



### **Company Profile**

## LOFA Corporation





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Leading On Future Advances

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#### 1. Overview

#### Leading On Future Advances

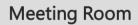
#### **Company View**



#### Greeting Room

#### **Conference Room**

#### **Engineering Office**









#### **Factory View**



동화상.



#### 2. Philosophy and Goal of Management

#### Leading On Future Advances

#### Philosophy of Management

- Spirit of Value based : Development of the technology and products that can contribute to

social welfare and mankind

- Spirit of Companion : Mutual growth with customers, shareholders, employees,

employees families and members of the society

- Spirit of Social responsibility : Returning to society the business ethics and profit

UD HP B

with sustained growth

#### **Goal of Management**

- 1. Making pleasant workplace
- 2. Organizing based on core competencies
- 3. Infinite challenge and creativity



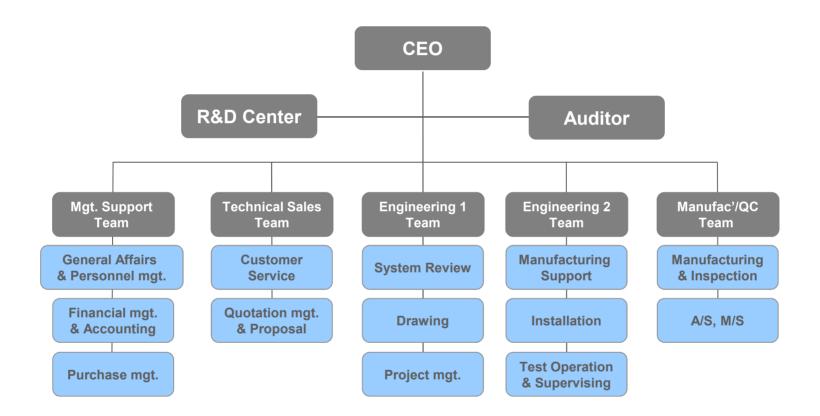


#### 3. History

- OCT / 2018 Korea Techno Park Promotion Association Selected as Excellent Enterprise in 2018 (No. KTA2018-0124)
- MAY / 2018 Commended by Ulsan small and medium venture business manager(2018-12)
- NOV / 2017 Promising company certification (UTP 2017-026)
- JUN / 2017 Certificate of Excellent Technology Evaluation (NICE-2017-77-003229)
- Sep / 2016 Be awarded a citation in field of national productivity by prime minister
- Mar / 2016 Reapproved the Productivity Management System (PMS) by Korea Productivity Center
- Jan / 2016 Certificate acquisition for Occupation Health & Safety Assessment Series OHSAS 18001
- Dec / 2015 International Patent Application(PCT): Connecting structure of soundproof panel
- Oct / 2015 Overseas patent registration (USA/Thailand) : Connecting structure of soundproof panel
- Aug / 2015 Selected as a 2015 global star venture company by Ulsan metropolitan city
- Feb / 2015 Acquired 2015 best partner certificate by Hyundai Hysco
- Sep / 2014 Certificate renewal for Environment Management System ISO 14001
- Sep / 2014 Certificate renewal for Quality Management System ISO 9001
- Jan / 2014 Be awarded a citation by board chairman of Korea Industrial Complex Corporation
- Oct / 2013 Overseas patent application (China) : Hot blank gripping device
- May / 2013 Conclusion of industry-academy cooperation agreement with Ulsan Hyein school
- May / 2013 Conclusion of industry-academy cooperation agreement with Ulsan energy (Meister) high school
- Jan / 2013 Certificate acquisition for Information Management System (IMS)
- Dec / 2012 NTIS professional monitoring group activities under patronage of National Science & Technology Commission
- Mar / 2011 Patent registration of Special gripper (Ultra high temperature)
- Dec / 2010 Be awarded an appreciation plaque from ministry of Gender Equality and Family
- Jan / 2010 Patent application for Robot laser welding method
- Jan / 2010 Patent application for Location correction jig between robot tools and vision sensors
- Aug / 2009 Completed the project of developing life-saving robot / Local community Leading project / Dae gu Gyeong buk Institute of Science an Technology (DGIST)
- Mar / 2009 Patent application for Special gripper (Ultra high temperature)
- Jun / 2008 Certificate acquisition for technology assessment venture company
- Feb / 2008 Established LOFA Corp.



