PNP
PACIFIC NETTING PRODUCTS
INCORPORATED

SafeGuard Boom Series

MATERIAL DESIGN AND CONSTRUCTION

Pacific Netting Products' SafeGuard Booms are designed for high flow and load conditions. With few moving parts or points of failure, they deliver up to a 50-year service life. They are watertight, corrosion-free, rot-resistant, and ultraviolet (UV)-stable. They are capable of withstanding temperatures to -140° F and designed and constructed with a boom diameter and wall thickness to meet site-specific load requirements and budgets.

SafeGuard Booms are designed with an external steel frame that consists of a solid hot-dipped galvanized steel structural member that spans the length of the underside of the boom. The high density polyethylene (HDPE) floatation element is attached to the structural member with hot-dipped galvanized clamp bands that are bolted to the structural member. Multiple boom sections are connected together with heavy duty marine grade galvanized stud link chain attached to the structural load member with a galvanized safety hex bolt. Each boom has a hot-dipped galvanized steel safety clevis plate at each end, which serves as a restraint to the HDPE floatation section to further lock the float to the structural member and creates an attachment point for the stud link chain.

SafeGuard Booms are built of HDPE PE4710 material. They are filled with type 1, closed cell, expanded polystyrene foam logs that are sized to fit the I.D. of the boom. SafeGuard Booms are formulated with a minimum of 2% carbon black and/or UV stabilizer for maximum protection against UV rays for added assurance. The smooth, non-stick surface of HDPE results in low friction factors with exceptional resistance to fouling. To meet the unique requirements of many applications, these booms offer standard working load capacities from 50 to 500 kips.

SafeGuard Booms are manufactured using co-extrusion HDPE to provide a highly visible color (e.g., yellow or orange). Co-extrusion lowers operation and maintenance costs by offering superior impact resistance and coating resilience. Graphics can be added per customer requirements.

A CLOSER LOOK AT HDPE MANUFACTURING

PNP uses customized and proprietary manufacturing processes to produce its SafeGuard Boom Series. The raw materials are extruded in a continuous surface method of production. In addition to tensile or safe pull strength and consistent cross sections (wall thickness), the other benefit of this method of manufacture is the consistency of the finished material properties, which are defined in standards such as ASTM D3350 describing key properties and ranges of performance.

During the manufacturing process, plastic pellets are mixed with other materials, such as UV inhibitors, and then pushed through the die. Because higher operating pressures are created during the extrusion process, higher density resins can be used. Together, the materials and manufacturing process make SafeGuard Booms ideally suited for debris, demarcation, and security applications.

A CLOSER LOOK AT HDPE CO-EXTRUSION MANUFACTURING

When a structure requires greater visibility than what is offered by standard black, PNP offers a full line of colorful co-extrusion SafeGuard Boom products. In standard HDPE extrusion, solid plastic pellets are gravity-fed into a forming mechanism, where jacketed compression screws melt and feed the materials into a die. Co-extrusion involves multiple extruders of different pigments and, if necessary, properties forming a homogeneous product. PNP's HDPE co-extrusion products do not chip, peel, or fade and are the obvious choice when demarcation and impact resistance is essential. Co-extrusion has the same service life and superior impact resistance as the standard black HDPE with the added value of color and superior coating resilience.

About PNP

PNP's administrative headquarters and manufacturing facility are located in Kingston, Washington, USA. As a family-owned and operated company, PNP was founded on the principle that listening carefully to customers is the best way to deliver the quality they need and surpass the service they expect. PNP has been manufacturing and supplying systems since 1997, so we know what it takes to successfully execute and deliver a project on schedule and within budget.