

전착도장 및 전착도장설비제작

# SAMILTECH





# 새로운 시작, 무한한 열정으로!

## 안전과 환경중시 및 기술적 선도에 정성을 다하는 기업

### 삼일테크(주)의 도전과 열정은 멈추지 않습니다.

New beginning, with Infinite passion!

A company that focuses on safety and environment while elaborating technological leadership

The challenge and passion of Samil Tech Co., Ltd. never not stop.



삼일테크(주)는 1993년 창립 이래 27년 이상 표면처리설비제작 전문업체로서 전착도 장설비제작, 각종 표면처리설비, 건조로, 트롤리 컨베이어 등에서 국내외 시장을 선도 하고 있습니다.

특히, 중국(북경, 천진, 태주, 염성), 폴란드, 인도(델리, 첸나이), 미국(조지아주, 앨라배 마) 등의 해외 설치 실적과 경험은 우리 회사의 큰 장점이라고 생각합니다.

또한, 2018년부터 자체 전착도장라인을 구축하여 전착 도장품을 생산하고 있습니다. 삼일테크(주)는 “새로운 시작, 무한한 열정으로”라는 슬로건으로 ‘안전과 환경중시 및 기술적 선도’에 정성을 다하는 기업으로 끊임없는 연구개발과 엄격한 품질관리로 고품질 제품을 제공하여 귀사의 생산성 향상과 원가 절감에 도움이 되고자 합니다.

전 임직원은 고객과 함께 성장·발전하고자 겸허한 마음과 자세로 경쟁에서 이길 수 있는 실력을 배양하여 고객의 성과 창출에 최선을 다하겠습니다.

감사합니다.

삼일테크(주) 대표이사 **김 동 선**

Samil Tech Co., Ltd. has been leading the domestic and overseas markets in the manufacture of electrodeposition coating facilities, various surface treatment facilities, baking oven, trolley conveyors, and others as a manufacturer of surface treatment facilities for more than 27 years since its founding in 1993.

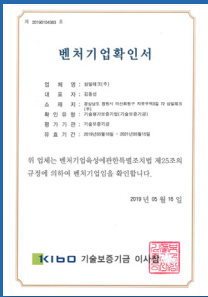
In particular, our company's great strengths are thought to be our overseas installation results and experiences in China (Beijing, Tianjin, Taizhou, Yancheng), Poland, India (Delhi, Chennai), and the United States (Georgia, Alabama).

In addition, we have established our own electrodeposition coating lines to produce electrodeposition coating products since 2018. Samil Tech Co., Ltd. is a company devoted to 'safety, environmental focus and technological leadership' with the slogan of "a new beginning, with infinite passion", while providing high-quality products under our strict quality control together with our endless research and development to help your productivity improvement and cost saving.

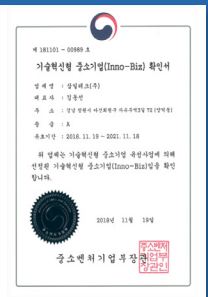
Thank you.

SAMIL TECH co.,Ltd. CEO **Dong Sun Kim**

## 특허 및 등록현황 | Patent and registration status



**벤처기업확인서**  
Venture business certificate



**Inno-Biz 확인서**  
Inno-Biz certificate



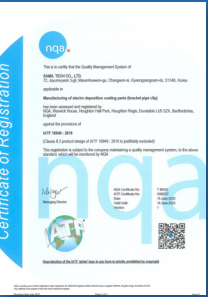
**기업부설연구소 인정서**  
Certificate of corporate research center



