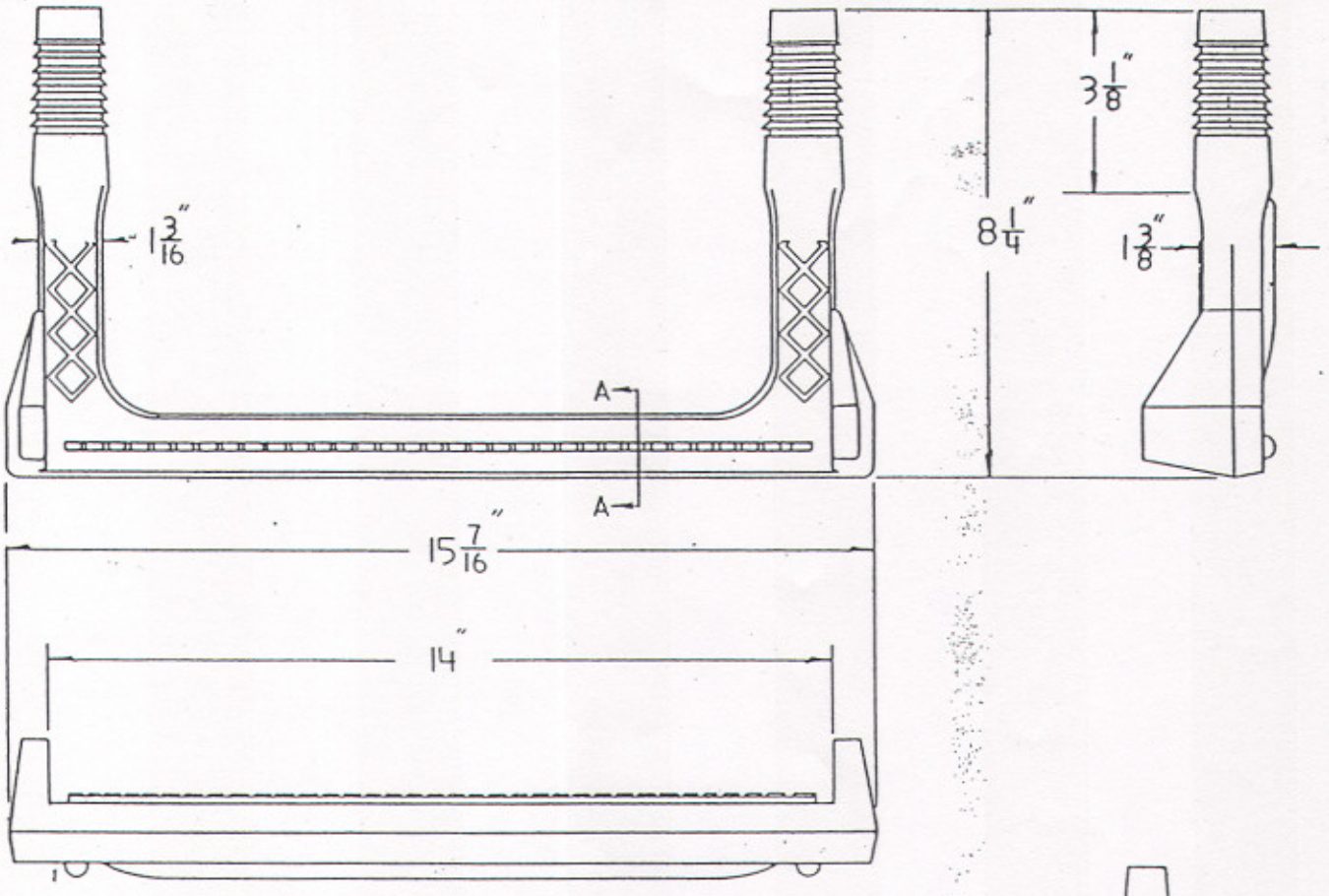
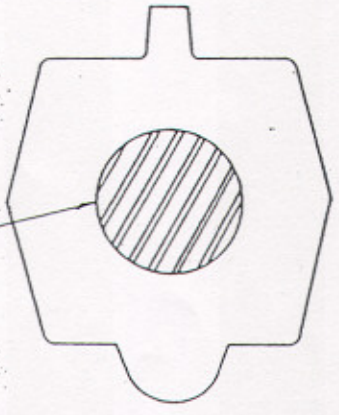
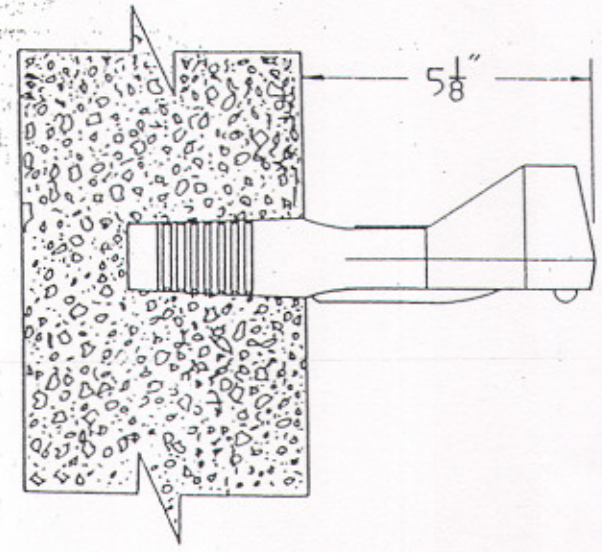


