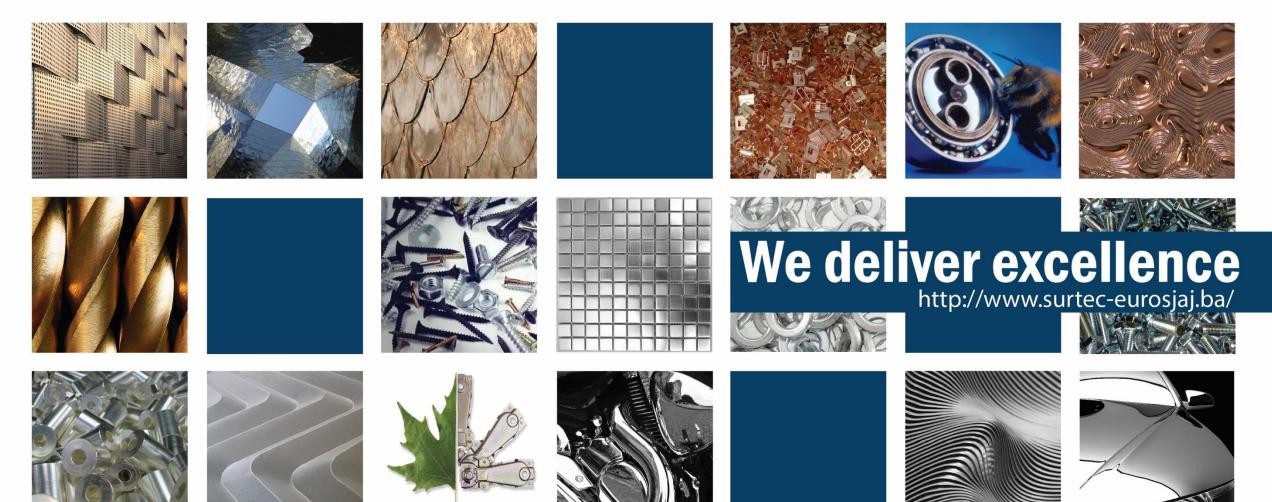
Surtec-Eurosjaj



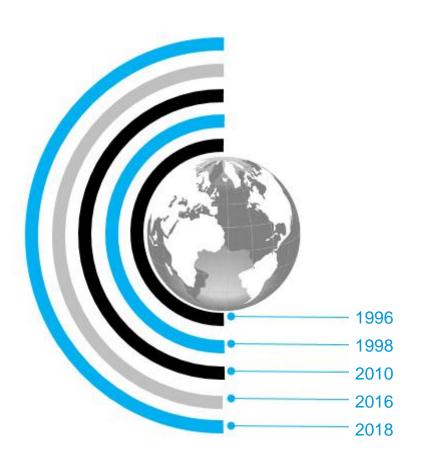
CONTENT

Introduction

- Implemented standards in business
- Surtec-Eurosjaj today: technology and production capacities
- I. Galvanic protection processes
- II. Hot dip galvinizing
- Brands and dealerships
- I. SurTec
- II. Kluber
- III. OKS
- Mission and Vision



ABOUT



1996 SURTEC-EUROSJAJ WAS FOUNDED IN 1996 AS ONE OF THE FIRST 'JOINT VENTURE' ACTIVITIES IN BIH WITH THE COMPANY SURTEC INTERNATIONAL (GERMANY).

998 INSTALLED FIRST ELECTROPLATING SURFACE PROTECTION PRODUCTION LINES.

2010 SURTEC-EUROSJAJ BECOMES 100% BOSNIAN COMPANY AND HOLDS DEALIERSHIPS FOR KLUBER AND OKS BRANDS.



16 SURTEC-EUROSJAJ INSTALLS FIRST HOT DIP GALVANIZING TECHNOLOGIES.

2018 SURTEC-EUROSJAJ REGISTERS COMPANIES EUROSJAJ IN CROATIA AND EUROSJAJ IN SERBIA.



ABOUT

COMPANY IS LOCATED IN INDUSTRIAL ZONE "UNIS" IN KONJIC, BOSNIA AND HERZEGOVINA.

