

State Pollutant Discharge Elimination System (SPDES)  
**INDUSTRIAL APPLICATION FORM NY-2C**  
 Supplement J  
**IRON AND STEEL MANUFACTURING INDUSTRIES (40 CFR Part 420)**

Facility Name:	SPDES Number:
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Complete the appropriate sections of the table below, and submit this form with your SPDES application. See attached definitions.

Subpart	Sub-Category	Production (1000 #/day)	Outfall
A	Cokemaking (40 CFR 420.10) a. By product cokemaking - iron & steel b. By product cokemaking - merchant c. Beehive cokemaking - No discharge allowed		
B	Sintering (40 CFR 420.20)		
C	Ironmaking (40 CFR 420.30) a. Iron blast furnace b. Ferromanganese blast furnace (reserved)		
D	Steelmaking (40 CFR 420.40) a. Basic oxygen furnace steelmaking - semi-wet; and electric arc furnace steelmaking - semi-wet (no discharge allowed) b. Basic oxygen furnace steelmaking - wet suppressed combustion c. Basic oxygen furnace steelmaking - wet open combustion; open hearth furnace steelmaking - wet; and electric arc furnace steelmaking - wet		
E	Vacuum Degassing (40 CFR 420.50)		
F	Continuous Casting (40 CFR 420.60)		
G	Hot Forming (40 CFR 420.70) a. Primary mill, carbon & specialty 1. without scarfing 2. with scarfing b. Section mills 1. carbon 2. specialty c. Flat mills 1. Hot strip sheet mills, carbon & specialty 2. Carbon plate mills 3. Specialty plate mills d. Pipe & tube mills, carbon & specialty		
H	Salt Bath Descaling (40 CFR 420.80) a. Salt bath descaling, oxidizing 1. Batch, sheet & plate 2. Batch, rod & wire 3. Batch, pipe & tube 4. Continuous b. Salt bath descaling, reducing 1. Batch 2. Continuous		

Supplement J  
IRON AND STEEL MANUFACTURING INDUSTRIES (40 CFR 420) - (continued)

Subpart	Sub Category	Production (1000 #/day)	Outfall
I	Acid Pickling (40 CFR 420.90) <ol style="list-style-type: none"> <li>a. Sulfuric acid pickling (spent acid solution &amp; rinse waters)               <ol style="list-style-type: none"> <li>1. Rod, wire &amp; coil</li> <li>2. Bar, billet &amp; bloom</li> <li>3. Strip, sheet &amp; plate</li> <li>4. Pipe, tube &amp; other product</li> <li>5. Fume scrubbers</li> </ol> </li> <li>b. Hydrochloric acid pickling (spent acid solution &amp; rinse waters)               <ol style="list-style-type: none"> <li>1. Rod, wire &amp; coil</li> <li>2. Strip, sheet &amp; plate</li> <li>3. Pipe, tube &amp; other products</li> <li>4. Fume scrubbers</li> <li>5. Acid regeneration (absorber vent scrubber)</li> </ol> </li> <li>c. Combination acid pickling (spent acid solution &amp; rinse waters)               <ol style="list-style-type: none"> <li>1. Rod, wire &amp; coil</li> <li>2. Bar, billet and bloom</li> <li>3. Strip, sheet &amp; plate - continuous</li> <li>4. Strip, sheet &amp; plate - batch</li> <li>5. Pipe, tube &amp; other product</li> <li>6. Fume scrubbers</li> </ol> </li> </ol>		
J	Cold Forming (40 CFR 420.100) <ol style="list-style-type: none"> <li>a. Cold rolling mills               <ol style="list-style-type: none"> <li>1. Recirculation - single stand</li> <li>2. Recirculation - multiple stands</li> <li>3. Combination</li> <li>4. Direct application - single stand</li> <li>5. Direct application - multiple stands</li> </ol> </li> <li>b. Cold Worked pipe &amp; tube               <ol style="list-style-type: none"> <li>1. Using water</li> <li>2. Using oil solution</li> </ol> </li> </ol>		
K	Alkaline Cleaning (40 CFR 420.110) <ol style="list-style-type: none"> <li>a. Batch</li> <li>b. Continuous</li> </ol>		
L	Hot Coating (40 CFR 420.120) <ol style="list-style-type: none"> <li>a. Galvanizing, terne coating and other coatings               <ol style="list-style-type: none"> <li>1. Strip, sheet &amp; miscellaneous products</li> </ol> </li> <li>b. Galvanizing &amp; other coating               <ol style="list-style-type: none"> <li>1. Wire products and fasteners</li> </ol> </li> <li>c. Fume scrubbers</li> </ol>		

**INDUSTRIAL APPLICATION FORM NY-2C**  
Supplement J  
**IRON AND STEEL MANUFACTURING INDUSTRIES (40 CFR 420)**  
**Definitions**

**Subpart A-Cokemaking**

**COKEMAKING** shall mean those operations from by-product and beehive cokemaking operations.

**BY PRODUCT COKEMAKING** shall mean those cokemaking operations in which coal is heated in the absence of air to produce coke.