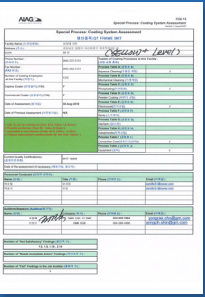
**ISO 9001:2015**  
ISO 9001:2015



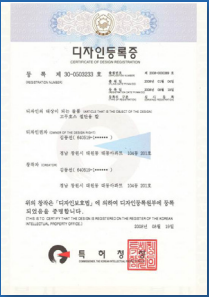
**ISO 14001:2015**  
ISO 9001:2015



**IATF16949**  
IATF16949



**GM CQI-12 인증**  
GM CQI-12 certificate



**디자인등록증**  
Design registration certificate



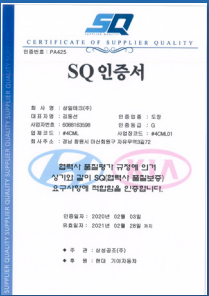
**특허증**  
Patent certificate



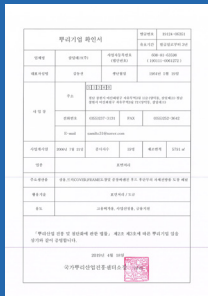
**특허증**  
Patent certificate



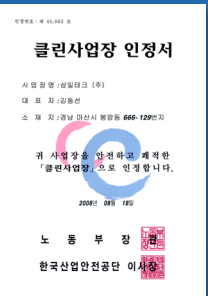
**특허증**  
Patent certificate



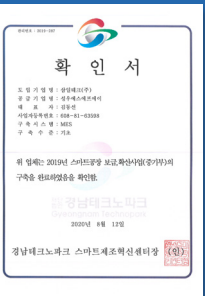
**SQ인증서-현대,기아**  
SQ certificate - Hyundai, Kia



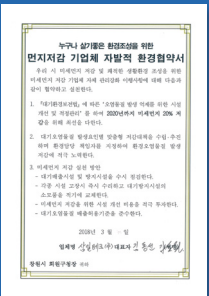
**뿌리기업 확인서**  
Root company certificate



**클린사업장 인정서**  
Certificate of clean workplace



**스마트공장 기초수준 확인서**  
Smart factory basic level certificate



**먼지저감 기업체 자발적 환경 협약서**  
Voluntary environment agreement for a dust reduction company



New beginning,  
with infinite passion!

기업부설연구소  
Corporate research center



대회의실  
Conference room



염수분무실험실  
Salt Spray Laboratory





회사연혁 | Company history

1993. 09

삼일정공 설립 (동력전달장치 전문)  
Established Samil Precision Industries  
(specialized in power transmission devices)
1994. 05

TROLLEY CONVEYOR 사업 진출  
Entered the trolley conveyor business
1996. 07

도장설비사업 진출  
Entered the painting equipment business  
신행사 KTX-도장라인 신설  
Newly established the KTX-painting line
2010. 02

동부대우전자-전착도장라인 16TON 신설  
Newly established Dongbu Daewoo Electronics -  
electrodeposition coating line (16 ton)
2010. 12

설비제작 해외 수출 \$1,200,000 달성  
Achieved overseas export of \$1,200,000 in facility  
production
2011. 01

부품소재 전문기업 지식경제부장관 인증  
Certified by the Minister of Knowledge Economy,  
a specialized parts and materials company
2012. 03

마산 수출자유지역으로 확장이전(1공장)  
Expanded and moved to Masan Free Export Zone (Plant 1)
2012. 12

SKE(주)-전착도장라인 16TON 신설  
Newly established SKE Co., Ltd. - electrodeposition  
coating line (16 ton)
2012. 03

지식경제부 장관 표창 수상  
Awarded a citation from the Minister of Knowledge  
Economy
2014. 06

기업 부설 기술연구소 설립  
Established corporate technology research center
2016. 01

COIL SPRING(COMP) 조립장치 특허등록  
Patent registration of coil spring (comp) assembly  
device
2017. 12

마산 수출자유지역으로 확장이전(2공장)  
Expanded and moved to Masan Free Export Zone (Plant 2)
2018. 02

자가 전착도장라인 신설(30TON) 가동  
Newly established and operated in-house  
electrodeposition coating line (30 ton)
2018. 10

전동기의 브레이크장치 특허등록  
Patent registration of a brake device for motors
2018. 11

기술혁신형 중소기업(Inno-Biz) 확인  
Certificate of small and medium-sized business for  
technology innovation (Inno-Biz)
2018. 12

LG 1공장-전착라인 및 건조로 라인 신설  
Newly established LG Plant 1 - electrodeposition line  
and drying furnace line

1993~  
1999



2000~  
2009

2004. 02

중국 LG전자-전착도장라인인 12TON 신설  
Newly established China LG Electronics - electrodeposition  
coating line (12 ton)
2006. 06

삼일테크(주) 설립  
Established Samil Tech Co., Ltd.
2007. 08

자동 커팅 MACHINE 특허출원 2건  
Applied for 2 patents for automatic cutting machine
2007. 12

