verify that “Feed Hold Through Safety Device Error” is displayed on the HMI screen.
4. To verify that the turntable will not move while working inside of the laser cell, hit the green activation button. *Employees can enter the laser cell only after these four (4) steps are completed.*
5. When work is completed inside the laser cell, all employees who entered the cell, except the Leader when more than one employee entered, shall exit and remove their individual locks. Once all other employees are outside of the laser cell, the Leader must verify his location and hit the Danger Zone Acknowledge Button on the inside of the cell door. The Leader must

immediately exit the cell, remove his lock, move the slide bar back to allow the door to shut, and shut the door.

6. Once cleaning of the laser cell is complete and all employees are clear of the restricted area, place the laser HMI back into production by placing the Series Production from “Single Job” to “Continuous Job” by clicking the “Continuous Job” button.
7. After the HMI has been released to production, press the green button which resets the light curtains and causes the robot to place the next part on the turntable.

Process to Restart Trumpf Laser Cell after Door is Opened:

1. Remove all padlocks from mechanical latch from the far access door.
2. Open the mechanical latch.
3. Visually inspect area for the presence of persons or tools.
4. Close the far machine enclosure door.
5. Walk to near access door.
6. Remove all padlocks from mechanical latch from the near access door.
7. Open the mechanical latch.
8. Visually inspect area for the presence of persons or tools.
9. Press the reset switch on inside of the machine enclosure.
10. Close the door within 3-4 seconds of pressing the reset switch.
11. Turn the key switch on the HMI to enable operations.
12. Engage HMI to activate laser.
13. Enable continuous mode operation (push button) within HMI.

The proposed door latch system cannot be easily defeated or tampered with.

Gestamp asserts that this alternative meets the requirements for control reliability as stated in ANSI B11.0 and ANSI Z244.1, in that no single fault of a component, wire,

device or other element will result in the loss of the safety function.² According to the variance application, in the event of a fault, the laser will achieve a safe state by inhibiting lasing, machine motions, and the release of hazardous energy. In addition, the system includes system fault monitoring, tamper resistance, and exclusive employee control over lockout devices. The Trumpf laser machine enclosure has a door interlock switch that is integrated to the laser and machinery motions. When the door to the laser cell is open, the release of laser energy is inhibited and the machine axes cannot move; therefore the laser will not operate.

To enhance the lockout functions of the Trumpf laser cell, Gestamp added red mechanical latches to the external side of each entry door to the laser cell. The lockable interface switches used with the mechanical latches are designed to be used as lockable devices. The circuitry of the lockable interlock switches inhibit both machinery motions and laser energy release with the Trumpf enclosure door switches and will not operate when disengaged.

C. Technical Review

OSHA conducted a review of Gestamp's application and the supporting technical documentation. After completing the review of the application and supporting documentation, OSHA concludes that Gestamp:

1. Modified the access door with red mechanical latches with a slide bar to prevent the door from being closed while cleaning activities are performed within the laser cell;

² ANSI B11.0 defines control reliability as the capability of the [machine] control system, the engineering control devices, other control components and related interfacing to achieve a safe state in the event of a failure within the safety-related parts of the control system.

ANSI Z244.1 defines control reliability as the capability of the machine, equipment or process control system, the safeguarding, other control components and related interfacing to achieve a safe state in the event of a failure within their safety-related functions.

2. Installed a personal lock control system and implemented administrative energy control procedures that prevent employee exposure to hazards associated with energy while performing cleaning activities within the laser cell;
3. Performed a job hazard analysis for tasks associated with cleaning the laser cell and conducted and documented an electrical isolation analysis, system and functional safety reviews, and control reliability analysis to verify that the use of the latch system and administrative energy control procedures prevent the closure of the doors to the laser cell, prevent mistaken or intentional re-energization, and maintain immobility in the event of fault conditions;
4. Developed detailed administrative energy control procedures for entering the laser cell to perform cleaning functions and distinguished these work procedures from other tasks that require full lockout;
5. Implemented detailed administrative energy control procedures designed to ensure that each authorized employee applies a personal lock to the secondary group lock box;
6. Made the administrative energy control policies and procedures available to employees;
7. Trained authorized and affected employees on the application of the proposed alternative work practice and associated administrative energy control policies and procedures; and
8. Developed a LOTO procedure which includes administrative controls to minimize the potential for authorized and affected employees to enter the laser cell when harm could occur.

