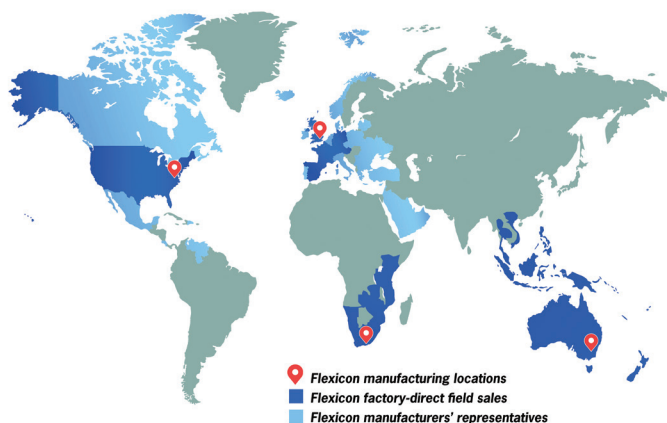




Drum tip approaches point of discharge into 300 gal (130L) capacity receiving hopper

Drum Dump and Conveying System Speeds Hairspray Manufacture

P-1025



● Flexicon manufacturing locations
■ Flexicon factory-direct field sales
■ Flexicon manufacturers' representatives

flexicon®

USA

FLEXICON CORPORATION
Tel: +1 610 814 2400
E-mail: sales@flexicon.com
Web: www.flexicon.com

UK

FLEXICON (EUROPE) LTD
Tel: +44 1227 374710
E-mail: sales@flexicon.co.uk
Web: www.flexicon.co.uk

AUSTRALIA

FLEXICON CORPORATION
(AUSTRALIA) PTY LTD
Tel: +61 7 3879 4180
E-mail: sales@flexicon.com.au
Web: www.flexicon.com.au

SOUTH AFRICA

FLEXICON AFRICA (PTY) LTD
Tel: +27 41 453 1871
E-mail: sales@flexicon.co.za
Web: www.flexicon.co.za

SPAIN

FLEXICON EUROPE SPAIN
Tel: +34 930 020 509
E-mail: ventas@flexicon.es
Web: www.flexicon.es

FRANCE

FLEXICON EUROPE SAS
Tel: +33 7 61 36 56 12
E-mail: ventes@flexicon.fr
Web: www.flexicon.fr

GERMANY

FLEXICON EUROPE GmbH
Tel: +49 173 900 78 76
E-mail: vertrieb@flexiconeurope.de
Web: www.flexicondeutschland.de

SINGAPORE

FLEXICON SINGAPORE PTE LTD
Tel: +65 6778 9225
E-mail: sales@flexicon.com.sg
Web: www.flexicon.com.sg

INDONESIA

FLEXICON SINGAPORE PTE LTD
Tel: +62 81 1103 2400
E-mail: sales@flexicon.co.id
Web: www.flexicon.co.id

Drum Dump and Conveying System Speeds Hairspray Manufacture

LYTHAM, UK — In manufacturing hairspray, Statestrong Ltd. improved product stability, increased throughput, and eliminated dusting by installing an enclosed system consisting of a drum dumper, hopper and flexible screw conveyor that transfers hair fixative powder to a 11,500-gallon (5000 liter) capacity mixer. Previously, operators manually adding the powder from a 200 lb (91 Kg) drum into separate containers of 26 lb (12 Kg), and then poured the contents of each into the 11,500-gallon (5000 liter) mixer containing alcohol. The small batches from the containers restricted throughput, and intermittent flow into the mixer compromised accurate dosing. The transfer also exposed the hygroscopic powder to ambient humidity, causing “balling” in the mixing vessel, thus increasing mixing time and filtration costs to eliminate the small particles. Workers also faced health risks from inhalation because the low bulk density powder fluidizes when handled.



Drum tip engages as neck of butterfly valve is securely positioned against rubber seal on top of receiving hopper.

Drum dump/conveying system contains dust

The new enclosed system, which was designed, manufactured and installed by Flexicon (Europe) Ltd., is comprised of a hydraulically operated drum dumper, a 300 gal (130 l) capacity receiving hopper, and a 13 ft (4 m) long, 3.5 in (88mm) diameter flexible screw conveyor activated from a control panel.

The operator places the 200 lb (91 kg) drum onto rollers attached to the base of the drum dumper. He removes the lid and eases the drum into position on the rollers from which it is hydraulically lifted to meet the drum dumper's clamping lid. The rollers fold back into the base to avoid obstructing traffic in the surrounding floor space.

The machine raises the drum through 180 degrees until the neck of the clamping lid seats against the rubber seal on the top of the receiving hopper. The operator opens the butterfly valve in the neck of the clamping lid allowing the additive to flow into the hopper with minimal dust emission. A low-level sensor in the hopper alerts the operator of the filling status.

From the control panel, the operator activates the flexible screw conveyor, which gently conveys the powder through 45 degrees to the mixer at a consistent rate. The UHMW polyethylene outer tube encloses a flexible stainless steel screw that successfully moves the fluidizable powder.

Throughput, product stability improve

The drum dumper system eliminates balling, improves mixing efficiency and throughput, improves product stability by eliminating exposure to ambient humidity, and minimizes worker health risk. Quick cleaning of the flexible screw conveyor decreases downtime, as the operator removes the bottom clean-out port and reverses the drive, evacuating any residual material.

During mixing, various liquid chemicals are added, such as a neutralizer,

conditioners, and perfumes. The mix is transferred to a second, similar sized vessel and clarified by a 25-micron filter. Finally, the mix is pumped to the in-line filling process where it is sealed and pressurized in canisters, ready for shipment.



USA

FLEXICON CORPORATION
Tel: +1 610 814 2400
E-mail: sales@flexicon.com
Web: www.flexicon.com