#### 4. Organization





#### **5. Business**

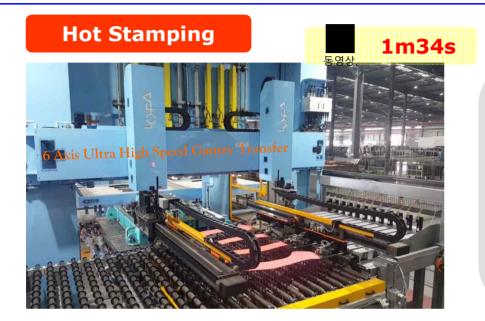






#### **5. Business**

#### Leading On Future Advances



Press Hardening is an innovative process by which advanced ultra high strength steel is formed into complex shapes more efficiently than with traditional cold stamping. The process involves the heating of the steel blanks until they are malleable, followed by formation and then rapid cooling in specially designed dies, creating in the process a transformed and hardened material.

Because of this ability to efficiently combine strength and complexity, press hardened parts accomplish in one relatively light-weight piece what would typically require thicker, heavier parts welded together in more than one process under cold stamping.



Cold Blank Loading/Unloading

#### Laser Marking

NP B







#### **Hydro Forming**





**Hydroforming** is a cost-effective way of shaping ductile <u>metals</u> such as <u>aluminium</u>, <u>brass</u>, low alloy <u>steel</u>, and <u>stainless steel</u> into lightweight, structurally stiff and strong pieces. One of the largest applications of hydroforming is the automotive industry, which makes use of the complex shapes made possible by hydroforming to produce stronger, lighter, and more rigid <u>unibody</u> structures for vehicles. This technique is particularly popular with the high-end <u>sports car</u> industry and is also frequently employed in the shaping of aluminium tubes for bicycle frames. In this process, LOFA offers material transfer, laser cutting, and mechancial cutting which are implemented in with either robot and gantry transfers.

#### **Product Image**



Pipe Loading /Unloading

#### Laser Cutting & Jig









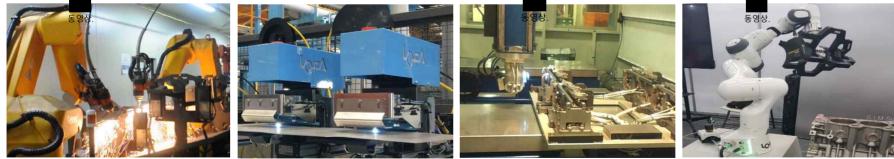
#### **Laser Application**



Industrial laser applications can be divided into two categories depending on the power of the laser: material processing and micro-material processing.

In material processing, lasers with average optical power above 1 kilowatt are used mainly for industrial materials processing applications. Beyond this power threshold there are thermal issues related to the optics that separate these lasers from their lower-power counterparts. Laser systems in the 50-300W range are used primarily for pumping, plastic welding and soldering applications. Lasers above 300W are used in brazing, thin metal welding, and sheet metal cutting applications. The required brightness (as measured in by the beam parameter product) is higher for cutting applications than for brazing and thin metal welding.<sup>[</sup>High power applications, such as hardening, cladding, and deep penetrating welding, require multiple kW of optical power, and are used in a broad range of industrial processes.