After the technical review identified above, OSHA concludes that Gestamp has established an alternative work practice that provides workers protection equivalent to that required by the standard. Specifically, the LOTO process for the Trumpf laser cell

identified in the variance application regulates the control of hazardous energy from the laser during the maintenance task of cleaning.

III. Description of the Conditions Specified for the Permanent Variance

As previously indicated in this notice, OSHA conducted a review of Gestamp's application and supporting documentation. OSHA determined that Gestamp developed and proposed to implement effective alternative means of protection that provides protection to their employees "as safe and healthful" as protections required within paragraph 1910.147(d)(4)(iii) of OSHA's LOTO standard during the maintenance task of cleaning the Trumpf laser cell. Therefore, on August 5, 2020, OSHA published a *Federal Register* notice announcing Gestamp's application for a permanent variance and interim order, grant of an interim order, and request for comments (85 FR 47422). The agency requested comments by September 4, 2020. There was one comment received in response to this notice in support of the application (OSHA-2019-0004-0006), however this comment did not require a response from OSHA.

During the period starting with the August 5, 2020, publication of the preliminary *Federal Register* notice announcing grant of the Interim Order until the agency modifies or revokes the Interim Order or makes a decision on the application for a permanent variance, the applicant was required to comply fully with the conditions of the Interim Order as an alternative to complying with the requirements of paragraph 1910.147(d)(4)(iii). With the publication of this notice, OSHA is revoking the Interim Order granted to the employer on August 5, 2020.

This section describes the conditions that comprise the alternative means of compliance with 29 CFR 1910.147(d)(4)(iii). Also, these conditions provide additional detail regarding the conditions that form the basis of the permanent variance OSHA is granting to Gestamp.

Condition A: Scope.

The scope of the permanent variance limits coverage to the work conditions specified under this condition. Clearly defining the scope of the permanent variance provides Gestamp, their employees, potential future applicants, other stakeholders, the public, and OSHA with necessary information regarding the work situations in which the permanent variance applies. To the extent that Gestamp conducts work outside the scope of this variance, it will be required to comply with OSHA's standards.

Pursuant to 29 CFR 1905.11, an employer (or class or group of employers)³ may request a permanent variance for a specific workplace or workplaces. When OSHA approves a permanent variance, it applies only to the specific employer(s) that submitted the application and only to the specific workplace or workplaces designated as part of the project. In this instance, OSHA's grant of a permanent variance applies only to the applicant, Gestamp, and only at the South Charleston, WV plant and to no other employers or any other Gestamp plant locations.

Condition B: List of Abbreviations.

The following abbreviations apply to this permanent variance:

1. CFR – Code of Federal Regulations
2. JHA – Job hazard analysis
3. HMI – Human Machine Interface
4. OSHA – Occupational Safety and Health Administration
5. OTPCA – Office of Technical Programs and Coordination Activities

Condition C: List of Definitions.

³A class or group of employers (such as members of a trade alliance or association) may apply jointly for a variance provided an authorized representative for each employer signs the application and the application identifies each employer's affected facilities.

The permanent variance includes definitions for a series of terms. Defining these terms serves to enhance the applicant's and the employees' understanding of the conditions specified by the proposed permanent variance.

1. *Affected employee or worker* – an employee or worker who is affected by the conditions of this proposed permanent variance, or any one of his authorized representatives. The term “employee” has the meaning defined and used under the OSH Act (29 U.S.C. 651 et seq.).
2. *Competent person* – an individual who is capable of identifying existing and predictable hazards in the surroundings or working conditions associated with the Trumpf laser cell that are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.
3. *Energy isolating device* – a mechanical device that physically prevents the transmission or release of energy, including but not limited to the following: a manually operated electrical circuit breaker; a disconnect switch; a manually operated switch by which the conductors of a circuit can be disconnected from all ungrounded supply conductors, and, in addition, no pole can be operated independently; a line valve; a block; and any similar device used to block or isolate energy. Push buttons, selector switches, and other control circuit type devices are not energy isolating devices.
4. *Group Lockout/Tagout Mechanism* – any device or mechanism that when used as part of a group LOTO system, permits each individual employee to use his personal lockout or tagout devices (Group lockout hasps or lockboxes that procedurally control equipment reenergization) to physically secure energy isolating devices.⁴

⁴ See 29 CFR part 1910.147(f)(3) Group Lockout/Tagout.

