

Press Release

Paderborn (Germany), 22 January 2022

Automatic WIP-Systems Efficient cleaning of Ploughshare® Mixers

A reliable and repeatable process for cleaning of mixing systems – as e. g. Ploughshare® Mixers by Lödige Process Technology – takes on an increasingly important role for companies handling Life-Science-applications. Automatic WIP-Systems have been established as a suitable technical solution for meeting these requirements. Beside the technical functionality, efficiency and the economy of cleaning systems are also playing an ever increasing role.

The amount of water, detergents and solvents, which are required per cleaning cycle, are supposed to be reduced to a minimum. By reducing the amounts of cleaning media and wastewater, savings of operating costs are achieved while also environmental considerations are taken into account and sustainable cleaning concepts can be developed.

Therefore, especially for bigger machines, complete filling of process vessels with cleaning media should be avoided. Although this is not a mandatory requirement: A smart arrangement of rotating cleaning nozzles inside the mixing drum ensures a thorough rinsing of all product contact surfaces without any need for filling the machine with cleaning media. By simultaneous rotation of mixing elements and cleaning nozzles any spray shadows are avoided. The gear driven rotating flat fan nozzles guarantee an intensive and uniform cleaning of all surfaces. Due to their robust construction and cleaning operation in circulation mode it's also possible for further potential savings on resource requirements.

Besides the rotating cleaning nozzles inside the mixing drum, the seals for the mixing elements and choppers are purged with water and all ports on the machine are cleaned effectively by static locally installed cleaning nozzles. Combined with a smart control system highly efficient cleaning sequences can be achieved that are fully automatic, programmable and repeatable. Hereby maximizing the cleaning efficiency with the economical use of cleaning media can be combined alongside full process reliability.

Press Contact:

Prospero GmbH Müllerstraße 27 – 80469 München/Munich (Germany)

Telefon: +49-89-273383-14 Telefax: +49-89-273383-29

E-Mail: marco.voeroes@prospero-pr.de

Gebr. Lödige Maschinenbau GmbH Elsener Straße 7-9 – 33102 Paderborn

(Germany)

Tel.: +49-5251-309-0 Fax: +49-5251-309-123 E-mail: marketing@loedige.de 1



Contact:

Dominik Sander, Life Science Technology

Gebr. Lödige Maschinenbau GmbH / Lödige Process Technology

Elsener Straße 7-9 – 33102 Paderborn

Tel.: +49-5251-309-260 Fax: +49-5251-309-129 E-Mail: sander@loedige.de

www.loedige.de

Captions:



Rotating flat fan cleaning nozzle in a 10.000 l Lödige Ploughshare®-Mixer in operation. (Source: Lödige Process Technology)

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Suitable rotating cleaning nozzle type Lechler XactClean® HP for cleaning of large mixing vessels. (Source: Lödige Process Technology)

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