

Cleaning & Finishing News

NEWS BULLETIN ON DEBURRING, FINISHING, WASHING & CLEANING



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No.1 Surface Engineering Solution Provider with over 4000 Installations

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Deburring | Finishing | Washing | Cleaning

Challenges in Finishing and Cleaning for Aerospace Industry

Aerospace industry is a most challenging and complex manufacturing sector. Reliability and consistency of manufacturing process is of utmost importance. In spite of this, traditional methods are adopted for finishing and cleaning process.

One of our customers was facing difficulty related to inadequate and improper deburring of Titanium parts. They were using manual process resulting in inconsistency.



Challenges:

- Hardness of material as it is a Titanium material
- Component size is of around 800 mm length
- High production rate

With our experience and wide product range, we offered Trough Vibrator to handle long parts for deburring and immersion rinsing to remove traces of chemicals used in vibratory finishing.

Results Achieved:

- Consistent and reliable deburring and cleaning process
- Optimum production rate
- Dust free and clean work environment in finishing area.



Case Study 1

One stop solution for finishing and cleaning of dowel pins

Challenges

Precision cleaning and polishing of Dowel pin
Removal of loose burr from blind threaded tapped holes with only ultrasonic cleaning is difficult.

Solution

Centrifugal Barrel Finishing and Single chamber multi-process ultrasonic cleaning machine.

Process followed :

Process A: Centrifugal Barrel Finishing

Process	Media / Compounds	Time
Descaling	High Density Ceramic Media with descaling compound	60 Min
Polishing	High Density Ceramic Media with polishing compound	30 Min

Process B: Single Chamber Multi Process Ultrasonic Cleaning Machine

Process	Compounds	Time
Ultrasonic Cleaning	Alkaline	7 Minutes
Dip Rinsing	Hot water	2 Minutes
Drying	Hot Air	3 Minutes

Millipore Test Report after Ultrasonic Cleaning

Before Cleaning	After Cleaning
2.1 mg	0.2 mg

Results achieved

- Complete removal of burr from blind threaded tapped hole
- Polishing of dowel pin surface



Case Study 2

Cleaning of Aluminium Casting Parts

Challenges

Removal of oil, dust, loose burr from intricate section of machined aluminium die cast - Fuel Injection Pump Housing (Engine part)

To achieve Millipore value of less than 5 mg per component.

Solution

Three stage Ultrasonic Cleaning and Drying

Process followed :

Sr. No	Process	Compounds	Conc. (%)	Temp (°C)	Time
1.	Immersed Flood Spray + Ultrasonic Cleaning	Alkaline Chemical	5 - 7	55 – 60	4 Min.
2.	Immersed Hot Water Rinsing	Water	N.A	50 – 60	3 Min
3.	Drying	N.A	N.A	70 - 100	6 Min.

Millipore Test Report after Ultrasonic Cleaning

Before Cleaning	After Cleaning
13 mg	4.5 mg

Results achieved

- Millipore value achieved less than 5 mg per component.
- Clean and dry components

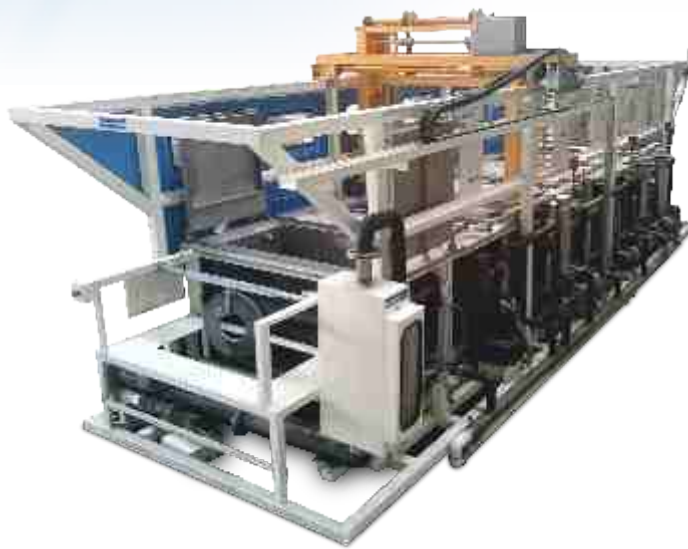


Automatic Phosphating Plant

Gala now offers state of the art Automatic Phosphating Plants to cater to industries where the component surface needs to be phosphated for corrosion resistance, surface finish, lubricity, paint adhesion and surface hardening etc.

Standard Features

- Sturdy construction
- Automatic basket handling
- Component holding jigs
- Fully independent fluid tanks
- Thermally insulated
- Low fluid level protection
- Digital display of process parameters
- Integral fluid filtration network
- Safe clean and efficient electric heating
- Auto fresh water refill in rinse tanks
- PLC Control



Optional

- Pre-treatment (wash, rinse, rust removal etc)
- Effluent transfer pump
- Auto dosing units
- Water pre-treatment plants