5. *Job hazard analysis* – an evaluation of tasks or operations to identify potential hazards and to determine the necessary controls.
6. *Leader* – a single authorized employee who assumes the overall responsibility for the control of hazardous energy for all members of the group if more than one employee enters the Trumpf laser cell to perform cleaning activities.
7. *Lockout* – the placement of a lockout device on an energy isolating device, in accordance with an established procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.
8. *Lockout device* – a device that utilizes a positive means such as a lock, either key or combination type, to hold an energy isolating device in the safe position and prevent the energizing of a machine or equipment.
9. *Personal lock and key* – a durable, standardized substantial and uniquely identified device (a lock) that is maintained and controlled by a single authorized employee whose name is attached to the device. The key is unique to the device and is equally maintained and controlled by the authorized employee whose name is attached to the device.
10. *Operator* – a production operator responsible for performing laser assembly operations pursuant to Gestamp company policies and procedures.
11. *Qualified person* – an individual who, by possession of a recognized degree, certificate, or professional standing, or who, by extensive knowledge, training, and experience, successfully demonstrates an ability to solve or resolve problems relating to the subject matter or the work.
12. *Servicing and/or maintenance* – workplace activities such as constructing, installing, setting up, adjusting, inspecting, modifying, and maintaining and/or servicing machines or equipment. These activities include lubrication, cleaning or unjamming

of machines or equipment and making adjustments or tool changes, where the employee may be exposed to the unexpected energization or startup of the equipment or release of hazardous energy.

13. *Tagout* – the placement of a tagout device on an energy isolating device, in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

Condition D: Safety and Health Practices.

This condition requires the applicant to: (1) modify certain controls at the entry door to the laser cell by ensuring that exclusive control is provided to each employee involved in cleaning activities within the machine, under the direction of the Leader who oversees energy control operations during the cleaning activity; (2) utilize a latch with a slide bar, designed to prevent the door from closing; (3) ensure that opening the door of the laser cell shuts down the machinery in the cell; and (4) adhere to the Group LOTO procedure in the Laser Cleaning Work Instruction provided to OSHA with the variance application.

Condition E: Steps Required to De-energize the System.

This condition requires the applicant to develop and implement a detailed procedure for de-energizing the laser cell in order to perform the maintenance task of cleaning within the laser cell. The procedure for de-energizing the laser cell includes a series of steps to remove the ability of the Trumpf laser cell to become energized before or during the maintenance task of cleaning.

Condition F: Steps Required to Re-energize the Laser Cell.

This condition requires the applicant to develop and implement a detailed procedure for re-energizing the laser cell in order to resume normal laser cutting operations. The procedure for re-energizing the laser cell includes a series of steps so that the Trumpf

laser cell can resume laser cutting activities when cleaning activities within the laser cell are complete.

Condition G: Communication.

This condition requires the applicant to develop and implement an effective system of information sharing and communication. Effective information sharing and communication are intended to ensure that affected workers receive updated information regarding any safety-related hazards and incidents and corrective actions taken, prior to the start of each shift. The condition also requires the applicant to ensure that reliable means of emergency communications are available and maintained for affected workers and support personnel during laser cleaning activities. Availability of such reliable means of communications enables affected workers and support personnel to respond quickly and effectively to hazardous conditions or emergencies that may develop during laser cleaning operations.

Condition H: Worker Qualification and Training.

This condition requires Gestamp to develop and implement an effective hazardous energy control qualification and training program for authorized employees involved in cleaning activities in or around the laser cell. Additionally, Condition H requires Gestamp to train each affected employee on the purpose and use of the alternative energy control procedures. All training must be provided in a language that the employees can understand.

The condition specifies the factors that an affected worker must know to perform the maintenance task of cleaning inside the laser cell, including how to enter, work in, and exit from the laser cell under both normal and emergency conditions. Having well-trained and qualified workers performing laser cleaning activities is intended to ensure that they recognize, and respond appropriately to, electrical safety and health hazards.

These qualification and training requirements enable affected workers to cope effectively with emergencies, thereby preventing worker injury, illness, and fatalities.

Condition I: Inspections, Tests, and Accident Prevention.

