40th ANNIVERSARY

ROTARY DRUM-SCREW CONVEYOR WASHING MACHINE [ROTOFLOW-LC] MODEL

A Worldwide Experienced Team Generating World Class EXCELLENT TECHNOLOGY

Sand it! it's clean! Automation!

ROTARY DRUM WASHING SYSTEMS

The material is loaded appropriately dosed inside the loading hopper of the plant itself, inside the plant carpentry there is the screw conveyor **to transport the material through the treatment phases**. The rotation of the screw conveyor (conveyor drum) generates a **slow stirring of the pieces**, while the hot detergent is sprayed at a predetermined pressure, **by means of suitably positioned spray nozzles.** Various phases can be composed to establish the most suitable washing cycle for the pieces being treated and the contaminated items to be removed (oils, shavings, etc ...). In the case of whole oily pollutant, a preliminary pre-washing phase is used, in order to concentrate the oil in the first tank and **separate it with a suitable concentrator** and then separate it using an external oil separator.

Subsequently, after the washing phase, during which the contaminants are eliminated, the pieces **are rinsed to eliminate any residual detergent present on the pieces**. Each active phase of the treatment (pre-washing, washing, rinsing and possible passivation) is obtained with the aid of specific independent ramps equipped with **spray nozzles present inside the drum**. Between the three phases there are drainage areas to limit the dragging of the solutions that make up the washing cycle towards the downstream tank. Positioned below the drum there are chutes to **convey the solutions into the respective treatment tanks** that make up the washing cycle.

We care!

ENGINEERED SOLUTIONS

Depure-Rinse

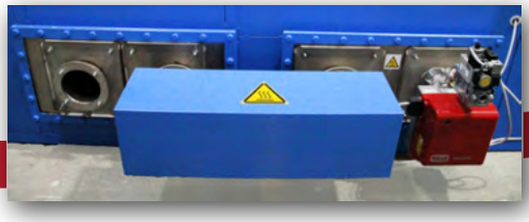
This system is conceived for maximum exploitation of the heating source generating vapor. The vapor gives up warmth to the relevant tanks and then condenses thus becoming fresh hot water to be re-used for filling up rinse and degreasing tanks. The most polluted solution is sent to the concentration / boiling tank where the heating unit is placed.

Depure-Rinse benefits:

- Lower sludge disposal, since the sludge is concentrated in one small-sized tank only.
- Power consumption reduction by approx. 50%.
- Inlet fresh water consumption reduction by 70%, since even the evaporation is captured by the condensate dampers.
- The automatic refill is always performed with fresh water, since it is released by the condensed vapor.
- Comfortable and quick tank cleaning, since the heating elements are only located in the concentration / boiling tank.

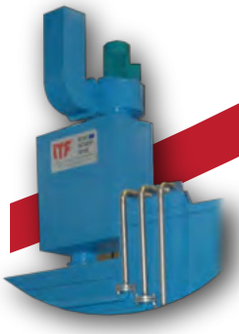
SMART DESIGN FOR EASY MAINTENANCE

The I.T.F. heat exchanger is **entirely manufactured in stainless steel AISI 304**, due to its dedicated design ensures a progressive **specific heat exchange power**, thus ensuring a much **longer useful life** in comparisson to the conventional heat exchangers. The recovery of the burnt gases from the exchanger of the first tank (degreasing) is employed to heat the bath in the next tank (hot rinse). This solution **saves thermal energy.**
The detection and management of the temperature of the solutions takes place via PT 100 probes connected to the PLC.



Energy Efficient

In the pre-wash chamber, at the entrance of the tunnel, we have a **vapor aspiration** device that will draw in all the hot steam generated by the hot washing solutions. The machine can also be equipped with a **vapor dumper**, thus eliminating the need for the exhaust chimney. The excrated steam is sent to an exchanger cooled with air at room temperature and, due to the heat exchange, it condenses to return in the form of liquid in the tank. The particular I.T.F. in-house design guarantees that the two air flows do not meet, preventing the sturated vapors from dispersing in the working environment



ENGINEERING AND DESIGN

With the increasing market standards for a better surface quality in the final product, a reliable and **efficient machinery supplier** such as I.T.F. becomes an invaluable strategic partner. Every customer's requirement is unique and that's why it deserves our full attention. For this reason we offer our **efficient Testing Center** always at the customer's disposal to perform process simulations and to verify test quality result. Only when the customer is satisfied with outcome, our technical department will start the engineering proposal to find the **perfect balance** between the customer's request and the best technology the state of art can provide, in order to achieve maximum efficiency with the best final result.

VAPOR EXTRACTION FAN

VAPOR DUMPER CONDENSATES THE VAPOR PRIOR EXHAUST

DEPURE RINSE DISTILLATION UNIT

LOWER-UPPER FRONT-BACK EASY DISCONNECT SPRAYING BARS AND MANIFOLDS

HOPPER IS LEANED BY ANTISCRATCH MATERIAL

HOPPER FOR AUTOMATIC LOADING OF BULKY MATERIAL

EMERGENCY STOP BUTTON AT LOADING + UNLOADING POSITIONS

EMPTYING MANIFOLD WITH SEVAGE PUMP (OPTION)

