DELTA Industrietechnik GmbH 6mtr Automatic Plating and Pre Treatments Line

Stock Code: FOK2
Manufacturer: DELTA Industrietechnik GmbH
Model: 6mtr Automatic Plating and Pre Treatments Line
Year of Manufacture: 2000
New or Used: Used (Second Hand)
Work Envelope (WxDxH mm): 6000 x 1045 -1200 x 3000
Process Stages: Multi process, multi stage (Adaptable)
External Dimensions (WxDxH): 65000 x 9000 x 9000

Delta-Industrietechnik Rack Plating Treatments Line....... **

** Please note that this does not include the process support equipment or the NDT Testing Facility **

** They are available separately please see links herewith **

http://www.rileysurfaceworld.co.uk/machines/26719.htm
http://www.rileysurfaceworld.co.uk/machines/26720.htm

Delta-industrietechnik Treatments line designed and built for large components within the aerospace and architectural industries.

Delta designed and engineered this electrolytic treatments plant with the desire to produce a system that was second to none in producing a high quality finishing system for a world renown and leading aircraft manufacturer.

The treatments and plating processes that can be applied in these types of plants may include, among others, Anodising, cleaning, phosphating, zinc, nickel, chrome plating, with drying processes.
DELTA Industrietechnik GmbH 6mtr Automatic Plating and Pre Treatments Line

Plants from DELTA Industrietechnik are used throughout the world within the aerospace, automotive, manufacturing, architectural, and military sectors and are applied to the production and refinement of a variety of products for the industrial and consumer-goods sector.

Using its modern process control and master computer technology, it becomes possible to exactly specify individual process runs as well as to record them completely with full traceability.

System overview:

The system is adaptable and interchangeable with its range of 18-21 m³ modular tanks making it easy to modify the existing process, or to shorten or extend the overall number of stations within the system.

The innovative design of the under-slung dual transporter system employed on this premier installation transports the flight bars in a covered enclosure and has a fitted secondary lift and swing assemble fitted that interlocks with the process tanks covers to lift and swing aside the lids to allow entry and exit from the tanks.

The hood on the transporter at this point engages with the extract system on the individual stations and removes any fumes through the hoods body by means of a flange on the upper side of the transporter that mates with the main extract manifold. These joints are individually controlled with an automatic valving system that allows just the station that the transporter is parked at to be extracted in this way.

This system ensures that all covers are only opened "as and when" needed, keeping the solutions free from atmospheric dusts, keeping the environment free from chemicals in the air and further reducing the overall demands on the fume extraction system.

Further feature of this build includes:

All tanks have programmed solution agitation that again operates on an individual basis only when parts are present in that vat or requested by the programme that has been selected. Programmed De-ionised water rinse on exit from the treatments tank to reduce any carryover of chemistry from the solutions. Insulated walls on all heated tanks.

No expense was spared in the design and upkeep of this well designed plant which has been immaculately maintained and kept in an "as new" condition. The top of the range features built in to the system include such items as:

Windows based graphical display computerised control system, large parts buffer holding stations, Programmed solution agitation that only operates on an individual basis when parts are present in that vat, Cam over lid cover system, Programmed De-ionised water rinse on exit from treatments tank to reduce any carry over of chemistry from the solutions., End of line hot air drying.All tanks made with a stainless steel sub tank and high quality coatings for chemical resistance.

The plating system is fully equipped with all the necessary ancillary items required to operate such a high quality plant like:

In line heat exchangers and cooling on electrolytic tanks, and on tank lip ducting.
The Delta systems incorporates two main areas within the process:

1/ Pretreatment and surface conditioning.

The initial part of the line consists of a number of pre-treatment and conditioner tanks, including alkali soak cleaning tanks, and surface conditioners.

2/ Metal treatments stations:

Originally commissioned for use in Anodising Aluminium and alloys in the manufacture of aircraft frames and skins.

Anodising is an electrolytic passivation process used to increase the thickness of the natural oxide layer on the surface of metal parts. Anodising increases corrosion resistance and wear resistance, and provides better adhesion for paint primers and glues than bare metal.