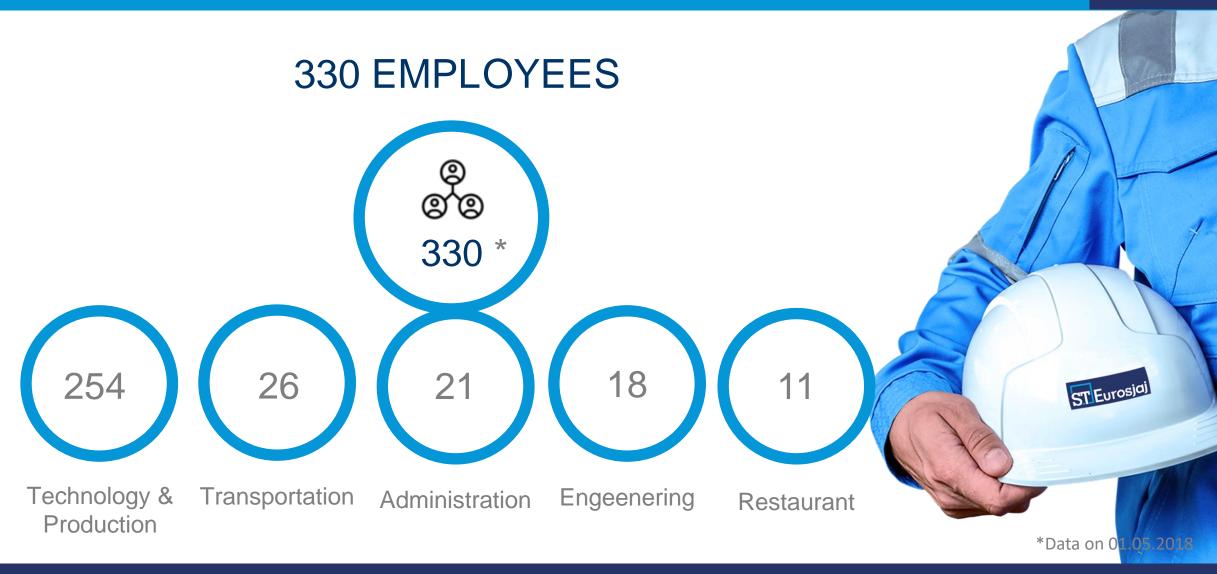


ALL FACILITIES INCLUDING PRODUCTION PLANTS, OFFICE BUILDING, STORAGES, LABORATORY, RESTAURANT AND OTHER SERVICES SPREAD OUT ON THE TOTAL SURFACE OF 15.000 M2 OF COVERED SPACE.











IMPLEMENTED STANDARDS

Management systems applicable in the organizational units of the company which directly or indirectly participate in the implementation of the company's activity, continuously improving, and the control system performs the TUV NORD.







PROVIDING HIGHEST QUALITY SERVICES

WORKING IN ACCORDANCE WITH EUROPEAN STANDARDS,

PARTNER RELATIONSHIPS WITH CUSTOMERS,

CONTINUOS TECHNOLOGY DEVELOPMENT AND IMPROVEMENT,

ECOLOGICAL CONSCIENTIOUS BUSINESS

CONTINUOS INVESTMENT IN EMPLOYEES EDUCATION.

OUR SERVICES

SURFACE TECHNOLOGIES



22. different metal surface protection technologies in one location.

CHEMICALS DEALERSHIPS



Chemicals for industrial parts cleaning, functional electroplating, metal pretreatment, decorative electroplating and lubrications.





SURFACE TECHNOLOGIES

- 1. BRIGHT ALKALINE ZINC PLATING ON RACKS
- 2. BRIGHT ALKALINE ZINC PLATING IN BARRELS
- 3. BRIGHT ALKALINE ZINC PLATING WITH THICK-FILM PASSIVATION
- 4. BRIGHT ACIDIC ZINC PLATING IN BARRELS
- 5. ZINC PLATING IN BARRELS WITH SEALERS
- 6. ALKALINE ZINC-NICKEL PROCESS
- 7. ALKALINE BRASS-PLATING PROCESS
- 8. ALKALINE COPPER-PLATING PROCESS
- 9. BRIGHT NICKEL PLATING
- 10. DECORATIVE CHROME PLATING
- 11. HARD CHROME PLATING