Condition I requires the applicant to develop, implement, and operate an effective program of frequent and regular inspections of the laser equipment, electrical support systems, and associated work areas. This condition will help to ensure the safe operation and physical integrity of the equipment and work areas necessary to conduct the maintenance task of cleaning in the Trumpf laser cell.

This condition also requires the applicant to conduct tests, inspections, corrective actions and repairs involving the use of the energy isolation devices identified in the application for a permanent variance. Further, this requirement provides the applicant with information needed to schedule tests and inspections to ensure the continued safe operation of the equipment and systems and to determine that the actions taken to correct defects are appropriate.

Condition J: Recordkeeping.

Under OSHA's existing recordkeeping requirements in 29 CFR Part 1904, Gestamp must maintain a record of any recordable injury, illness, or fatality (as defined by 29 CFR Part 1904) resulting from exposure of an employee to electrical conditions by completing OSHA Form 301 Incident Report and OSHA Form 300 Log of Work Related Injuries and Illnesses.

Condition K: Notifications.

Under this condition, the applicant is required, within specified periods of time, to:

- (1) notify OSHA of any recordable injury, illness, in-patient hospitalization, amputation, loss of an eye, or fatality that occurs as a result of cleaning activities around the laser cell;
- (2) provide OSHA a copy of the incident investigation report (using OSHA Form 301 Injury and Illness Incident Report) of these events within 24 hours of the incident;
- (3)

include on OSHA Form 301 Injury and Illness Incident Report information on the conditions associated with the recordable injury or illness, the root-cause determination, and preventive and corrective actions identified and implemented; (4) provide the certification that affected workers were informed of the incident and the results of the incident investigation; (5) notify OSHA's Office of Technical Programs and Coordination Activities (OTPCA) and the Charleston, West Virginia OSHA Area Office within 15 working days should the applicant need to revise the procedures to accommodate for any changes in the maintenance task of cleaning the Trumpf laser cell that affect Gestamp's ability to comply with the conditions of the permanent variance; (6) provide OTPCA and the Charleston, West Virginia Area Office within 15 working days should the applicant need to revise the energy isolation procedures to accommodate changes in the application of the door switch that affect the ability to comply with the conditions of the permanent variance; and (7) provide OTPCA and the Charleston, West Virginia Area Office, by January 31 of each calendar year, with a report evaluating the effectiveness of the alternative energy control procedures in the previous calendar year.

Additionally, Gestamp must notify OSHA if it ceases to do business, has a new address or location for the main office, or transfers the operations covered by the permanent variance to a successor company. In addition, the transfer of the permanent variance to a successor company must be approved by OSHA. These requirements allow OSHA to communicate effectively with the applicant regarding the status of the permanent variance and expedite the agency's administration and enforcement of the permanent variance. Stipulating that an applicant is required to have OSHA's approval to transfer a variance to a successor company provides assurance that the successor company has knowledge of, and will comply with, the conditions specified by permanent variance, thereby ensuring the safety of workers involved in performing the operations covered by the permanent variance.

IV. Decision

As described earlier in this notice, after reviewing the proposed alternative, OSHA determined that Gestamp developed, and proposed to implement, effective alternative means of protection that protect its employees as effectively as paragraphs 1910.147(d)(4)(iii) of OSHA's LOTO standard during the maintenance task of cleaning the Trumpf laser cell. Further, under section 6(d) of the OSH Act (29 U.S.C. 655(d)), and based on the record discussed above, the agency finds that when the employer complies with the conditions of the variance, the working conditions of the employer's workers are at least as safe and healthful as if the employer complied with the working conditions specified by paragraph 1910.147(d)(4)(iii) of OSHA's LOTO standard. Therefore, under the terms of this variance Gestamp must: (1) comply with the conditions listed below under section V of this notice ("Order") for the period between the date of this notice and until the agency modifies or revokes this final order in accordance with 29 CFR 1905.13; (2) comply fully with all other applicable provisions of 29 CFR part 1910; and (3) provide a copy of this *Federal Register* notice to all employees affected by the conditions using the same means it used to inform these employees of its application for a permanent variance.

V. Order

As of the effective date of this final order, OSHA is revoking the Interim Order granted to the employer on August 5, 2020 (85 FR 47422).