#### **Product Image**



Laser Cutting

#### Laser Marking

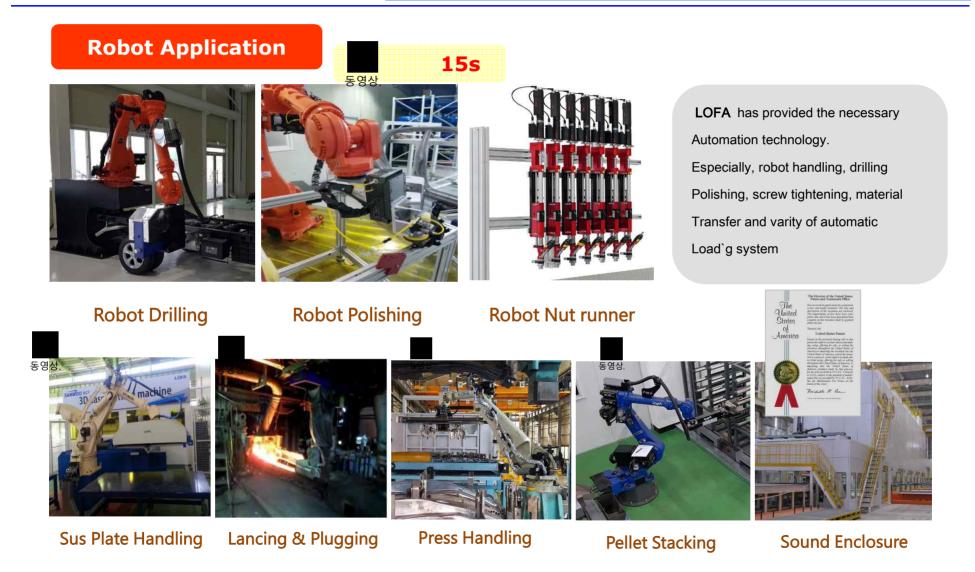




Laser Scanning / inspection











#### **5. Business**

#### Leading On Future Advances

#### **Tooling Component**



Hot Stamping Process

# Id Blanking Tooling

**Press Process** 



Handling / Palletizing

**LOFA**'s Flexible Tool has a standard modular components and rigid structure for any type of heavy duty application.

This flexible system allows easy tool changes that provide much faster and minimize running cost during the production.

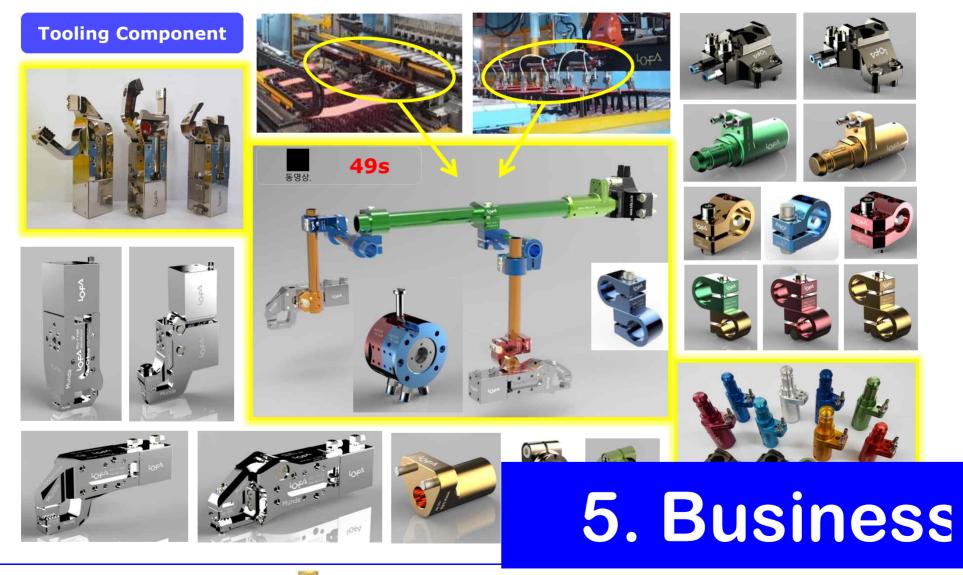
**LOFA**'s Flexible Tooling will reduce your design time and cost for manufacturing.