- 12. TINNING PROCESS
- 13. SILVER PLATING PROCESS
- 14. BLACK OXIDATION ON IRON
- 15. PHOSPHATING
- 16. ELECTROSTATIC POWDER COATING (EPC)
- 17. ZINC PLATING + EPC
- 18. CATAPHORESIS (KTL)
- 19. HOT DIP GALVANIZING
- 20. HOT DIP GALVANIZING + EPC
- 21. CENTRIFUGAL HOT DIP GALVANIZING,
- 22. CENTRIFUGAL HIGH TEMPERATURE HOT DIP GALVANIZING



ZINC PLATING



GALVANIC ZINC-PLATING PRODUCTION LINES



lines with galvanic racks

ST Eurosjaj



galvanic lines with the barrels



ZINC PLATING

ADDITIONAL TREATMENT OF WHITE (BLUE), YELLOW AND THICK LAYER PASSIVATION IS CONDUCTED TO PROVIDE THE TREATED SURFACES A DIFFERENT COLOR, IE. THE VISUAL APPEARANCE AND DIFFERENT CORROSION RESISTANCE









PRODUCTION LINE 1



PRODUCTION LINE 2



PRODUCTION LINE 3



PRODUCTION LINE 7

FOUR PRODUCTION LINES WITH RACKS ARE IMPLEMENTING NEW GENERATION OF BRIGHT ZINC-PLATING

WITH ALCALINE NON-CYNIDE ELECTROLITE SURTEC 704

Also featuring: Zinc generators for zinc dissolution, Ion-exchangers for thick layer passivation SurTec 680, Demi water equipment, Automatic dosage, etc.





PRODUCTION LINE 1

Γ-	_
1:	=1
	2

7000 liters of electrolytes



Maximum dimensions for galvanizing positions are 1800x800 mm.

Technology:

ST Eurosjaj

- SurTec 704
- Thick-filmed passivation SurTec 680,
- Blue trovalent passivation SurTec 664,
- Sealing for Bright Zinc with Sur Tec 555 S.
- Base materials: iron, cooper, brass, ZAMAK

SEMI - AUTOMATIC PRODUCTION LINE FOR BRIGHT ZINC-PLATING ON SPECIALISED RACKS

References: Zinteknik Bosnia d.o.o. Mostar (for MAGNA, AUTOLIV), EMKA BOSNIA d.o.o. Goražde (for EMKA Germany, Schüco), PD Igman d.d. Konjic etc.



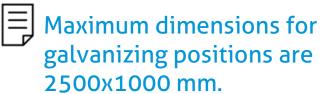




PRODUCTION LINE 2



20.000 liters of electrolytes



Technology:

ST Eurosjaj

- SurTec 704
- Thick-filmed passivation SurTec 680,
- Blue trovalent passivation SurTec 664,
- Sealing for Bright Zinc with Sur Tec 555 S.
- Base materials: iron, ZAMAK

AUTOMATIC PRODUCTION LINE FOR BRIGHT ZINC-PLATING ON RACKS

References: MANN+HUMMEL BA, HST CNC TECHNIK Gračanica – (for Kröne Njemačka), Zinkteknik Bosnia d.o.o. Mostar, MAHLE Letrika d.o.o. Laktaši, Elas Metalexpert Banja Luka, Jaksche Technology Laktaši, Metal a.d. Gradiška etc.



PRODUCTION LINE 3

:		_	
•		- -	ļ

22.000 liters of electrolytes



Maximum dimensions for galvanizing positions are 3000x2000 mm.

Technology:

ST Eurosjaj

- SurTec 704
- Thick-filmed passivation SurTec 680,
- Blue trovalent passivation SurTec 664,
- Sealing for Bright Zinc with Sur Tec 555 S.
- Base materials: iron

SEMI - AUTOMATIC PRODUCTION LINE FOR ALKALINE BRIGHT ZINC-PLATING ON RACKS

References: Metalos d.o.o. Kreševo, Elas Metalexpert d.o.o. Banja Luka, Civić d.o.o. Cazin





PRODUCTION LINE 7

50.000 liters of electrolytes

Maximum dimensions for galvanizing positions are 3000x1400 mm.

Technology:

- SurTec 704
- Thick-filmed passivation SurTec 680,
- Blue trovalent passivation SurTec 664,
- Sealing for Bright Zinc with Sur Tec 555 S.
- Base materials: iron.