설비수출 \$700,000 달성  
Achieved facility export of \$700,000
2009. 06

klbo 벤처기업 등록 (제20090106105호)  
Registered as a KLBO venture company (no. 20090106105)
2009. 12

인도LG전자-전착도장라인인 12TON 신설  
Newly established India LG Electronics - electrodeposition  
coating line (12 ton)

2010~  
now  
현재



2019. 05

KS/ISO 14001:2015 환경경영시스템 인증  
Certification of KS/ISO 14001:2015 environment  
management system
2019. 05

S/ISO 9001:2015 품질경영시스템 인증  
Certification of ISO 9001:2015 quality management system
2019. 08

IATF16949 인증 취득  
Acquired IATF16949 certification
2019. 08

GM CQI-12 인증 취득  
Acquired GM CQI-12 certification
2019. 10

국무총리 표창 수상  
Awarded prime minister citation
2020. 02

현대, 기아차 SQ품질인증  
Certification of Hyundai, Kia Motors SQ Quality
2020. 06

스마트 팩토리 Level2 완료  
Completed Smart Factory Level 2

핵심가치 | Core Value



조직도 | Organization chart

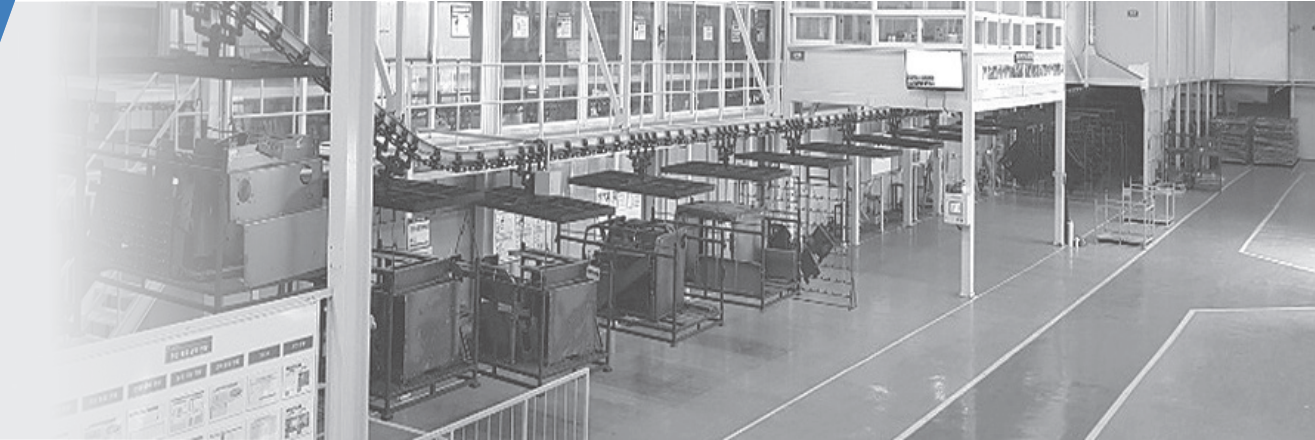






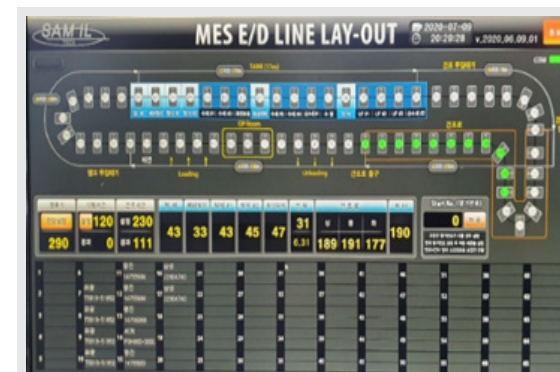
# Electrodeposition Coating Department

## 전착도장사업부

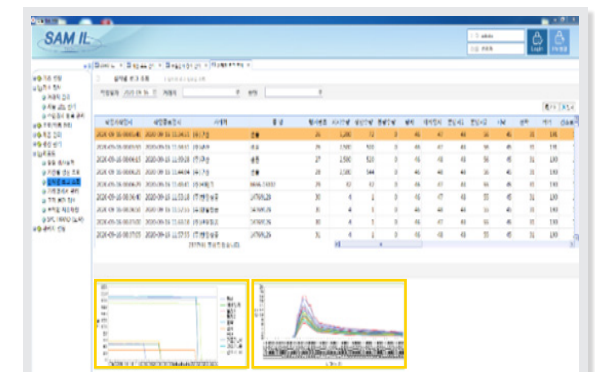


당사는 MES와 Fool-Proof production system 운영으로 생산 현장 최적화, 생산 현장 원가 절감 그리고 생산 장비 실시간 모니터링 등을 실시하고 있다. MES(Manufacturing Execution System: 제조회행시스템)는 실시간 모니터링, 제어, 물류 및 작업 내역 추적 관리, 진척 상황 파악, 불량 관리에 초점을 맞춘 현장 중심의 공장 운영 관리 시스템이다. FPS(Fool-Proof System: 약품정량공급장치)는 정밀 가공 산업에서 기능 숙련도가 낮은 작업자라도 가공 설비를 적절히 할 수 있고 인간과 기계적 요소에 의한 잘못이 자동으로 방지되어 품질 · 능력 향상, 안전도를 제고하는 생산 관리 체계이다.

Our electrodeposition coating production line has established the Smart Factory Level 2 stage, and we are conducting production site optimization, production site cost reduction, and real-time monitoring of production equipment through operating the MES system. MES (Manufacturing Execution System) is a field-oriented factory operation management system focusing on real-time monitoring, control, tracking management of logistics and work history, progress status identification, and defect management. FPS (Fool-Proof System) is a production management system in the precision processing industry, which allows even workers with low skill levels to properly perform processing facilities and automatically prevent errors caused by human and mechanical factors in an effort to improve quality and efficiency, and safety.



