Rhode Island Department of Environmental Management

2023 General Survey Form

Welding

Facility Name

Facility Address (City, State, Zip)

Name of Person Completing Form

For each type of welding done at your facility please complete the table below *(attach additional sheets as necessary)*. **Explanations for types of welding and electrodes are on page 2.**

Type of welding	Electrode type	Pounds used	Wire or rod

What is your NAICS (North American Industry Classification System) Code? _____

Is welding done in a booth?

☐yes ☐no

If yes, does the booth have an exhaust stack?

☐yes ☐no

Have you submitted an initial notification to USEPA under 40 CFR Part 63 subpart XXXXXX?

☐yes ☐no

If yes, do you have a site-specific welding emissions management plan?

☐yes ☐no

Return Form to:
DEM.AirInventory@dem.ri.gov
Air Pollution Inventory, Office of Air Resources 235
Promenade Street, Providence, RI 02908-5767

API Form T2

Welding

Emissions factors are available for the following common welding and electrode types. Please complete the form for each process and type of electrode used at your facility. If your facility does not use one of the listed electrodes or processes please list the process and electrode you are using.

Types of Welding:

Shielded metal arc welding (SMAW) uses heat produced by an electric arc to melt a covered electrode and the welding joint at the base metal. During operation, the rod core both conducts electric current to produce the arc and provides filler metal for the joint. The core of the covered electrode consists of either a solid metal rod of drawn or cast material or a solid metal rod fabricated by encasing metal powders in a metallic sheath. The electrode covering provides stability to the arc and protects the molten metal by creating shielding gases by vaporization of the cover.

Electrode types:

14Mn-4Cr	*E316*	*E6012*	*E7028*	*ECoCr*
E11018	*E410*	*E6013*	*E8018*	*ENi-Cl*
E308	*E6010*	*E7018*	*E9015*	*ENiCrMo*
E310	*E6011*	*E7024*	*E9018*	*ENi-Cu*

Gas Metal Arc Welding (GMAW) is a consumable electrode welding process that produces an arc between the pool of weld and a continuously supplied filler metal. An externally supplied gas is used to shield the arc.

Electrode types:

E308L	*ER1260*	*ER316*	*ERNiCu*
E70S	*ER5154*	*ERNiCrMo*	

Flux Cored Arc Welding (FCAW) is a consumable electrode welding process that uses the heat generated by an arcbetween the continuous filler metal electrode and the weld pool to bond the metals. Shielding gas is provided from flux contained in the tubular electrode. This flux cored electrode consists of a metal sheath surrounding a core of various powdered materials. During the welding process, the electrode core material produces a slag cover on the face of the weld bead. The welding pool can be protected from the atmosphere either by self-shielded vaporization of the flux core or with a separately supplied shielding gas.

Electrode types:

E110	*E308LT*	*E70T*
E11018	*E316LT*	*E71T*

Submerged Arc Welding (SAW) produces an arc between a bare metal electrode and the work contained in a blanket of granular fusible flux. The flux submerges the arc and welding pool. The electrode generally serves as the filler material. The quality of the weld depends on the handling and care of the flux. The SAW process islimited to the downward and horizontal positions, but it has an extremely low fume formation rate.

Electrode type:

EM12K

Any questions regarding this form should be directed to Alexi Mangili at (401) 222-2808 ext 2777019 or email alexi.mangili@dem.ri.gov