OSHA issues this final order authorizing Gestamp West Virginia LLC ("Gestamp" or "the applicant") to comply with the following conditions instead of complying with the requirements of paragraphs 29 CFR 1910.147(d)(4)(iii) of OSHA's LOTO standard during the maintenance task of cleaning the Trumpf laser cell. This final order applies to all Gestamp employees located at 3100 MacCorkle Avenue, SW, Building 307, South Charleston, West Virginia 25303.

A. Scope

1. This permanent variance applies only to the maintenance task of cleaning the Trumpf laser cell at Gestamp's South Charleston, WV, establishment. This work is to be performed by authorized employees under the alternative energy control procedures submitted to OSHA as part of this application for a permanent variance.
2. No other servicing and/or maintenance work, including electrical maintenance (such as troubleshooting or maintenance covered under 29 CFR 1910.333), may be performed using the conditions of this interim order. These activities are to be performed under full lockout as required by 29 CFR 1910.147.
3. Except for the requirements specified by 29 CFR 1910.147(d)(3), Gestamp must comply fully with all other applicable provisions of 29 CFR 1910.147 during cleaning activities of the laser cell.
4. The Interim Order granted to Gestamp on August 5, 2020 (85 FR 47422), is hereby revoked.

B. List of Abbreviations

The following abbreviations apply to this permanent variance:

1. CFR – Code of Federal Regulations
2. JHA – Job hazard analysis
3. HMI – Human Machine Interface
4. OSHA – Occupational Safety and Health Administration
5. OTPCA – Office of Technical Programs and Coordination Activities

C. Definitions

The following definitions apply to this permanent variance:

1. *Affected employee or worker* – an employee or worker who is affected by the conditions of this permanent variance, or any one of his authorized

representatives. The term “employee” has the meaning defined and used under the OSH Act (29 U.S.C. 651 et seq.).

2. *Competent person* – an individual who is capable of identifying existing and predictable hazards in the surroundings or working conditions associated with the Trumpf laser cell that are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.
3. *Energy isolating device* – a mechanical device that physically prevents the transmission or release of energy, including but not limited to the following: a manually operated electrical circuit breaker; a disconnect switch; a manually operated switch by which the conductors of a circuit can be disconnected from all ungrounded supply conductors, and, in addition, no pole can be operated independently; a line valve; a block; and any similar device used to block or isolate energy. Push buttons, selector switches, and other control circuit type devices are not energy isolating devices.
4. *Group Lockout/Tagout Mechanism* – any device or mechanism that when used as part of a group LOTO system, permits each individual employee to use his personal lockout or tagout devices (group lockout hasps or lockboxes that procedurally control equipment re-energization) to physically secure energy isolating devices.
5. *Job hazard analysis* – an evaluation of tasks or operations to identify potential hazards and to determine the necessary controls.
6. *Leader* – a single authorized employee that assumes the overall responsibility for the control of hazardous energy if more than one employee enters the Trumpf laser cell to perform cleaning activities.
7. *Lockout* – the placement of a lockout device on an energy isolating device, in accordance with an established procedure, ensuring that the energy isolating

device and the equipment being controlled cannot be operated until the lockout device is removed.

8. *Lockout device* – a device that utilizes a positive means such as a lock, either key or combination type, to hold an energy isolating device in the safe position and prevent the energizing of a machine or equipment.
9. *Personal lock and key* – a durable, standardized substantial and uniquely identified device (a lock) that is maintained and controlled by a single authorized employee whose name is attached to the device. The key is unique to the device and is equally maintained and controlled by the authorized employee whose name is attached to the device.
10. *Operator* – a production operator responsible for performing laser assembly operations pursuant to Gestamp company policies and procedures.
11. *Qualified person* – an individual who, by possession of a recognized degree, certificate, or professional standing, or who, by extensive knowledge, training, and experience, successfully demonstrates an ability to solve or resolve problems relating to the subject matter or, the work.
12. *Servicing and/or maintenance* – workplace activities such as constructing, installing, setting up, adjusting, inspecting, modifying, and maintaining and/or servicing machines or equipment. These activities include lubrication, cleaning or unjamming of machines or equipment and making adjustments or tool changes, where the employee may be exposed to the unexpected energization or startup of the equipment or release of hazardous energy.
13. *Tagout* - the placement of a tagout device on an energy isolating device, in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

