BOC EDWARDS SEMCO CORPORATION INCREASES SAFETY AND REDUCES SPILLAGE IN SMARTCART CHEMICAL MANAGEMENT SYSTEM

OPPORTUNITY

BOC Edwards Semco Corporation, a California-based OEM of chemical management systems for the semiconductor and pharmaceutical industries, was looking for a robust, intuitive connection device for their SmartCart chemical transport system. The SmartCart is used for management of aggressive chemicals, including sulfuric acid, hydrofluoric acid, hydrogen peroxide, and ionized water. These chemicals are extremely dangerous if not handled correctly.

SOLUTION

CPC suggested its PTFE ChemQuik® non-spill quick disconnect coupling. The coupling features a push-button thumb latch, which allowed for one-handed quick disconnects from the chemical cart and reconnects to the process tool. It can also be disconnected under pressure with no spillage, unlike traditional poppet-style designs, which can spill a significant amount when disconnected.

In addition, chemicals and high purity process fluids can be contaminated by the metallic springs in the flow path of ordinary couplings, or the lubricants that are used for seal lubrication. The ChemQuik coupling uses no lubricants, and the springs, which are hermetically encapsulated in fluoropolymer plastic, are located outside the flow path, away from corrosive and ultra pure fluids, eliminating the expensive risk of contamination.

To further enhance safety, CPC added a unique, rugged keying system to the ChemQuik couplings it provided for Semco, which helped prevent accidental line misconnections.

RESULTS

With the integration of CPC’s non-spill, quick disconnect couplings, Semco was able to offer its customers a chemical management system that reduced spillage and contamination, and was safer and easier to use.

— Kenneth A. Johnson, Director of Product Technology at Semco