**MERCHANT** shall mean those by-product cokemaking operations which provide more than fifty percent of the coke produced to operations, industries, or processes other than iron making blast furnaces associated with steel production.

**IRON AND STEEL** shall mean those by-product cokemaking operations other than merchant cokemaking operations.

**BEEHIVE COKEMAKING** shall mean those operations in which coal is heated with the admission of air in controlled amounts for the purpose of producing coke.

**Subpart B-Sintering**

**SINTERING** shall mean those operations conducted by the heating of iron bearing wastes (mill scale and dust from blast furnaces and steeling making furnaces) together with fine iron ore, limestone, and coke fines in an ignition furnace to produce an agglomerate for charging to the blast furnace.

**Subpart C-Iron Making**

**IRON MAKING** shall mean those operations in which iron ore is reduced to molten iron in a blast furnace.

**FERROMANGANESE BLAST FURNACE** shall mean those blast furnace which produce molten iron containing more than fifty percent manganese.

**IRON BLAST FURNACE** shall mean all blast furnaces except ferromanganese.

**Subpart D-Steelmaking**

**STEELMAKING** shall mean those operations conducted in basic oxygen, open hearth and electric arc furnaces.

**BASIC OXYGEN FURNACE** shall mean the production of steel from molten iron, steel scrap, fluxes and various combinations thereof, in refractory lined furnaces by adding oxygen.

**OPEN HEARTH FURNACE** shall mean the production of steel from molten iron, steel scrap, fluxes, and various combinations thereof, in refractory lined fuel-fired furnace equipped with regenerative chambers to recover heat from the flue and combustion gases.

**ELECTRIC ARC FURNACE** shall mean the production of steel principally from steel scrap and fluxes in refractory lined furnaces by passing an electric current through the scrap or steel bath.

**WET** shall mean those steelmaking air cleaning systems that primarily use water for furnace gas cleaning.

**SEMI-WET** shall mean those steelmaking air cleaning systems that use water for the sole purpose of conditioning the temperature and humidity of furnace gases such that the gases may be cleaned in dry air pollution control system.

**SUPPRESSED COMBUSTION** shall mean those basis oxygen furnace steelmaking wet air cleaning systems which air designed to limit or suppress the carbon monoxide in furnace gases by restricting the amount of excess air entering the air pollution control system.

**Subpart E-Vacuum Degassing**

**VACUUM DEGASSING** shall mean these operations conducted by applying a vacuum to molten steel.

**Subpart F-Continuous Casting**

**CONTINUOUS CASTING** shall mean those operations of the continuous casting of molten steel into intermediate or semi-finished steel products through water cooled molds.

**Subpart G-Hot Forming**

**HOT FORMING** shall mean those steel operations in which solidified, heated steel is shaped by rolls.

**PRIMARY MILL** shall mean those steel hot forming operations that reduce ingots to blooms or slabs by passing the ingots between rotating steel rolls. The first hot forming operation performed on solidified steel after it is removed from ingot molds is carried out on a "primary mill".

**SECTION MILL** shall mean those steel hot forming operations that produce a variety of finished and semi-finished steel products other than the products of those mills specified in "flat mill", "pipe and tube mill", "plate mill", and "hot-strip and sheet mill".

**FLAT MILL** shall mean those steel hot forming operations that reduce heated slabs to plates, strip and sheet or skelp.

**PIPE AND TUBE MILL** shall mean those steel hot forming operations that produce butt welded or seamless tubular steel products.

**SCARFING** shall mean those steel surface conditioning operations in which flumes generated by the combustion of oxygen and fuel are used to remove surface metal imperfections from slabs, billets or blooms.

**PLATE MILL** shall mean those steel hot forming operations that produce flat hot-rolled products which are (1) between 8 and 48 inches wide and over 0.23 inches thick; or (2) greater than 48 inches wide and over 0.18 inches thick.

**HOT STRIP AND SHEET MILL** shall mean those steel hot forming operations that produce flat hot-rolled products other than plates.

**SPECIALTY STEEL** shall mean steel products containing alloying elements which are added to enhance the properties of the steel produced when individual alloying elements (e.g. aluminum, chromium, cobalt, columbium, molybdenum, nickel, titanium, tungsten, vanadium, zirconium) exceed 3% or the total of all alloying elements exceed 5%.

**CARBON STEEL** shall mean those steel products other than specialty steel products.

**CARBON HOT FORMING OPERATION** (or "carbon") shall mean those hot forming operations which produce a majority, on a tonnage basis, of carbon steel products.

**SPECIALTY HOT FORMING** shall mean all hot forming operations other than "carbon hot forming operations".

### **Subpart H-Salt Bath Descaling**

**SALT BATH DESCALING** shall mean scale removal from semi-finished steel products by immersing the steel in molten salt baths of oxidizing and reducing.

**SALT BATH DESCALING OXIDIZING** shall mean the removal of scale from semi-finished steel products by the action of molten salt baths other than those containing sodium hydride.