MES system  
MES system



Smart Factory MES를 통한 공정관리  
Process control through Smart Factory MES



전착도장  
Electrodeposition coating



전착도장  
Electrodeposition coating



Fool-Proof system  
Fool-Proof system

| MES 생산관리 SOLUTION |             |             |         |          |   |  |  |  |  |
|-------------------|-------------|-------------|---------|----------|---|--|--|--|--|
| 현재                | 예비할지        | 분할지 #1      | 분할지 #2  | 피막       |   |  |  |  |  |
| 온도 낮음 (LOW)       | 온도 낮음 (LOW) | 온도 낮음 (LOW) | PH: 55  | HI: 47   |   |  |  |  |  |
| 온도: 42            | 온도: 33      | 온도: 44      | LOW: 45 | LOW: 43  |   |  |  |  |  |
| 전착                | 버너          | 건조로(중)      | 디핑 시간   | 건조 모드    |   |  |  |  |  |
| HI: 32            | HI: 210     | HI: 210     | 설정: 2 0 | 설정: 4 0  |   |  |  |  |  |
| LOW: 28           | LOW: 180    | LOW: 175    | 계도: 0 0 | 계도: 0 12 |   |  |  |  |  |
| 온도: 31            | 온도: 189     | 온도: 189     |         |          |   |  |  |  |  |
| 온전 상태             |             |             |         |          | 알람  |  |  |  |  |
| 지속                | 허용 허용       | 허용 운전       | 현재 이상   | 초과 이상    | 2019-10-30 14:25:56 (발생) (1119) 전류LOW, 정류기#32 |  |  |  |  |
| 수동                | 피막 결미       | 지용 결미       | 리프트 이상  | 전류 이상    | 2019-10-30 14:39:53 (현재) (1309) 온도LOW, 당제     |  |  |  |  |
| 정위치               | 필름 결판       | 배액량 결       | 배액량 결   | 배액 결     | 2019-10-30 14:40:32 (현재) (1309) 온도LOW, 제비탈지   |  |  |  |  |
| 온도                | 상수          | 주행          | 미검출액    | 전력 변동    | 2019-10-30 14:40:32 (현재) (1309) 온도LOW, 제비탈지   |  |  |  |  |
|                   |             |             |         |          | 2019-10-30 14:55:38 (발생) (1310) 온도LOW, 분할지#1  |  |  |  |  |