# 5. Bus





#### 6. Major Performances

| YEAR | CUSTOMER               | KEY PROJECT                         |  |
|------|------------------------|-------------------------------------|--|
| 2020 | HYUNDAI STEEL (ULSAN)  | HYDROFORMING LINE COMMON RETROFIT   |  |
|      | POSCO                  | HOT STAMPING PROTO LINE             |  |
|      | HYUNDAI MOTORS (ULSAN) | PRESS AUTOPALLETIZING LINE RETROFIT |  |
| 2019 | DAEWON PRECISION       | KA4 PWR LASER WELDING JIG SYSTEM    |  |
|      | HYUNDAI STEEL (POHANG) | TRACK SHOE ROBOT HANDLING SYSTEM    |  |
|      | TNP                    | HOT STAMPING PROTO LINE             |  |





#### 6. Major Performances

| YEAR | CUSTOMER               | KEY PROJECT  |  |
|------|------------------------|--|--|
|      | HYUNDAI STEEL (YESAN)  | LASER CUTTING JIG SYSTEM                                 |  |
| 2018 | HYUNDAI STEEL (POHANG) | TRACK SHOE ASSEMBLY AUTOMATION FOR EXCAVATOR             |  |
|      | HYUNDAI MOTORS         | No 2 PRESS FACTORY DESTACKING LINE                       |  |
|      | HYUNDAI STEEL (ULSAN)  | No 1,2,3 HYDROFORMING LINE FULL OVERHAUL                 |  |
|      | POSCO                  | SECONDARY BATTERY CATHODE MATERIAL ROBOT HANDLING SYSTEM |  |
|      | HYUNDAI STEEL (CHINA)  | TENJIN FACTORY HIGH SPEED TRANSFER LINE                  |  |
| 2017 | HYUNDAI STEEL          | No 2 FACTORY PANEL PALLETIZING LINE                      |  |
|      | HYUNDAI MOTORS         | No 3 PRESS FACTORY DESTACKING LINE                       |  |
|      | HYUNDAI STEEL          | No 8,9,10,11 HOT STAMPING AUTOMATION TOTAL LINE          |  |
| 2016 | HYUNDAI STEEL          | DUAL HIGH SPEED TRANSFER SYSTEM                          |  |
| 2016 | HYUNDAI MOTORS         | No 2,4 PRESS FACTORY DESTACKING LINE                     |  |
| Γ    | HYUNDAI STEEL (CHINA)  | TENJIN No 6,7 HOT STAMPING AUTOMATION LINE               |  |
|      | SHINHWA ST             | HOT STAMPING AUTOMATION LINE                             |  |
| 2015 | HYUNDAI MOTORS         | SOUND PROOF FOR 6, 100TON TANDEM PRESS LINE              |  |
| 2015 | LG HOUSYS              | LASER CUTTING JIG SYSTEM                                 |  |
| Г    | HYUNDAI STEEL (CHINA)  | TENJIN No 3,4,5 HOT STAMPING AUTOMATION LINE             |  |
|      | HYUNDAI HYSCO          | No 7,8. HOT STAMPING AUTOMATION TOTAL LINE               |  |
| Γ    | SAMWOO MCP             | AUTOMATION FOR LASER CUTTING LINE                        |  |
| 2014 | I RAE CS               | No 1. HOT STAMPING AUTOMATION LINE                       |  |
| -    | HYUNDAI HYSCO (CHINA)  | TENJIN No 1.2.3 HOT STAMPING AUTOMATION TOTAL LINE       |  |
| Γ    | IL JI TECH             | No 1. HOT STAMPING AUTOMATION LINE                       |  |
|      | SAMSUNG ENGINEERING    | SAUDI MADDEN AL CAST PLANT TOOLING                       |  |
| Γ    | SAMWOO MCP             | MEMBRANE LASER WELDING AUTOMATION LINE                   |  |
| 2013 | DAEWON PRECISION       | No 3. LASER WELDING AUTOMATION LINE                      |  |
|      | GM RUSSIA              | GMR TANDEM PRESS SOUND PROOF (Two Line )                 |  |
| Γ    | FORD INDIA             | 7,100/6,100 Ton TANDEM PRESS SOUND PROOF (Two Line)      |  |
|      | HYUNDAI HYSCO          | No 3.4. HOT STAMPING AUTOMATION TOTAL LINE               |  |
| Γ    | HYUNDAI MOTOR BRAZIL   | HMMB / TANDEM PRESS SOUND PROOF                          |  |
| 2012 | HYUNDAI MOTOR INDIA    | HAOS / TANDEM PRESS SOUND PROOF                          |  |
| F    | POSCO MEXICO           | No 2. IR OVEN FOR POSCO MEXICO CGL SKELF                 |  |
| Γ    | HYUNDAI MOTORS         | HMMR / TANDEM PRESS SOUND PROOF                          |  |
|      | LS NIKKO COPPER        | FSF MUD PLUG/LANCING ROBOT AUTOMATION                    |  |
|      | HYUNDAI HYSCO          | TWB DESTACK/STACKING SYSTEM                              |  |
| 2011 | POSCO CHINA            | No 1. IR OVEN FOR POSCO GWANGDONG CGL SKELF              |  |
| F    | DAEWON PRECISION       | No 1. LASER WELDING AUTOMATION LINE                      |  |
|      | HYUNDAI HYSCO          | TWB DIMPLING SYSTEM                                      |  |
| 2010 | HYUNDAI HYSCO          | No 2. HOT STAMPING AUTOMATION TOTAL LINE                 |  |
|      | HYUNDAI HYSCO          | PIPE FORMING/PACKING AUTOMATION LINE                     |  |
|      | RENAULT INDIA          | RNI PROGRESSIVE PRESS LINE PROOF                         |  |
| 2009 | HYUNDAI ROTEM          | SPOT WELDING LINE for HYDRO AIRPORT ENGLAND              |  |
| F    | DGIST                  | TRANSFORTATION FOR FIRE ROBOT                            |  |
|      | HYUNDAI HYSCO          | No 1. HOT STAMPING AUTOMATION TOTAL LINE                 |  |
| 2008 | HYUNDAI HYSCO          | No 4. HYDRO FORMING AUTOMATION                           |  |
| 2000 | HYUNDAI HYSCO          | No 1,2,3. TWB DESTACKING SYSTEM                          |  |