References: Metalos d.o.o. Kreševo, Elas Metalexpert d.o.o. Banja Luka, Civić d.o.o. Cazin





GALVANIC ZINC-PLATING IN BARRELS



PRODUCTION LINE 1-UG



PRODUCTION LINE 2-UG

TWO PRODUCTION LINES WITH BARRELS THE PROCESS IS BASED ON LOW-ACIDIC ZINC ELECTROLYTE - SURTEC 759 PROCESS AND IS CHARACTERIZED BY A HIGH BRIGHTNES AND EXCELLENT CORROSION RESISTANCE.

Also featuring: Zinc generators for zinc dissolution, Ion-exchangers for thick-film passivation SurTec 680, Demi water equipment, Automatic dosage, etc.



GALVANIC ZINC-PLATING IN BARRELS



PRODUCTION LINE 1-UG



AUTOMATIC PRODUCTION LINE SUITABLE FOR SMALL PIECES SUCH AS BOLTS, NUTS, PLATES...

Technology:

- SurTec 759
- Thick layer passivation SurTec 680,
- Blue trovalent passivation SurTec 664,
- Yellow sixvalent passivation SurTec 676,
- Sealing for Bright Zinc with Sur Tec 555 S.
- Base materials: iron.

References: GRAEWE TADIV Konjic, Real Comerc Vitez, Real-Kem Konjic, MAHLE Letrika d.o.o. Laktaši, KMM Gradiška, Elting NN Gradiška, Enker Tešanj itd.





GALVANIC ZINC-PLATING IN BARRELS



PRODUCTION LINE 2-UG



SEMI-AUTOMATIC PRODUCTION LINE SUITABLE FOR SMALL PIECES SUCH AS BOLTS, NUTS, PLATES, ETC.

Technology:

ST Eurosjaj

- SurTec 759
- Thick-filmed passivation SurTec 680,
- Blue trovalent passivation SurTec 664,
- Yellow sixvalent passivation SurTec 676,
- Sealing for Bright Zinc with Sur Tec 555 S.
- Base materials: iron.

References: Elektro-Agent Tuzla, Ramex Kladanj, MAHLE Letrika d.o.o. Laktaši, GRAEWE TADIV Konjic, Igman d.d. Konjic itd.

ALKALINE ZINC NICKEL PROCESS



PRODUCTION LINE 4



Technology:

ST Eurosjaj

- SurTec 717 B non-cyanide alkaline zincnickel method for the barrel,
- Base materials: iron.

SEMI-AUTOMATIC PRODUCTION LINE SUITABLE FOR SMALL PIECES SUCH AS BOLTS, NUTS, PLATES...

Duration of corrosion protection is on average 10 times longer than a standard galvanized zinc plating and 3 times longer than cadmium plating.

References: GRAEWE TADIV d.o.o. Konjic, Šumer d.o.o. Celje - Slovenija



ALKALINE BRASS-PLATING PROCESS



PRODUCTION LINE 5



Technology:

ST Eurosjaj

- SurTec 810
- Prior to brass-plating, layer of nickel is applied to the base material applied, to increase corrosion resistance.
- Base materials: iron.

SEMI-AUTOMATIC PRODUCTION LINE WITH BARRELS

Brass is an alloy of zinc and copper, with the proportion of 30-40% for zinc and 60-70% for copper. Brass as electrochemical metal plating is used as an anti-corrosive coating, mainly because of its specific color for decorative purposes.

References: Pobjeda Tehnology Goražde, Axle Bugojno (for IKEA), Zupčanik Tešanj (for IKEA).



ALKALINE COOPER PLATING PROCESS

PRODUC

PRODUCTION LINE 6



Capacity 50 Tons / Month



In barrels for small pieces

Technology:

ST Eurosjaj

- Alkaline process SurTec 864
- Base materials: iron.

SEMI-AUTOMATIC PRODUCTION LINE WITH BARRELS AND RACKS

The process of copper plating may be a corrosion protection(10-20 microns) with organic passivation for copper, as well as a base for applying a decorative surface of nickel and chrome.

References: MAHLE Letrika d.o.o. Laktaši, Igman d.d. Konjic.



BRIGHT NICKEL-PLATING



PRODUCTION LINE 4



Capacity 30 Tons / Month



Technology:

ST Eurosjaj

- Alkaline cooper process SurTec 864
- Acidic cooper process SurTec 867
- Semibright nickel process SurTec 853
- Bright nickel process SurTec 856
- Base materials: iron, cooper, brass, ZAMAK

AUTOMATIC PRODUCTION LINE FOR GALVANIC PROTECTION OF SEMI GLOSS AND POLISHED NICKEL PLATING

Nickel-plating may be a corrosion protection or base coat for decorative chromium plating.