**SALT BATH DESCALING REDUCING** shall mean the removal of scale from semi-finished steel products by the action of molten salt baths containing sodium hydride.

**BATCH, SHEET AND PLATE** shall mean those descaling operations that remove surface scale from sheet and plate products in batch processes.

**BATCH, ROD AND WIRE** shall mean those descaling operations that remove surface scale from rod and wire products in batch processes.

**BATCH, PIPE AND TUBE** shall mean those descaling operations that remove surface scale from pipe and tube products in batch processes.

### **Subpart I-Acid Pickling**

**ACID PICKLING** shall mean the process of chemically removing oxides and scale from the surface of steel using dilute inorganic acids.

**SULFURIC ACID PICKLING** shall mean those operations which steel products are immersed in sulfuric acid solutions to chemically remove oxides and scale, and those rinsing operations associated with such immersions.

**HYDROCHLORIC ACID PICKLING** shall mean those operations in which steel products are immersed in hydrochloric acid solutions to chemically remove oxides and scale, and those rinsing operations associated with such immersions.

**COMBINATION ACID PICKLING** shall mean those operations in which steel products are immersed in solutions of more than one acid to chemically remove scale and oxides, and those rinsing steps associated with such immersions.

**FUME SCRUBBER** shall mean those pollution control devices used to remove and clean fumes originating in pickling operations.

**ACID RECOVERY** shall mean those sulfuric acid pickling operations that include processes for recovering and unreacted acid from spent pickling acid solutions.

**ACID REGENERATION** shall mean those hydrochloric acid pickling operations that include processes for regenerating acid from spent pickling acid solutions.

**NEUTRALIZATION** shall mean those acid pickling operations that do not include acid recovery or acid regeneration processes.

**SPENT ACID SOLUTION** (or "spent pickle liquor") shall mean those solutions of steel pickling acids which have been used in the pickling process and are discharged or removed therefrom.

**ROD, WIRE AND COIL** shall mean those acid pickling operations that pickle rod, wire or coiled rod and wire products.

**BAR, BILLET AND BLOOM** shall mean those acid pickling operations that pickle bar, billet or bloom products.

**STRIP, SHEET AND PLATE** shall mean those acid pickling operations that pickle strip, sheet or plate products.

**PIPE, TUBE AND OTHER** shall mean those acid pickling operations that pickle pipes, tubes or any steel product other than those included in "rod, wire and coil", "bar, billet and bloom" and "strip, sheet and plate".

### **Subpart J-Cold Forming**

**COLD FORMING** shall mean those operation of cold rolling and cold working pipe and tube operations in which unheated steel is passed through rolls or otherwise produced a smooth surface, or to develop controlled mechanical properties in the steel.

**RECIRCULATION** shall mean those cold rolling operations which include recirculation of rolling solutions at all mill stands.

**COMBINATION** shall mean those cold rolling operations which include recirculation of rolling solutions at one or more mill stands, and once-through use of rolling solutions at the remaining stand or stands.

**DIRECT APPLICATION** shall mean those cold rolling operations which include once-through use of rolling solutions at all mill stands.

**SINGLE STAND** shall mean those recirculation or direct application cold rolling mills which include more than one stand of work rolls.

**MULTIPLE STANDS** shall mean those recirculation direct application cold rolling mills which include more than one stand of work rolls.

**COLD WORKED PIPE AND TUBE** shall mean those cold forming operations that process unheated pipe and tube products using either water or oil solutions for cooling and lubrication.

#### **Subpart K-Alkaline Cleaning**

**ALKALINE CLEANING** shall mean those operations in which steel and steel products are immersed in alkaline cleaning baths to remove mineral and animal fats or oils from the steel, and those rinsing operations which follow such immersion. The removal can be enhanced by the electrolysis of the steel in an alkaline solution.

#### **Subpart L-Hot Coating**

**HOT COATING** shall mean those operations in which steel is coated with zinc, terne metal, or other metals by the hot dip process, and those rinsing operations associated with that process.

**GALVANIZING** shall mean coating steel products with zinc by the hot dip process including the immersion of the steel products in a molten bath of zinc metal, and the related operations preceding and subsequent to the immersion phase.

**TERNE COATING** shall mean coating steel products with terne metal by the hot dip process including the immersion of the steel product in a molten bath of lead and tin metals, and the related operations preceding and subsequent to the immersion phase.

**OTHER COATING** shall mean coating steel products with metals other than zinc or terne metals by the hot dip process including the immersion of the steel product in a molten bath of metal, and the related operations preceding the subsequent to the immersion phase.

**FUME SCRUBBER** shall mean wet air pollution control devices used to remove and clean fumes originating from hot coating operation.

**STRIP, SHEET AND MISCELLANEOUS PRODUCTS** shall mean steel products other than wire products and fasteners.

**WIRE PRODUCTS AND FASTENERS** shall mean steel wire, products manufactured from steel wire, and steel fasteners manufactured from steel wire or other steel shapes.