D. Safety and Health Practices

1. Gestamp must modify certain controls at the entry door to the laser cell by ensuring that exclusive control is provided to each employee involved in cleaning activities within the laser cell, under the direction of the Leader who oversees energy control operating during the cleaning activity;
2. Gestamp must utilize a latch with a slide bar, designed to prevent the door from closing;
3. Gestamp must ensure that opening the door to the laser cell shuts down the machinery in the cell;
4. Gestamp must adhere to the Group LOTO procedure in the Laser Cleaning Work Instruction provided to OSHA with the variance application;
5. Gestamp must implement the safety and health instructions included in the manufacturer's operations manuals for the Trumpf laser cell and the safety and health instructions provided by the manufacturer for the operation of laser cutting equipment; and
6. Gestamp must implement a procedure to ensure that no other servicing and/or maintenance activities aside from cleaning will be performed on the laser cutter, unless full lockout is used.

E. Steps Required to De-energize the System

Gestamp must implement a detailed procedure for de-energizing the laser cutting machine that will consist of the following steps to ensure that the laser cell door is prevented from closing and the machine starting during cleaning activities within the laser cell:

1. The authorized employee entering the laser cell will communicate to the Operator and co-workers in that area that cleaning will take place;

2. At the HMI screen, the Operator shall change the Series Production from “Continuous Job” to “Single Job”;
3. Once the turntable has come to a complete stop, the Operator shall open one of the doors on the side of the laser cell by using the handle;
4. After the door is open, the Operator shall communicate the lockout to his co-workers and move the red slide bar to prevent the door to the laser cell from being shut while personnel are inside;
5. All personnel entering the laser cell must individually lockout, by placing a lock on the slide bar or hasp. If more than one person is to enter on either side, a lockout hasp must be used;
6. Each employee entering the cell must remove his own personal key from the lock or hasp, take the key into the cell, and keep the key in his possession the entire time he is in the cell;
7. If more than one employee enters the laser cell, one of the employees shall be designated the Leader of the cleaning operation;
8. After locking out the laser cell, the Operator shall verify that the “Feed Hold Through Safety Device Error” is displayed on the HMI screen; and
9. To verify that the turntable will not move while working inside of the laser cell, the Operator shall hit the green activation button. *Entry is not to be made into the cell until the previous 8 steps have been completed.*

F. Steps Required to Re-energize the Laser Cell

Gestamp must implement a detailed procedure for re-energizing and intentionally starting motion in the laser cutter in order to resume normal operations at the conclusion of the cleaning operation. The procedure for re-energizing the laser cell will consist of the following steps:

1. When work is completed inside the laser cell, all employees who entered the cell, except the Leader (when more than one employee entered), shall exit and remove their locks;
2. The Leader/Solo Employee shall open the mechanical latch;
3. The Leader/Solo Employee shall visually inspect the area for the presence of persons or tools within the laser cell;
4. Once all other employees are outside of the laser cell, the Leader/Solo Employee must verify his location and hit the Danger Zone Acknowledge Button on the inside of the cell door;
5. The Leader/Solo Employee must exit immediately, remove his lock, move the slide bar back to allow the door to shut, and shut the door. The door must shut within 3-4 seconds of hitting the Danger Zone Acknowledge Button. The 3-4 second limitation ensures that no one can enter or re-enter into the machine enclosure between the visual inspection and restart.
6. Once the cleaning operation is complete and employees are clear of the restricted area, the Leader/Solo Employee shall place the laser HMI back into production by placing the Series Production from “Single Job” to “Continuous Job” by pressing the “Continuous Job” button;
7. After the HMI has been released to production, the Leader/Solo Employee shall press the green button which resets the light curtains and causes the robot to place the next part on the turntable; and
8. Both entry doors to the laser cell must be closed before operations can resume.
An engineering control within the Trumpf laser cell prevents engagement of the laser until both doors are closed.

G. Communication

Gestamp must:

1. Implement a system that informs workers using energy isolation devices of any hazardous occurrences or conditions that might affect their safety; and
2. Provide a means of communication among affected workers where unassisted voice communication is inadequate.

H. Worker Qualifications and Training

Gestamp must develop and implement a detailed worker qualification and training program. All training must be provided in a language that the employees can understand.