References:

MAHLE Letrika d.o.o. Laktaši, Elsta Mosdorfer Bosnia Tuzla (for Elsta-Mosdorfer Austria), Elas Metalexpert Banja Luka, General Steel Čelinac, DAL CIN Čelinac ...



DECORATIVE CHROME-PLATING



PRODUCTION LINE 3 PRODUCTION LINE 4



Capacity 30 Tons / Month

I	—
	=

In barrels for small pieces



On racks with maximum object of 3000 x 1200 x 550 mm.

Technology:

STEurosjaj

- Alkaline cooper process SurTec 864
- Acidic cooper process SurTec 867
- Semibright nickel process SurTec 853
- Bright nickel process SurTec 856
- Decorative chrome plating SurTec 871
- Base materials: iron, cooper, brass, ZAMAK

SEMI - AUTOMATIC PRODUCTION LINE FOR DECORATIVE CHROME PLATING

The process of decorative chrome plating is applied to the polished nickel coatings in thicknesses of 0.3-0.5 microns, giving the product a distinctive bluish gloss chrome.

References: Elas Metalexpert Banja Luka, DAL CIN Čelinac, General Steel Čelinac, MAHLE Letrika d.o.o. Laktaši, A.M.T. Široki Brijeg, Sinkro Sarajevo.



24

HARD CHROME-PLATING



PRODUCTION LINE 8

Г		
	_	_
	_	_
		Б

Installed capacities for vertical hard chrome-plating: 1. Length 800 mm, 2. Hardness of the coating HV 700-1000.

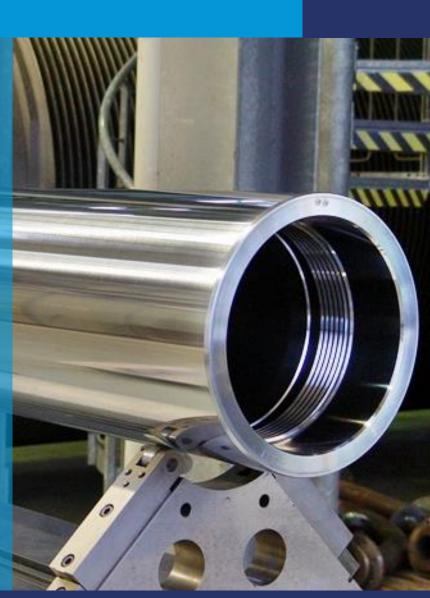
ST Eurosjaj

Installed capacity for horizontal hard chromeplating: 1.Lenght up to 2000 mm, 2. Hardness of the coating 700-1000 HV.

PRODUCTION LINE FOR HARD CHROME PLATING

Compared with decorative chromeplating, technical hard chromium-plating provides high wear resistance and corrosion protection.

References: Alat d.o.o. Konjic, Igman d.d. Konjic, Gostol-Gopan d.o.o. Lukavac.



Metal surface technology

TINNING



PRODUCTION LINE 3 PRODUCTION LINE 4



Capacity 30 Tons / Month

Г	_		Л	
L	_	_	l	
L	_		Ļ	

In barrels for small pieces



On racks with maximum object of 3000 x 1200 x 550 mm.

Technology:

ST Eurosjaj

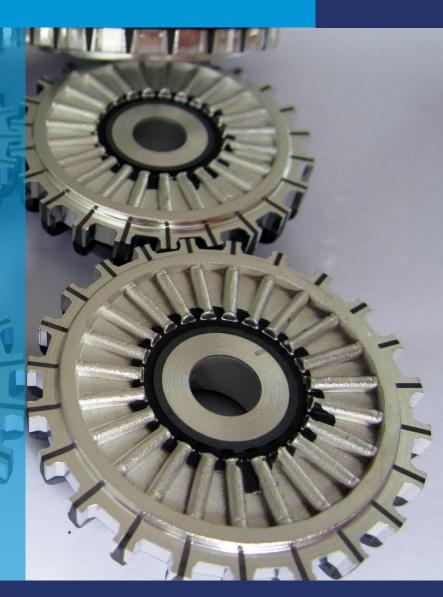
- SurTec 821
- Base materials: iron, cooper, brass

PRODUCTION LINE FOR TINNING

Electrolytic tinning is mostly used in the food industry (white sheet metal), as well as in the electrical and electronics industries (copper contacts, copper strips and electronic elements). Technical support is DIN 50965.