#### 7. Map











#### Leading On Future Advances





8. Certifications / Patents













#### Leading On Future Advances







#### Leading On Future Advances





#### Leading On Future Advances

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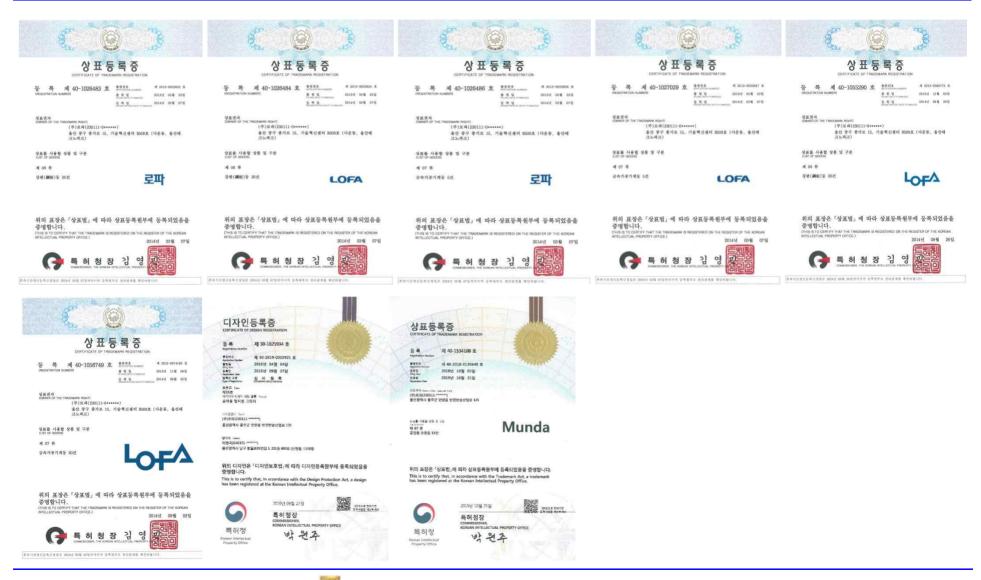


#### Leading On Future Advances





#### Leading On Future Advances









#### **Thanks!**

#### Leading On Future Advances



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