Anodic films are most commonly applied to protect aluminium alloys, although processes exist for titanium, zinc, magnesium, niobium, and tantalum.

Anodising changes the microscopic texture of the surface and changes the crystal structure of the metal near the surface.

Preceding the anodising process, wrought alloys are cleaned in a hot soak cleaner and may be etched in sodium hydroxide, ammonium bifluoride or brightened in a mix of acids.

The anodised aluminium layer is grown by passing a direct current through an electrolytic solution, with the aluminium object serving as the anode (the positive electrode).

The current releases hydrogen at the cathode (the negative electrode) and oxygen at the surface of the aluminium anode, creating a build-up of aluminium oxide.

The most widely used anodising specification, MIL-A-8625, defines three types of aluminium anodising. Type I is Chromic Acid Anodising, Type II is Sulphuric Acid Anodising and Type III is sulphuric acid hard coat anodising. Other anodising specifications include MIL-A-63576, AMS 2469, AMS 2470, AMS 2471, AMS 2472, AMS 2482, ASTM B580, ASTM D3933, and ISO 10074.

Current full system process lineup.

2 x Racking stations (both height adjustable)7 x buffer holding stationsAlkali degreasingRinseWater break inspectionAcid etching (2 stations)Twin rinse stationsTwin Buffer stations (for return)IriditeAnodizing, Rinse stationsDemaskingSplit station (length limitation to 2.8 meters) for seal and conversion coatingFull length conversion coating stationTwin rinse stationsHot Seal Twin top loaded drying ovens Twin Buffer stations3 x De-racking stations (one fixed, two height adjustable)

Current full process services lineup.
DELTA Industrietechnik GmbH 6mtr Automatic Plating and Pre Treatments Line

Position/
Material
Process step
Agitation
Covers
Spray rinse
Heated
Rectification
Cooled
Extraction
Level control
Tank volume m³
P 010
PP
Alkaline degreasing
Yes
Yes
Yes
Yes
No
No
Yes
Yes
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20.40
P 011
PP
Immersion rinsing
Yes
No
Yes
No
No
No
Yes
18
P 012
PVC
Pickling (acid activation)
Yes
Yes
No
No
No
Yes
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Yes

18

P 013

PVC

Pickling (acid activation)

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

18

P 014

PVC

Cascade Rinsing 1

Yes

No

Yes

No

No

No

No
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- No
- Yes
- No
- Yes
- 18
- P 030

Unmasking station
- Yes
- No
- No
- N/A
- N/A
- Yes
- No
- Yes
- N/A
- P 022a + 22b
- SS
- Sealing 1+2
- Yes
- Yes
- Yes
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Yes
No
N/A
Yes
Yes
8.93+
8.93
P 023
SS
Sealing
Yes
Yes
Yes
Yes
No
No
Yes
Yes
18.8
P 024
PVC
Cascade rinsing 1
No
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No
Yes
No
N/A
No
Yes
18
P 027
PVC
Cascade rinsing 2
Yes
Yes
Yes
Yes
No
No
No
Yes
Yes
Yes
18.8
P 026
PVC
De-min Rinse Seal
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Yes

Yes
No
No
No
No
Yes
18
P 028
SS
Drying oven
N/A
Yes
N/A
Yes
No
No
No
N/A
N/A
P 029
SS
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Drying oven
N/A
Yes
N/A
Yes
No
No
No
N/A
N/A

Materials Key.
DELTA Industrietechnik GmbH 6mtr Automatic Plating and Pre Treatments Line

PP = Polypropylene
PVC = Polyvinyl chloride
PVDF = Polyvinylidene fluoride
SS = Stainless steel.

Best offers are being accepted over the advertised combined salvage value, and including the added services of professional marking up, disconnections and loading to customers own appropriate transport.

View DELTA Industrietechnik GmbH 6mtr Automatic Plating and Pre Treatments Line on our web site at http://www.rileysurfaceworld.co.uk/machines/26718.htm

PHOTOGRAPHS TAKEN PRIOR TO REFURBISHMENT.