Gestamp must:

1. Develop an energy control training program and train each authorized employee on the latch system and the procedures required under it;
2. Develop and document a training program and train each affected employee in the purpose and use of the alternative energy control procedures using the latch system;
3. Develop a training program and train other employees whose work operations are or may be in an area where energy control procedures may be utilized. These employees will receive training about the procedure and about the prohibition relating to attempts to restart or reenergize machines or equipment that are locked out;
4. Ensure that each authorized employee, affected employee, and other employees have effective and documented training in the contents and conditions covered by this permanent variance and interim order; and
5. Ensure that only trained and authorized employees perform energy control procedures for the task of performing cleaning of the laser cell at Gestamp's facility.

I. Inspections, Tests, and Accident Prevention

Gestamp must develop and implement a detailed program for completing inspections, tests, program evaluations, and incident prevention. Gestamp must:

1. Ensure that a competent person (authorized employee) conducts daily visual checks and monthly inspections and functionality tests of the laser cell components and configuration or operation and energy control procedures that ensure that the procedure and conditions of this permanent variance and interim order are being followed;
2. Ensure that a competent person conducts weekly inspections of the work areas associated with the cleaning of the laser cell;
3. Develop a set of checklists to be used by a competent person in conducting weekly inspections of the energy control procedures used while performing cleaning activities at the laser cell;
4. Remove from service any equipment that constitutes a safety hazard until Gestamp corrects the hazardous condition and has the correction approved by a qualified person; and
5. Maintain records of all tests and inspections of the laser cell, as well as associated corrective actions and repairs, at the job site for the duration of the variance. The maintenance, servicing, and installation of replacement parts must strictly follow the manufacturer's specifications, instructions, and limitations, when that information is available.

J. Recordkeeping

In addition to completing OSHA's Form 301 Injury and Illness Incident Report and OSHA's Form 300 Log of Work-Related Injuries and Illnesses in the case of injuries that result from cleaning the laser cell, Gestamp must maintain records of all tests and inspections of the energy control procedures, as well as associated hazardous condition corrective actions and repairs.

K. Notifications

To assist OSHA in administering the conditions specified herein, Gestamp must:

1. Notify all affected employees of this permanent variance by the same means required to inform them of the application for a variance.
2. Notify the OTPCA and the Charleston, West Virginia, Area Office of any recordable injury, illness, or fatality (by submitting the completed OSHA Form 301 Injuries and Illness Incident Report) resulting from implementing the alternative energy control procedures of the permanent variance conditions while performing the task of cleaning of the laser cell, in accordance with 29 CFR 1904. Gestamp shall provide the notification within 8 hours of the incident or 8 hours after becoming aware of a recordable injury, illness, or fatality; and a copy of the incident investigation (OSHA Form 301 Injuries and Illness Incident Report) must be submitted to OSHA within 24 hours of the incident or 24 hours after becoming aware of a recordable injury, illness, or fatality. In addition to the information required by OSHA Form 301 Injuries and Illness Incident Report, the incident investigation report must include a root-cause determination and the preventive and corrective actions identified and implemented.
3. Provide certification to the Charleston, West Virginia, Area Office within 15 working days of any incident that Gestamp informed affected workers of the incident and the results of the incident investigation (including the root-cause determination and preventive and corrective actions identified and implemented).
4. Obtain OSHA's approval prior to implementing any changes to the energy control operations that affects Gestamp's ability to comply with the conditions of this permanent variance.

5. Provide OTPCA and the Charleston, West Virginia, Area Office, by January 31 at the beginning of each calendar year, with a report evaluating the effectiveness of the alternative energy control procedures in the previous calendar year.
6. Notify OTPCA and the Charleston, West Virginia, Area Office as soon as possible, but no later than seven (7) days after it has knowledge, that it will:
 - (i) Cease doing business;
 - (ii) Have a new address or location for the main office, or
 - (iii) Transfer the operations specified herein to a successor company; however, this permanent variance cannot be transferred to a successor company without OSHA approval.

VI. Authority and Signature

Amanda L. Edens, Deputy Assistant Secretary of Labor for Occupational Safety and Health, 200 Constitution Avenue, NW, Washington, DC 20210, authorized the preparation of this notice. Accordingly, the agency is issuing this notice pursuant to 29 U.S.C. 657(g)(2)), Secretary of Labor's Order No. 8-2020 (85 FR 58393, Sept. 18, 2020), and 29 CFR 1910.7.

Signed at Washington, DC, on February 23, 2021.

Amanda L. Edens,
Deputy Assistant Secretary of Labor for Occupational Safety and Health.

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