

The ideal piping system by David A. Chasis

Suppose a group of engineers and installers got together to collaborate on designing the ideal piping system. Suppose they were aiming for an overall piping solution to meet the requirements of residential, commercial and industrial building projects. The requirements: it would have to be durable, easy and safe to install, environmentally sound and, not but least, be cost effective. Plastic piping makes the grade on all counts.

Durability

Plastic piping has a proven performance record for almost seven decades. Many installations have a service life projected to exceed 100 years. Plastic piping is practically immune to interior and exterior corrosion or chemical attack. It doesn't rust, pit or scale. It resists bacteria, fungi and termite attack. It has unmatched leak-proof joint integrity. It's more abrasion resistant than most other piping materials. It has a smooth inner pipe bore offering optimum flow characteristics. It is non-toxic and odorless. And it's available in complete systems of fluid and air-handling products.



CPVC chemical process piping



PP chemical waste and high purity piping under-bench lab systems

Easy and safe to install

When it comes to the ease and safety of installation, plastic piping is in a league of its own. Plastic's weight (1/6 to 1/8 the weight of most other non-plastic piping) makes installation comparatively easier and safer. Along with its lighter weight, ease of joining also reduces the likelihood of reportable on-site accidents. Adding value is that there are over a half-dozen proven joining methods depending on the application and particular plastic piping material. Plastics are available in a broad size range, from 1/8-inch to 144-inch diameter and larger. Generally, from 10-inch diameter and smaller, no heavy pipe moving equipment is required. Process-integrated coloration allows piping to be easily identified, especially important in critical applications, and service markings allow for easy identification of all relevant data. Plastic pipe's low thermal conductivity minimizes or eliminates insulation. Another benefit of plastic piping is its acceptance by most building code authorities throughout the world.

Environmentally sound

All plastic piping compounds used for potable and high purity water applications are produced to National Sanitary Foundation International and ASTM standards. Presently, life cycle analyses have been completed in Europe and underway in North America to scientifically determine the environmental impact of plastic pipe and other piping materials. The preliminary results so far are very complimentary for plastic. Part of the analysis shows plastic pipe reduces energy losses due to low thermal conductance. And with its smooth inner pipe bore, plastic piping requires less horsepower to move fluids.

Helping to further reduce its environmental footprint are additional energy savings in shipping costs. In post-industrial processing almost 100 percent of the material is recycled. In post-consumer use all thermoplastic piping is recyclable. Unlike any other non-plastic piping materials, plastic piping in the future could be made from sustainable and renewable bio-fuel feedstocks.

Cost effective

So here we have a piping system which possess amazing durability, is easy and safe



PVDF ultra high-purity water piping system

to install, and is environmental sound. What more could we want? How about cost effectiveness? Plastic piping systems reliably cost less to purchase and install than other piping systems. And when you consider the cost savings in freight, maintenance and reduced onsite theft, plastic piping is at the head of the pack.

When designing and selecting a piping system, make the smart move. Choose plastics — *the ideal piping system*. ■

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