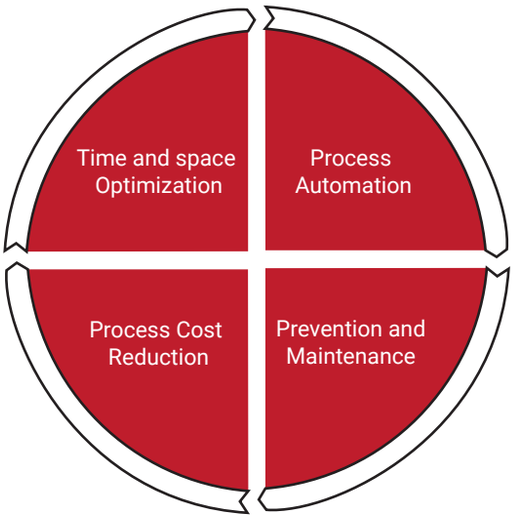
EFFICIENT ENGINEERING CONCEPT

Time and space optimization

- Plant Space Saving
- Cycle Time Optimization
- Process/Cost Reduction

Process cost reduction

- Water Saving
- Energy Saving
- Waste Reduction
- Disposal Reduction
- Part / Cost Reduction



Process automation

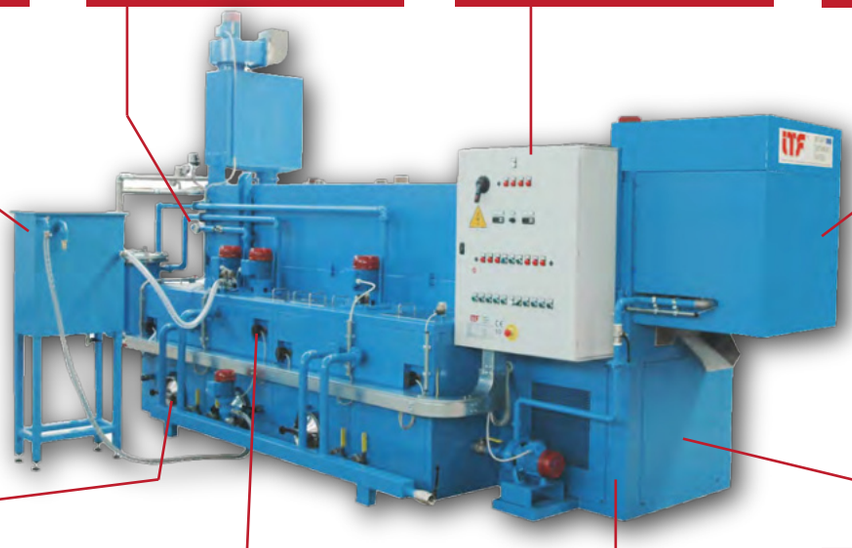
- Cycle Time Optimization
- Space Optimization
- Higher Productivity
- Labor Cost Reduction
- Part / Cost Reduction

Prevention and maintenance

- Cycle Time Optimization
- Higher Productivity
- Labor Cost Reduction
- Part / Cost Reduction

FRIENDLY SOLUTIONS FOR THE ENVIRONMENT

- INTEGRATED OIL SEPARATOR
- PRESSURE GAUGE TO READ THE PRESSURE OF SPRAYING MANIFOLDS + VALVE TO RULE THE FLOWRATE
- ELECTRIC BOARD FOR COMMAND/CONTROL
- COMPLETE FAIRING AT UNLOADING POSITION

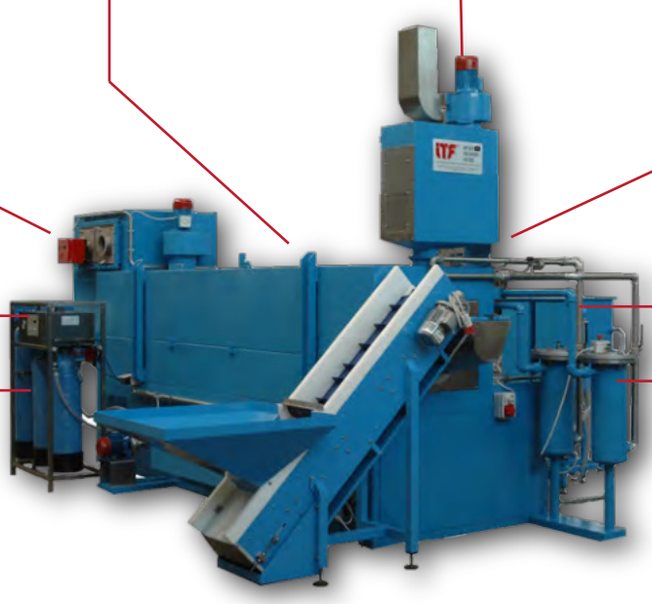


- CLEAN-OUT DOORS Ø 220mm STANDARD FEATURE
- LEVEL CONTROL FOR AUTOMATIC REFILLING
- VARIABLE SPEED MOTOGEAR
- STANDARD COMPLETE OPENING FEATURES ENABLE COMPLETE SERVICE UPON THE TIME

CUSTOMIZED CYCLES
EXTREME FLEXIBILITY – TREATMENT OF AN ELEVATE MIX PRODUCTION AT THE SAME TIME
FULL INSPECTION & QUICK ACCESS TO ALL PARTS AND COMPONENTS OF THE MACHINE
MAXIMUM RELIABILITY EVEN IN THE FULL TIME PRODUCTION 24/7

- ELECTRIC HEATERS
- GAS HEATERS
- VAPOR OR SUPER-HEATED WATER HEATING
- OIL HEATING

- ULTRASONIC ARE INSTALLED TO EMPOWER THE CLEANING EFFICIENCY
- HIGH EFFICIENCY ELECTRIC MOTORS
- ALL INTERNAL CONSTRUCTION FOR WET & DRY ZONES IS STANDARD STAINLESS STEEL AISI 304



- HEAVY DUTY WHEELS DRIVE TRAIN
- DETERGENT DOSING UNIT
- DEMINERALIZED WATER MAKER
- BY-PASS FILTRATION ON WASHING- RINSING STAGES (OPTION)

it's clean!

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