공정모니터링  
Process monitoring



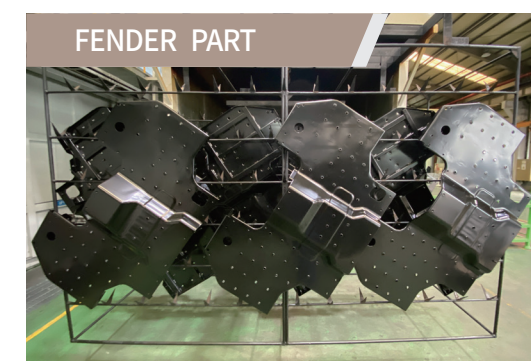
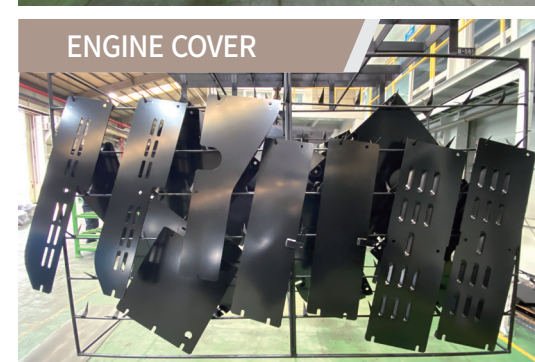
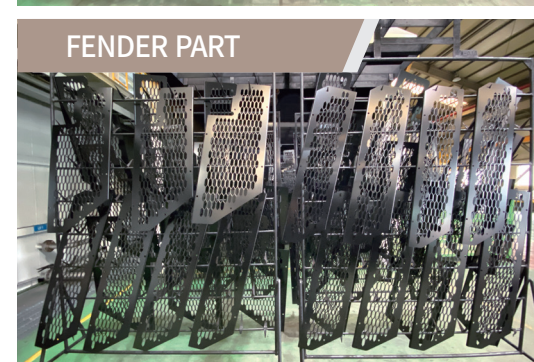
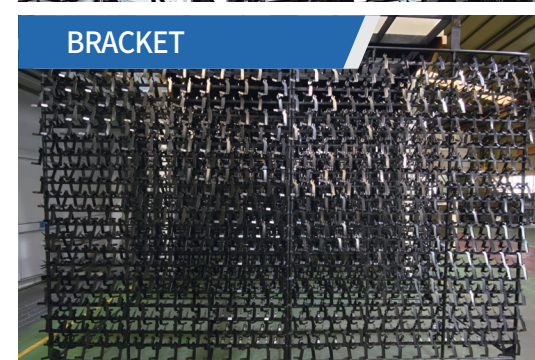
전착도장라인 생산공정 | Production process of electrodeposition coating line





# 전착도장사업부 | Electrodeposition Coating Department

## 전착도장품 | Electrodeposition coating product







# Equipment Production Department

## 설비제작사업부



### 전착도장설비 | Electrodeposit Paint Coating Plant

전처리된 피도물을 수용성의 전착탱크에 침적해 피도물과 전착액에 직류전류를 통전시킴으로써 하전을 가진 수지입자가 전도에 의해 피도물에 이동 석출하여 나온 것을 여분의 도착 도료액을 씻어내고 가열 경화시키면 균일한 품질의 양질도막이 형성되어진다.

The pre-treated products to be coated are immersed in a water-soluble electrodeposit tank where DC current is applied to both the products and the electrodeposit solution to form a good film in a uniform quality as the charged resin particles are transferred and educed to the coated products due to conductivity and the products are heated and hardened after the residual deposition liquid is washed out.



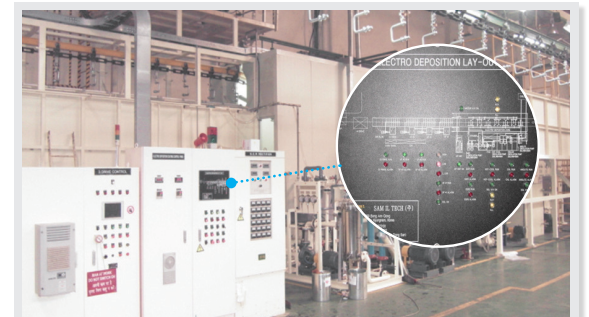
연속방식 전착 15TON EVA  
Continuous electrodeposit 15-ton EVA