References:

Kolektor Bosnia d.o.o., Laktaši, Bekto Precisa d.o.o., Goražde, Tvornica dalekovodnih stubova, Sarajevo, Elsta Mosdorfer Bosnia d.o.o.,Tuzla (for Elsta-Mosdorfer Austrija), MAHLE Letrika d.o.o. Laktaši, Ditrx d.o.o., Mostar ...



SILVER PLATING PROCESS



PRODUCTION LINE 13



Capacity 15 Tons / Month



In barrels for small pieces

Technology:

- Silver process
- Base materials: iron, cooper, brass, ZAMAK

PRODUCTION LINE FOR SILVER PLATING PROCESS

Silver Plating provides a coating which is matte-white in appearance. This finish provides good corrosion resistance, but also has the tendency to easily tarnish. Silver plating also provides a good coating for parts that require low electrical resistance, and lastly, silver provides great lubricity.





BLACK OXIDATION ON IRON



PRODUCTION LINE 8



Technology:

ST Eurosjaj

- The hot browning method (133-145 ° C) SurTec 620
- Base materials: iron.

The term black oxidation is understood as burnishing surface protection of ferrous materials due to which the surface of metal is covered in very thin layer of black iron oxide with the aim of corrosion protection and / or optical effect.

References: Zec d.o.o. Međugorje, Čičak d.o.o. Međugorje Alat d.o.o. Konjic



PHOSPHATING



PRODUCTION LINE 2-UG AND KTL



Capacity 100 Tons / Month



In barrels for small pieces



On racks with maximum object of 2500x900x2000mm

Technology:

ST Eurosjaj

- SurTec iron phosphate product range includes the following: SurTec 614 and SurTec 618
- Base materials: iron.

The process includes the phosphating procedure for coating metal that may have a variety chemical composition, depending on the type of phosphate baths.

The most common use of phosphate coating is:1. As a base for existing varnishing or rubberizing,2. Holder of the lubricant for corrosion protection or due to cold deformation of

References: PD Igman d.d., Konjic MDG d.o.o., Sarajevo

metals.



ELECTROSTATIC POWDER COATING (EPC)

PRODUCTION LINE 9



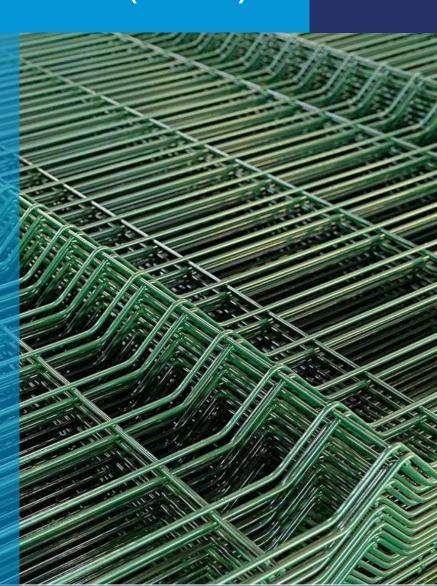
Capacity 250 Tons / Month



Objects to maximum dimensions 3000x2000x1100 mm. Process is based on the powder coating of the surface and the polymerization of powder at a particular temperature. Plastic coated layer, in addition to being an excellent protection against corrosion, is resistant to heat and abrasion.

Painting is done in all tonalities of international RAL mark.

References: Metalos d.o.o. – Kreševo, FEAL Široki Brijeg, DIS Eurostandard, Wolkswagen Sarajevo itd.



Metal surface technology



ZINC-PLATING + ELP







Capacity 250 Tons / Month



Objects to maximum dimensions 3000x2000x900 mm. Complete duplex metal protection which will meet the needs of the most demanding conditions.

This type of protection comprises two protective coats – zinc electroplating as the ideal basis to the application of paint by electrostatic coating.

References: Metalos d.o.o. – Kreševo, FEAL Široki Brijeg, DIS Eurostandard, Wolkswagen Sarajevo itd.



