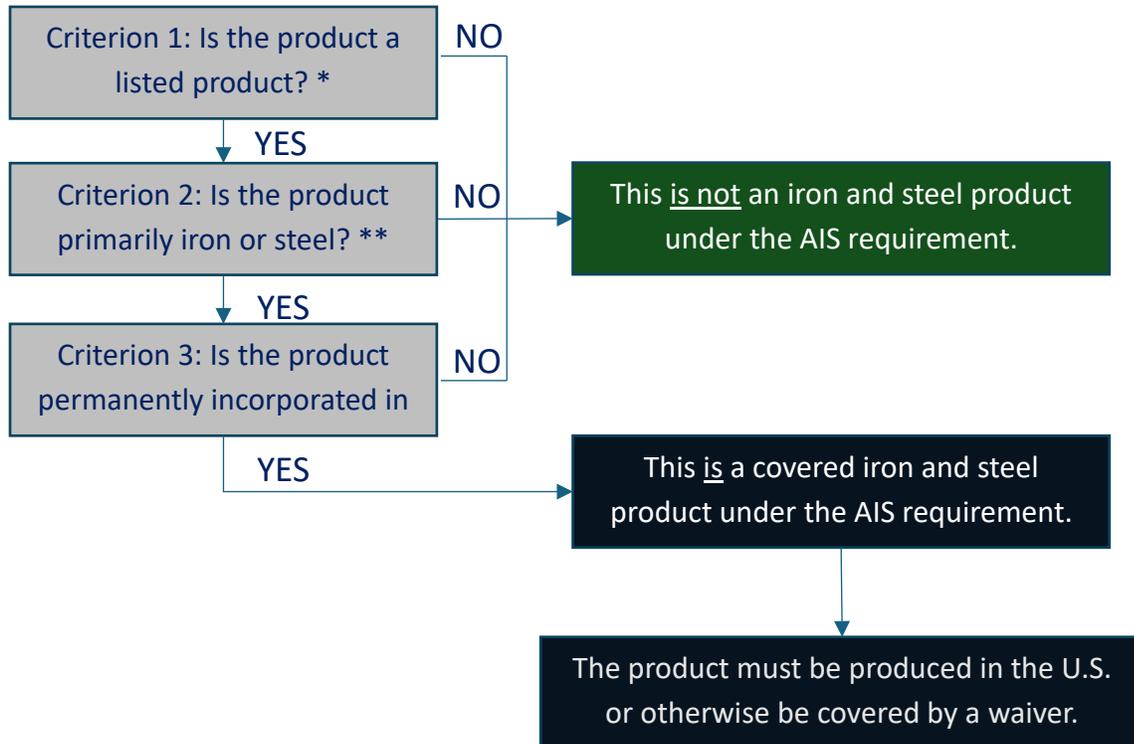


WHICH PRODUCTS NEED TO BE AIS-COMPLIANT?

As illustrated in the diagram and further explained below, the AIS requirement applies to products that meet three key criteria. Products that meet these criteria must be produced in the U.S. or otherwise be covered by a waiver.



CRITERION 1: IS THE PRODUCT A LISTED PRODUCT?

The AIS requirement specifically lists key water infrastructure products that are covered. This includes:

- **Lined or unlined pipes and fittings.** Pipes also include tubing. Fittings include elbows, tees, couplings, reducers, unions, flanges, etc.
- **Manhole covers and other municipal castings.** Municipal castings cover an array of items, including access hatches, ballast screens, benches, bollards, curb guards and openings, drainage grates, lamp posts, valve and meter boxes, riser rings, trash receptacles, tree and trench grates, etc.
- **Hydrants.**
- **Tanks.** Tanks include reaction tanks, storage tanks, surge tanks, water tanks, etc.
- **Flanges.** Flanges may overlap with pipe and fittings. It also covers flanges that are used to join tanks or other process equipment to pipe.

- **Pipe clamps and restraints.** Though associated with pipes, pipe clamps and restraints incorporate pipe support structures, not just fittings.
- **Valves.** Valves may include butterfly, plug, check, gate, ball, globe or any variation of these valves.
- **Structural steel.** Structural steel covers the “hunks and chunks” of steel that is used to construct treatment plants, pump stations, and similar structures.
- ****Reinforced precast concrete.** Although this may not be a primarily iron and steel product, it is specifically listed and therefore subject to the AIS requirement. The reinforcing bar and wire must be AIS-compliant, and the casting of concrete must occur in the U.S.
- ***Construction materials.** Construction materials can be considered a catch-all for primarily iron and steel products that are permanently incorporated in a project. It may include items such as fencing, doors, railings, stairs, fasteners, reinforcing bar and wire, wire rope and cables, wall panels, roofing, ductwork, manhole steps, stationary screens, etc. However, it does not include mechanical and electrical components, equipments, or systems¹.