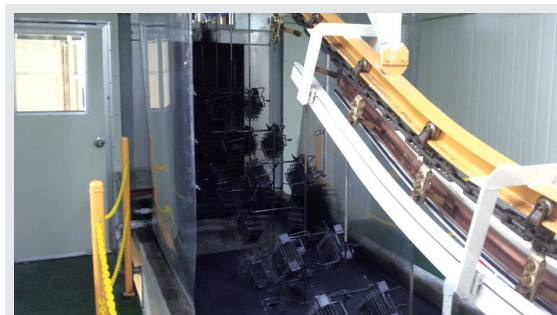
전착 15TON EVA  
Electrodeposition 15-ton EVA



DIPPING TYPE 전착 12TON  
Dipping type electrodeposit 12-ton



전착 12TON EVA  
Electrodeposition 12-ton EVA



전착 15TON EVA  
Electrodeposition 15-ton EVA



전착 10TON  
Electrodeposition 10-ton



전착조  
Electrodeposition tank



전착라인  
Electrodeposition line



# 설비제작사업부 | Equipment Production Department

## 전처리설비 | Pretreatment facilities

도장작업전 피도물 표면에 존재하는 유분과 이물질  
을 제거하고 도료와 피도물의 밀착성과 내식성을 향  
상시키기 위한 것이다.

They aim to remove oil and foreign substances  
from the surface of the coated products before  
painting, and to improve the adhesion and  
corrosion resistance of both the paint and coated  
products.



전처리(DIPPING)  
Pre-treatment (dipping)



전처리(DIPPING)  
Pre-treatment (dipping)



탕세, 탈지, 피막  
Hot water cleaning, degreasing, coating

## 표면처리설비 | Surface treatment facilities

소재를 열처리나 장기간의 방치로 금속표면에 발생한  
산화피막이나 수산화물을 산으로 제거하는 것이다.

They refer to facilities for the removal of the oxide  
film or hydroxide generated on the metal surface  
with an acid from heat treatment or after a long  
period of time in storage.



산처리 라인  
Acid treatment line



유브라이트(박막, 중막)  
Lubrite (thin film, medium film)



탄화수소 세척기  
Hydrocarbon washer

## 건조로 | Backing oven

건조설비는 도장공정의 최종 공정으로 피도물에 도색  
된 도료성을 경화시키는 설비다. 효율이 높은 건조로를  
설치하는 것이 생산성 향상과 품질의 안정성 및 에너지  
절감의 효과는 물론 쾌적한 분위기를 유지할 수 있다.

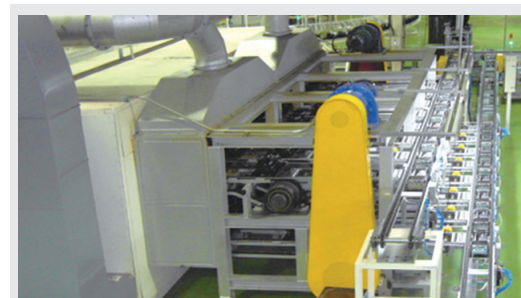
The drying facilities aim to cure the paint properties  
painted on the objects as the final step of the painting  
process. Installing a drying furnace with high efficiency  
can improve productivity, stabilize quality, save  
energy, and maintain a pleasant atmosphere.



건조로  
Backing oven



건조로  
Backing oven



건조로  
Backing oven

## 테프론코팅 | Teflon coating

피도물에 도색된 도료성을 고온에서 경화 시키는 것을  
말한다.

It refers to curing the paint coated on the object at  
high temperature.



TEFLON COATING PAINTING  
TEFLON COATING PAINTING



테프론코팅 자동이재  
Automatic transfer of Teflon coating



정밀회전 TEFLON COATING 장치  
Precision rotation Teflon coating device



# 설비제작사업부 | Equipment Production Department

## 트롤리콘베어 | Trolley Conveyor

Trolley Conveyor는 입체적Rail을 따라 상,하,좌,우 자유롭게 주행하도록 설계하여 공간활용과 연속적 기능을 수행해 운반물 손상을 방지하고 대량생산이 가능하다.

A trolley conveyor is designed to run freely up, down, left and right along a three-dimensional rail to use space and perform continuous functions in an effort to prevent damage to the materials in transportation and enable mass production.