CATAPHORESIS (KTL)



PRODUCTION LINE 12

Capacity is 40.000 to 50.000 m2, or 50 to 100 tons of material

Maximum dimensions for positions are 2500x900 x2000 mm

Technology:

ST Eurosjaj

- Zinc phosphate SurTec 618 + KTL
- Base material: iron, Zamak, Aluminium

AUTOMATIC PRODUCTION LINE FOR CATAPHORESIS

Technological process used for coating of metal surfaces with a thin, solid, one layer, and corrosion-resistant organic coating.

The possible coating thickness of parts is from 15 to 35 microns.

References: MANN+Hummel d.o.o., Tešanj EMKA BOSNIA d.o.o., Goražde AMA Adriatic d.o.o., Ilijaš



HOT DIP GALVINIZING



PRODUCTION LINE 10

_

Capacity is 1500 Tons / Month.

—
—
—

Maximum dimensions for positions are 9000x1100x2900mm.



Maximum weight of the charge is 5000kg.

PRODUCTION LINE FOR HOT DIP GALVINISING

Hot dip galvanizing by immersion in accordance with EN ISO 1461: 2009th, standard relates to the zinc coating to be applied to the hot process of iron and steel.

References: BH Telecom d.d., Alternativa d.o.o., Feal d.o.o., HP Investing d.o.o., etc







CENTRIFUGAL HOT DIP GALVINISING



PRODUCTION LINE 11

		_		
	_			
	_		_	
1	_	_	_	

Maximum dimensions for positions are 500mm. Suitable for galvanizing screws, nuts, chains, brackets, various carriers bearing the thread holes.

Capacity is 200 tons of material/month.

PRODUCTION LINE FOR CENTRIFUGAL HOT DIP GALVINISING

Hot galvanizing with centrifuge system contains all the steps as normal hot dip galvanizing with subsequent centrifugation, the removal of the excess zinc from the surface that will have a further utility in the context of an assembly.

References: Graewe Tadiv d.o.o., Konjic (for Wurth, Kelner Kunz i dr.) Bekto Preciza d.o.o, Goražde Silla, Serbia etc.





HIGH TEMPERATURE CENTRIFUGAL H.D.G. 35



PRODUCTION LINE 11

\equiv

Capacity is 200 tons of material / month.



Maximum dimensions for positions are 500mm, for galvanizing screws, nuts, chains, brackets, various carriers bearing the thread holes.

PRODUCTION LINE FOR HIGH TEMPERATURE CENTRIFUGAL HOT DIP GALVINISING

This is a more advanced process of galvanizing where the dipping is done in ceramic bath containing zinc melt preheated to temperatures up to 580°C. By this method it is possible to provide a coating of zinc coating thickness of 25 microns to 80, according to DIN EN

References: Graewe Tadiv d.o.o. iz Konjica (za Wurth, Kelner Kunz i dr.), Bekto Preciza d.o.o, Silla Serbia etc.

ISO1461.











Complete technology in our production plants is based on SurTec high quality chemicals, which SurTec-Eurosjaj distributes in the market of Bosnia and Herzegovina, Croatia and Serbia. For costumers we provide technical support by trained engineering team. SurTec Eurosjaj is authorized representative for the distribution and sales of the Klüber, offering lubricate high performance.

Klüber products are suitable for use in all areas of industry where special requirements need special solutions, providing lubricatea with high performance. OKS offers products which will ensure that your equipment, machines and systems operate flawlessly under the most difficult circumstances and conditions - always.

SURTEC EUROSJAJ HAS ACHIEVED A LEADING POSITION ON THE MARKET OF BOSNIA AND HERZEGOVINA THANKS TO THE:

TEAMWORK

- CONTINUOUS DEVELOPMENT OF SERVICES
- PARTNERSHIPS WITH CUSTOMERS
- INVESTMENT IN EDUCATION
- ☆ ENVIRONMENTALLY CONSCIENTIOUS BUSINESS

FOLLOWING THE LATEST WORLD TRENDS IN THE SURFACE PROTECTION OF METAL AND EXPANDING ACCORDINGLY TO THE NEEDS OF THE MARKET, SURTEC-EUROSJAJ WILL IN THE FUTURE EXTEND ITS CAPACITIES AND TECHNOLOGIES.





THANK YOU

Surtec-Eurosjaj team



