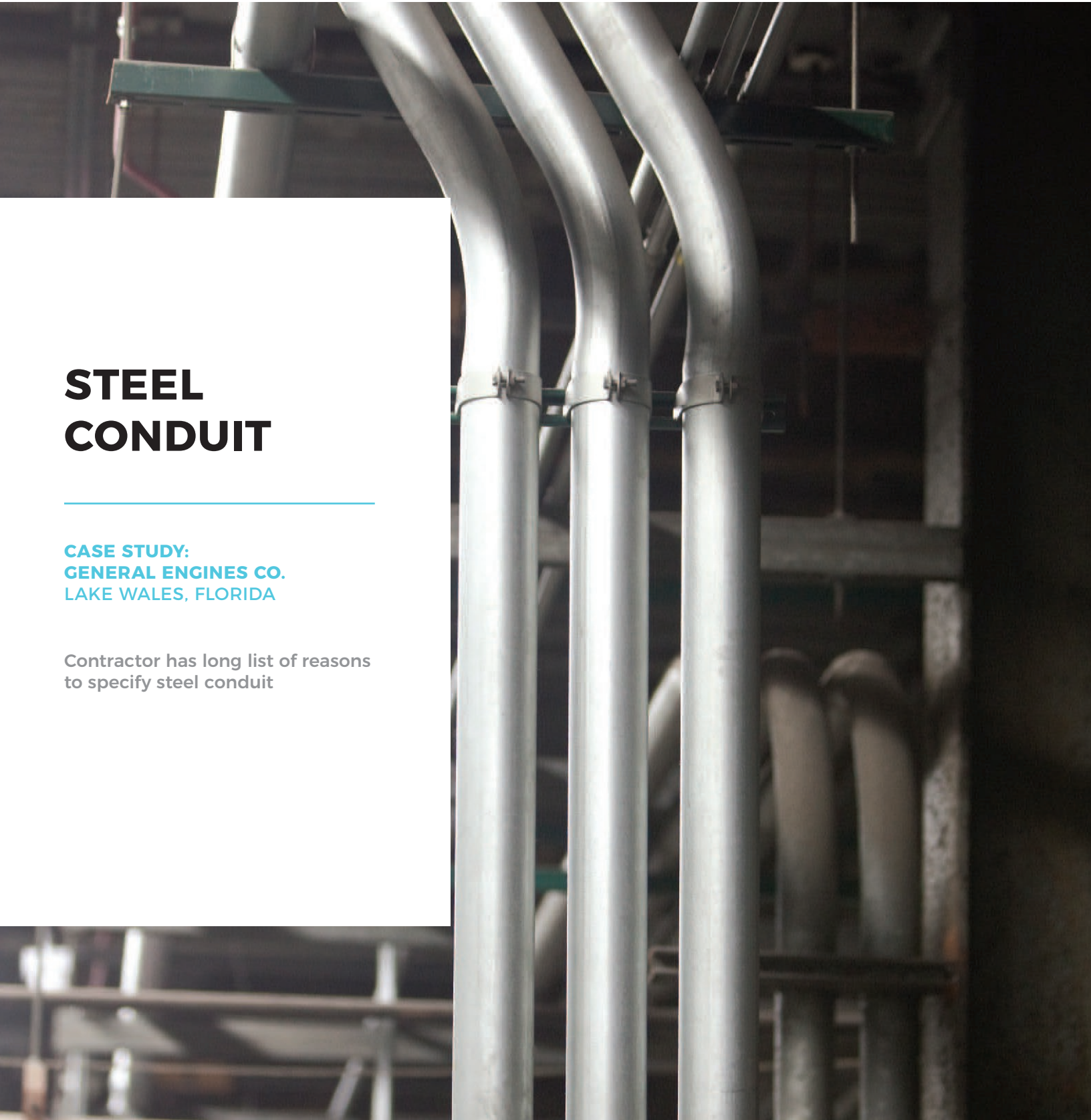


STEEL CONDUIT

CASE STUDY:
GENERAL ENGINES CO.
LAKE WALES, FLORIDA

Contractor has long list of reasons
to specify steel conduit





GARY ESTES IS AN ENTHUSIASTIC USER OF STEEL CONDUIT TO PROTECT CONDUCTORS IN THE SYSTEMS HE INSTALLS. IN FACT, HE RARELY SPECIFIES ANY OTHER TYPE OF CONDUIT.

GARY ESTES KNOWS ELECTRICAL WIRING INSIDE OUT.

Gary Estes is president of Estes Electric, a Lake Wales, Florida, firm that he's operated since 1983. The company primarily handles commercial and industrial contracts in the central part of the state, but will travel further away for larger jobs.

Gary is an enthusiastic user of steel conduit to protect conductors in the systems he installs. In fact, he rarely specifies any other type of conduit.

Ongoing work for two Estes Electric clients in Lake Wales illustrates the reasons Gary prefers steel conduit. Estes has performed work for General Engines Co. since it bought an existing Lake Wales plant in 1985 and retrofitted it to produce truck trailers between five and 30 tons. The facility has roughly 80,000 square feet under one roof.



NEARLY A MILE OF STEEL CONDUIT

Estes has installed more than 5,000 feet of steel conduit in the General Engines plant, in diameters ranging from 1/2" to 4". The firm has put in both rigid steel conduit and electrical metallic tubing (EMT), primarily because of their strength.

The work has been ongoing, since General Engines is continually modernizing the facility and adding new equipment. "It's a tough environment there," Gary says. "Most of the potential damage to electrical conductors is from forklifts and other mobile equipment."

A number of times, Gary adds, General Engines has simply used regular electrical cords as a temporary expedient. "Every time that happens, the cords end up being cut, and we go in and replace it with steel conduit."

STEEL CONDUIT AS PROTECTION AGAINST EMF

While the conduit at General Engines primarily protects against physical damage and provides equipment grounding, the steel conduit installed at the Lake Wales plant of Findley Industries also serves another protective function – electromagnetic fields (EMF) protection. The facility has three separate buildings and produces door panels for several auto and truck manufacturers.

"Basically," Gary explains, "The high EMF that the plant's machine puts out is a concern, so we run all the control wires and feeder wires through steel conduit to keep the energy off them while the machine is in operation."

The plant also has a lot of computer-controlled production equipment, and steel conduit protects their controls against electromagnetic interference (EMI) from other plant energy sources. Estes Electric has installed about 4,000 feet of steel conduit in diameters between 3/4" and 4" in the Findley Industries facility.

Gary normally specifies the type of conduit used in the electrical systems his company installs and he says he has a long list of reasons to specify steel conduit.

SUPERIOR FIRE PROTECTION

In addition to equipment grounding, physical protection and EMF shielding, Gary notes that steel conduit is a superior product in protecting conductors against fire damage – in part because of its grounding function.

"If you have a short," he explains, "It's generally in a box or in the conduit. If it's in the conduit, the short will trip a breaker and shut everything down, minimizing damage. That's not the case with some other types of conduit."

Another advantage Gary notes is the rigidity of steel conduit. "When you're spanning 5' gaps between wall columns, steel conduit is the best material to do that with."

Steel conduit makes it easier to pull old wiring and install new systems when electrical power, data and communications conductors need to be replaced or upgraded. Sometimes that involves the removal of existing conduit. When that happens, Gary says, "We simply tear out the conduit, scrap it and replace it with new steel conduit." And because steel is recyclable, disposing of old steel conduit is no problem.