스프링라인  
Spring line



건조기 열풍발생기  
Dryer's hot air generator



COIL 스프링 분체도장  
Coil spring powder coating



분체도장라인  
Powder coating line



Take-Up Part  
Take-Up Part



Trolley Driving Part  
Trolley Driving Part

## 자동화기계제작 | Automatic machine production



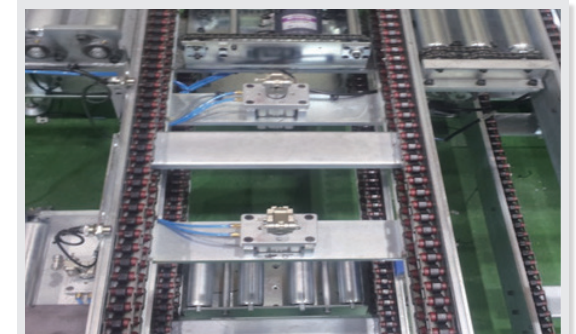
CURVE CONVEYOR SYSTEM  
CURVE CONVEYOR SYSTEM



물류 포장 AIR BALANCE SYSTEM  
Logistics packaging air balance system



BUFFER CONVEYOR  
BUFFER CONVEYOR



BUFFER CONVEYOR  
BUFFER CONVEYOR



COMP소음측정장치  
Comp noise measuring device

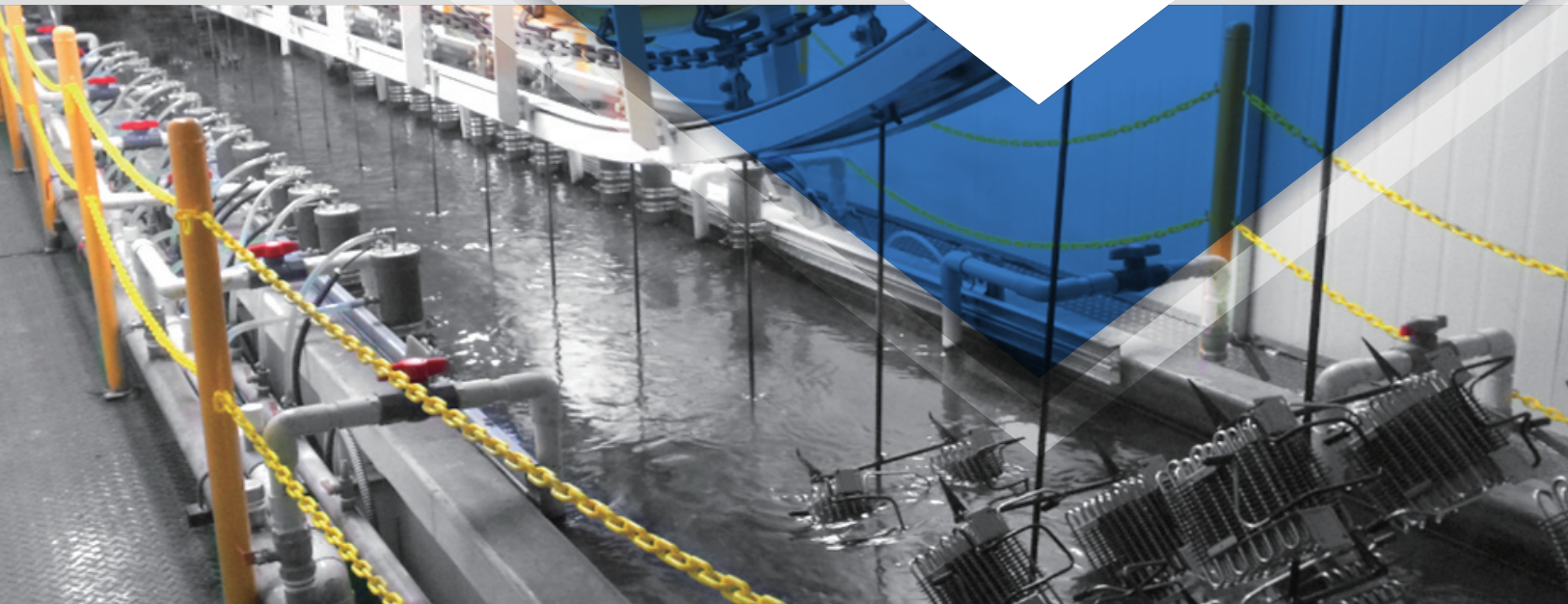


소음 TEST기 조립  
Noise tester assembly





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