



# up grade

Newsletter for customers, employees and partners  
volume 23, issue no. 43, May 2020

## News

### 4.0 solutions in demand like never before

Interlinked, data-driven process automation and division of labor - generally described by the catchword „Industry 4.0“ - are the focus of interest in the manufacturing industry worldwide. This was evident at nearly all trade fairs and industry meetings even before the corona virus pandemic broke out. Now more than ever, the availability of such solutions is crucial.

## Know-how

### Digital support in machine operation

To support our customers, LASCO is launching the next generation of digital remote maintenance systems. Based on the Internet, image, sound and data transmission will enable decentrally localized teams to work together in real time and from a first-person perspective. The system is field-tested and ready for immediate use.

## In practice

### Stévenin Nollevaux increases capacity

The French forging company Stévenin Nollevaux has further increased its production capacity. Since last year, the new semi-automated line, with a LASCO HO-U 500 as main forming unit, has been added to the four existing lines. And thus it secures itself two fully utilized production lines.







**Lothar Bauersachs**  
CEO

## Historical challenge

We had just been inspired by the prospect of new „golden twenties“ when the corona virus and the measures taken to contain it suddenly put the world economy into a state of shock. There is no need to describe the situation wordy and in great detail: „These days are very difficult for everyone and not (yet) predictable for the economy“. However, we would not be entrepreneurs if this caused us to remain paralyzed, and the assessment of the adequacy of the decreed measures takes a back seat because we have no alternative but to comply with governmental directives. It would be better to relax and ask ourselves, at least in our minds, how we can master this historical challenge.

It is important to keep as many supply chains as possible running. We can establish the new division of labor required for this with the help of modern information and communication technology, and many production processes can be automated more optimally in this way anyway, while we don't even have to physically meet each other and automatically comply with infection control regulations.

In logistics, lock systems have been tried and tested for a long time and must now be used sensibly. In addition to technical solutions, which we will of course confidently continue to develop, it is essential to build new trust among business partners all over the world. Such confidence can be contagious and would even stimulate demand. So let's work on the further expansion of our partnerships, perhaps we can even make a lightning start out of the crisis.

Stay confident and healthy!

Yours Lothar Bauersachs

## Annual meeting of the Cold Forging Industry

# Digital methods scrutinized

**At the 35<sup>th</sup> annual meeting of the Cold Forging Industry in Düsseldorf in February, LASC0 set highlights on the subject of „Digital methods for the development and maintenance of machine tools“.**

The presentations by Sebastian Neubauer, Dipl.-Wirt.-Ing. (FH), and Nicklas Trier M. Sc. focused on topics such as how users of LASC0 machines and systems can achieve cost and competitive advantages. This topic met with great interest among the trade visitors and was subsequently discussed and scrutinized individually.

Examples:

1. How can the time/cost expenditure for setting up and commissioning new systems at the manufacturer's plant and their optimization at the customer's site be minimized?

Or:

2. How can time loss and costs be reduced in complex events of failures?

Re question 1

Users of LASC0 machines participate from the system of „virtual commissioning“ via the modelling of a „digital twin“, which elimi-

nates the need to set up the system in the manufacturer's factory and allows the system to be commissioned and tested virtually under production conditions. This saves time and costs and offers the additional advantage that the modelled „digital twin“ can continue to be used for optimization and fault analysis during the production phase at the customer's plant. Finally, when the product range changes during the long-term usage phase, it is possible to obtain support from LASC0 by carrying out changing handling concepts and reprogramming in the virtual world that has been set up. This reduces downtimes, and any risks arising in the production process can be identified and quantified at an early stage.

Re question 2

The well-established „LASC0 Condition Monitoring System“ and the internet-based LASC0 maintenance services optimize the service of the equipment at the operator's plant - see also article „Know-how“ on pages 4/5.

