AK Steel

PRODUCT FEATURES

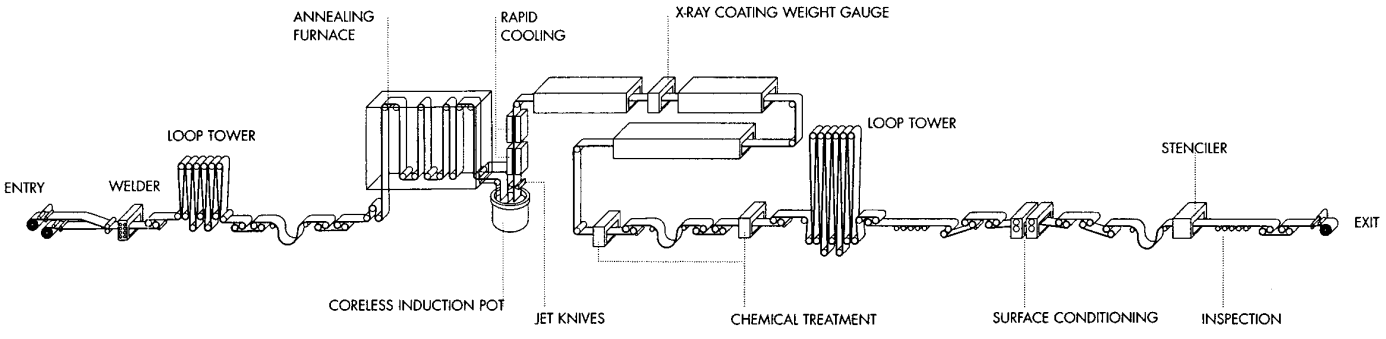
ALUMINIZED STEEL TYPE 2

- **MANUFACTURING**
  Steel strip is hot-dipped in a bath of molten, commercially pure aluminum. Controlled processing results in a durable bonded coating of controlled thickness.
- **COATING MICROSTRUCTURE**
  A duplex aluminum/aluminum-iron alloy coating provides a double line of defense against corrosion. The coating is tightly bound to the steel substrate and closely controlled for thickness and uniformity.
- **BASIC COATING-CORROSION BEHAVIOR**
  A passive aluminum layer resists corrosion arising from dissolved oxygen, CO_2 and high velocity waters. The alloy provides backup abrasion/erosion resistance while inhibiting pit growth.

Aluminized Steel Type 2 was developed in 1939 for superior environmental corrosion resistance. Type 2 combines the strength of a steel substrate with the corrosion resistance of aluminum.

Manufacturing

Aluminized Steel Type 2 is produced by continuous hot-dip coating of steel strip in a bath of molten, commercially pure aluminum. Cleaning the strip in a non-oxidizing/reducing furnace atmosphere assures a pristine surface for coating adherence. Interaction of molten aluminum with the steel surface produces a metallurgical bond and provides corrosion protection. Line speed, bath temperature and air finishing knives control aluminum coating thickness.



The Aluminize Line at AK Steel's Middletown Works