TRITON
ADVANCED SEARCH

SURFACE TREATMENT SOLUTIONS

TUNNEL WITH OVERHEAD CONVEYOR SYSTEM

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GENERAL FEATURES OVERVIEW

TRITON **tunnel with overhead conveyor system**, is characterized by the **capability to treat pieces of large dimensions and great weight**. The versatility of our transportation system, allows to design the entire line with the maximum flexibility. The tunnels can have a rectilinear development, U or L shape, in accordance with the available layouts.

The overhead conveyor system foresees that the pieces are loaded on suspension bars (bilancelle), fixed or rotating, depending on the pieces geometry or on any downstream operations requirement. The overhead conveyor can carry the pieces for long distances and, therefore, can feed different working islands. When using a dual-rail overhead conveyor, **the line can offer different loading/unloading or storage areas and meet any production requirement.**

BILANCELLE UNIVERSAL PIECES HOLDER

The innovative suspension bars system, designed for the treatment of stainless steel components, makes possible the loading of pieces, with different sizes and geometries, without having to move or add other elements. In addition to an improved simplicity of the loading/unloading operations, the system guarantees greater stability during all stages of the treatment, preventing pieces of swing, crawl and move under the effect of the sprays or air blowing. Another feature of this system, is not to create points of contact with the surface to be washed in order to have consistency of treatment and, thanks to the materials used, the stainless steel surface is not minimally marked.

SPRAYING RAMPS AND NOZZLES

The spraying ramps are made with a special plastic material, resistant to pressures up to 10 bar and temperatures over 100°C, also useful in preventing the formation of incrustations of detergent or limestone inside the ramps. The spray circuit foresees a special mounting system for both ramps and nozzles, to facilitate the maintenance operations and to ensure the exact repositioning and the "memory" of the angle of inclination.

INSPECTION AND MAINTENANCE

For the entire length of the tunnel runs, parallel with the movement of the pieces, a corridor with anti-slippery walkway, artificial lighting, internal ventilation and a wire emergency switch. Walking along this corridor, which is accessed by a door equipped with safety sensors, the operator can overlook all treatment areas, making cleaning and maintenance operations inside the tunnel chambers extremely easy, fast and safe.

SECURITY AND CONTROL

All access doors to the treatment chambers, are interlocked with sensors or electrical contact hinges. These components are class 4 approved and managed by PILZ safety relays. The supervision of the process can be entrusted to a PLC with operator panel interface. Beside the setting of all operating parameters, thanks to the logic of the PLC, the start of the different engines is performed in sequence to avoid major current peaks.

When using photocells at the tunnel entrance, the PLC switches off in sequence the different zones, with greater energy saving.

ENERGY SAVING AND ENVIRONMENTAL FRIENDLY SOLUTIONS

The tube bundle heat exchangers, fed from fuel burners, are made of stainless AISI 304 and are designed with suitable geometries to achieve a high thermal efficiency. In multi-stages washing machines, TRITON system foresees the recovery of the exhaust gas from the heat exchanger of the first degreasing tank, in order to achieve, thanks to a second heat exchanger, the heating of the following rinsing tank, with significant energy savings.

The washing machines can be equipped with a system for the condensation of the hot vapors to avoid the fabrication of the external exhaust chimney for their extraction. This system, which employs an electric exhaust unit and a heat exchanger with "air/air" crossed plates, allows the condensation of the saturated vapors and the consequent return to the machine of the condensate in the liquid status.

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