CRITERION 2: IS THE PRODUCT PRIMARILY IRON OR STEEL?

“Primarily” is defined as the iron and steel components of a product make up more than 50% of the material costs. Material costs do not factor in labor costs. It is simply the purchased cost of the component that makes up the product.

CRITERION 3: IS THE PRODUCT PERMANENTLY INCORPORATED IN THE PROJECT?

Products that are temporarily installed during construction that are removed from the project site upon completion of the project are not considered “permanently incorporated.” For example, trench boxes or sheet pile that are installed to shore up surrounding soil during construction activities are not considered permanently incorporated unless they remain in ground after the construction has completed.

¹ Water infrastructure products not considered construction materials include: pumps, motors, gear reducers, drives (including variable frequency drives (VFDs)), electric/pneumatic/manual accessories used to operate valves (such as electric valve actuators), mixers, gates, motorized screens (such as traveling screens), blowers/aeration equipment, compressors, meters, sensors, controls and switches, supervisory control and data acquisition (SCADA), membrane bioreactor systems, membrane filtration systems, filters, clarifiers and clarifier mechanisms, rakes, grinders, disinfection systems, presses (including belt presses), conveyors, cranes, HVAC (excluding ductwork), water heaters, heat exchangers, generators, cabinetry and housings (such as electrical boxes/enclosures), lighting fixtures, electrical conduit, emergency life systems, metal office furniture, shelving, laboratory equipment, analytical instrumentation, and dewatering equipment. (AIS Implementation Memo, March 2014)

WHAT DOES IT MEAN TO BE ‘PRODUCED IN THE U.S.’?

For products that meet all three criteria, they must be produced in the U.S. This means all manufacturing processes must occur in the U.S. for the product to be considered AIS-compliant.



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A NOTE ON ASSEMBLY AND APPURTENANCES

Some but not all assemblies (and their appurtenances) are subject to the AIS requirement.

AIS requirements only apply to final products, as delivered to the work site and incorporated into the project. Sometimes, those final products are more complex than the listed products under the AIS requirement.

EPA defines an *assembly* as a product purchased from a business that may include one or more components that are “listed products” under AIS. An assembly serves a singular core function, such as conveyance, aeration, filtration, chemical feed, or surge protection, and may be skid-mounted with other supporting components (or *appurtenances*), such as frame, valves, pipes, and meters.

If there are multiple core functions for the product purchased, then there are likely multiple assemblies to consider within that product, and each assembly should be evaluated separately.

If a product purchased from a business requires significant construction, fabrication, or assembly at the project site, it is not considered an assembly for the purpose of the AIS requirement. They need to be evaluated separately.

Items that are not purchased as part of an assembly (i.e., purchased separately) are not considered **appurtenances**. They will always be evaluated individually.

WHICH ASSEMBLIES ARE SUBJECT TO THE AIS REQUIREMENT?

Look to the core function of the assembly. If the component that serves the core function of the assembly is subject to the AIS requirement, then the assembly and its iron and steel appurtenances are also subject to the AIS requirement.

Example 1. Assemblies subject to the AIS requirement. The core function of a surge control system is to prevent a surge of pressure through critical equipment. Pressure vessels generally serve this core function to regulate the pressure. Is the pressure vessel (1) primarily iron or steel and (2) a listed product? If the answer is yes, it is subject to the AIS requirement and therefore, all components of the surge control system are also subject to the AIS requirement. For each component, determine if they (1) are primarily iron or steel, and (2) are listed products, e.g., valves, pipe and fittings. If the criteria are met, these components must be produced in the U.S. *Other examples include prefabricated steel buildings, and generally all tanks or basins.*

Example 2. Assemblies not subject to the AIS requirement. The pumps in a skid-mounted pumping assembly serves the core function of the assembly. Pumps are not an AIS-listed product and therefore, the pump assembly and its appurtenances (valves, pipe and fittings) are not subject to the AIS requirement and no additional evaluation is needed. Again, items purchased separate from the assembly are not considered appurtenances. *Other examples include thermal dryers, chemical feed systems, membrane or resin filtration systems, generators, heat exchangers, belt presses, HVAC equipment (excluding ductwork).*