Copolymer Polypropylene Plastic

1/2" GRADE 60 STEEL REINFORCEMENT



SECTION-A



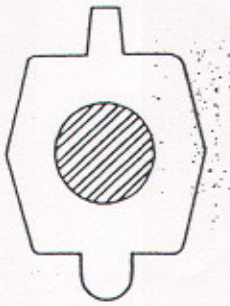
PS2-PFSL

Manhole Step

M.A. Industries Inc.
Kelley & Dividend Dr.
Peachtree City Ga.

M.A. STEP

The manhole step for engineers, precasters, and maintenance personnel. Injection molded of tough copolymer polypropylene that encapsulates a 1/2" grade 60 steel reinforcing rod. This combination plus our manufacturing technology and quality control provides a better manhole step.



LONG LIFE IN CORROSIVE ENVIRONMENTS

Has polypropylene's superior resistance to all types of corrosive environments found in sewers. Tests show polypropylene resists even 50% hydrogen sulfide or sulfuric acid solutions up to 120° F.

Accelerated aging tests on polypropylene indicate a life expectancy as long as that of the manhole you install it in.

CONSISTENTLY TIGHT INSTALLATIONS

The M.A. "press fit" step is simply hand driven by hammer into preformed holes in the cured concrete. No grout or epoxy is used. Driving the step into the hole forms a positive friction lock, which is reinforced by the locking rings (clearly shown in the photo) securely wedged against the concrete.

The other M.A. steps have surface projections that assure retention whether the steps are cast in place or vibrated into green concrete.

IMPACT AND PULLOUT STRENGTH

Impact testing of up to 300 foot pounds, with only minor deflection and no cracking or breaking, proves that the M.A. step will withstand even abusive usage.

And it will resist pullout forces of over 1500 pounds—whether cast in place, vibrated into green concrete, or press fit installed into preformed holes.

SAFETY

Serrated tread and tall end lugs prevent the feet from slipping forward, backward, or sidewards off the M.A. step.

The polypropylene will not spark against a steel heel tap or dangling tool—so no explosive concentration of gas will be ignited.

OSHA

OSHA Instruction STD 1-1.9, issued December 29, 1978, revised the agency's original directive for FIXED LADDERS, 29 CFR 1910.27, **to specifically exclude manhole steps.** STD 1-1.9 says: "individual rungs or steps used for access or egress, embedded in the walls of risers or the conical top sections of manholes, shall be safe, well constructed, and installed in accordance with good engineering practices."

M.A. Industries will furnish, on request, the above OSHA information plus any more recent update.

ASTM

The M.A. manhole step is in conformance with ASTM C-478, paragraph 11. It is available in various sizes to fit the dimensional requirements of different locales.