Problem:

Radiadores Visconde, a Brazilian manufacturer of automotive radiators, needed to apply flux on radiator cores before the brazing furnace. The powdered flux is mixed with deionized water and then sprayed on the aluminum parts before entering the furnace. The previous system included a stainless steel spray manifold with plastic nozzles. Frequent clogging caused poor spray performance and excessive downtime to remove and clean the spray nozzles.

Solution:

Spraying Systems Co.’s solution consisted of a brush-type shower header spraying over the width of the conveyor. The 1000 mm (39 in.) header is equipped with 20 flat spray ShowerJet nozzles which apply a uniform coating of flux on the radiators from a spray height of 215 mm (8.5 in.). A simple turn of the hand wheel rotates an internal brush that cleans all nozzles at once. In just seconds, debris is removed from the header through a flush-out valve, restoring full liquid flow quickly and easily.
Radiator Manufacturer Saves Over US$6,000 Annually with New Shower Header – Continued

Results:

Installation of the brush-type shower header has saved Radiadores Visconde two hours of manual labor per shift and allows factory staff to be assigned to other tasks. Based only on labor costs, the payback for the new header was just under 12 months. Reduced downtime and more consistent product quality are additional benefits provided by the new spray system.

A CLOSER LOOK AT THE SYSTEM

An internal rotating brush assembly scrubs the interior wall of the shower as well as each disc-type shower nozzle orifice. In just a few seconds, debris is swept away through the flush-out valve, restoring full liquid flow to the system without contaminating the sprayed surface. And, there’s no need to stop the system. The brushes operate without disruption to normal processes.

ShowerJet self-locating nozzles are available with a variety of flow rates and spray angles. A lock ring on the shower holds the nozzles in place.

Valve Seal (shown in open position)

Handwheel