There are many ways to attach an InfoSight metal tag. Choosing the right technique means understanding what is being tagged and how it will be processed or handled.

For example, **Stud Welding** (above) securely attaches tags on steel products stored in service yards, and leaves the tags to hang loosely at the same angle, making it easy to read text and scan bar codes.

Other **Loose Methods** include lengths of **Common Wire** (left) or **Small Chain** (right). Both methods can be used indoors or out. These methods are inexpensive, simple to attach and survive occasional handling.
Rivets require holes entirely through the face of the product. The tag is aligned with the holes and the rivets are inserted. Then the shop head is deformed with a crimping tool or a bucking bar. Rivets are the preferred technique for asset identification tags on finished sheet metal.

Attachment with Hog Rings (left) is similar to the wire-on method. A tag slips onto one end of the ring and the other ring winds onto the product. Rings are reusable and available in many shapes and sizes.

By nature, loose attachments are not Permanent Methods. Lifetime attachment, where the tag becomes part of the finished product, requires mechanical stability and durability. The following examples show attachment techniques commonly used on high value equipment and manufactured products.

Attachment with Metal-Tacks is similar to operating a nail gun. The operator uses a portable impact tool to position the attachment before fastening. No drilling or surface preparation is required. This technique works well on thicker materials and eliminates the need to precisely locate and align holes in the base material.

Push Pin attachments require studs designed into the work piece. The tag holes are pressed over the pins. Then collar buttons are pushed or hammered onto the studs.

There are professional grade Adhesives for both metal tags and Polyacrylic labels designed to attach to almost every combination of material and surface. Attachment longevity, resistance to oils, cleaners and removal will vary. Some adhesives begin to lose adhesion when temperatures exceed 250°F (121°C).
**Work in Process Methods** emphasize efficiency, effectiveness and safety. The initial costs are higher but justified when production volumes are high. The techniques shown here are common and have many applications.

**Nailing** is common in high volume metal casting operations. It requires pneumatic or powder-charged nailing equipment. Nailing guns with magnetic tag holders simplify the process and make it safer.

**Nut and Bolt** methods (right) require welding or embedding a bolt onto the work piece. Double bolting is an excellent way to secure the tag so that it stands off from the piece during shot blasting, painting, or galvanizing.

An InfoSight customer created **Angle Weld** to insure permanent identification on galvanized steel beams. The tag attaches before galvanizing and includes worksite installation information. One end of the angled band welds to the beam. Then the slotted tag slides on and the opposite end and the band is bent down onto the beam.

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A customer wanted to attach tags using **Resistance/Spot Welding**. InfoSight responded by making tags with bare edges. The method works on hot or cold steel with light or no scale. It is ideally suited for coils, plates or sections, intended for in-process inventory or shipment to a reheat mill.

**MIG Welding** forms an electric arc between a consumable wire electrode and the workpiece metal(s), causing them to melt and join. It is used for hot or cold steel products that have rough surfaces and scale, such as billets, blooms, slabs, etc.
More industries are adopting ISO-9000 traceability standards. Sometimes new attachment techniques are needed. A few of those techniques already have been mentioned. Here are four more InfoSight innovations that were recently introduced.

Banding methods use tags with holes or slots toward each end. A metal band is worked behind the tag and through the slots. Cinch bands feed around the product and then tighten. Weld bands (shown left) attach permanently. This technique also allows tags to be welded onto steel work pieces.

Embedding tags into products before they solidify is InfoSight's newest development. Slightly different methods are used to float tags onto metal ingots and billets, and provide assembly site identification for precast concrete fabricators (shown right).

Flexible Tags are designed to use the springiness of the metal substrate to wedge the tag in place. Flexible tags may have serrated ends to add grip. Generally they identify in-process parts requiring special handling.

Snap Rings (Circlips) are used by a forge shop manager who wanted a removable tag to identify his dies and trace each dies' resurfacing history. A two dimensional bar code was printed on half-inch square die-cut tags. The tags were then inserted in shallow slotted pockets that were milled into the side of the dies, and retained by the clip.

InfoSight tracking tags uniquely identify parts and products that need to survive hostile processes and environments. As industries adopt new standards for controlling their processes and finished goods, we create new ways to help them handle their most difficult tracking problems. That’s why we say:

We BARCODE Difficult Stuff™