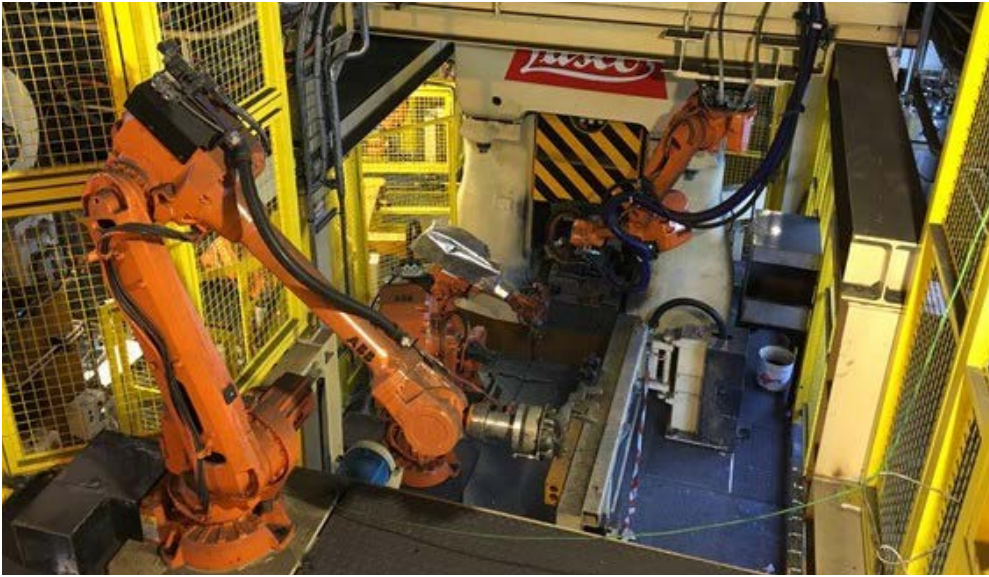
## 2nd Euro-Mexican Forging Conference EMFC

# Meeting of the industry in Querétaro

**Despite Mexico's economic boom in recent years, experts believe that the country's great potential is far from being exhausted.**

This positive assessment was reflected in the strong participation in the 2nd Euro-Mexican Forging Conference EMFC, which was held at the end of 2019 in the industrial city of Querétaro, where the German automotive industry and its suppliers also have production sites. The industry meeting was sponsored by LASC0, Georgsmarienhütte GmbH, Induction SLR, Carl Bechem GmbH, Forging Technologies, Simufact and WMP Mexico Advi. Hatebur Umformmaschinen AG was responsible for the organization of the event, whose focus was on maintaining contacts and exchanging experiences, inspired by current lectures from the forging industry. Sales engineer Sven Lorz from LASC0 informed the participants from industry and commerce about the many advantages of the new generation of multi-directional LASC0 presses.





The components of the fully automatic forging line operate in a very confined space.



Typical products of Forges de Courcelles

## Automated LASCO HO-U 400 for Forges de Courcelles Installation space optimally used

**Forges de Courcelles has added another LASCO die forging hammer with automation to its production facility in Nogent (France). The line was commissioned successfully only nine months after the order was placed.**

Forges de Courcelles, which belongs to the French SCIFOR Group, is a supplier to the automotive industry and forges medium and large series parts on three LASCO die forging hammer lines. The successful cooperation started in 2006, when LASCO was asked to automate a 31.5 kJ hammer. At that time, the project was automated within only six months using the patented LASCO forging process. Forges de Courcelles modernized upstream

and downstream areas with its own specialists.

In 2006, this was the first fully automated hammer forging cell in France. The current new line with the internal customer designation 4T1 stands out for its extraordinarily compact design. Two robot-operated LASCO special gripping systems handle the feeding of parts to the LASCO HO-U 400 from the forg-

ing roll as well as the transfer in the forging process. A suspended LASCO robot system carries out die care.

This method is used to produce balancer shafts and control arms. With this plant, Forges de Courcelles has further upgraded its facilities to open up new markets. Founded in the 1880s as a family business, the SCIFOR Group with subsidiaries at two locations produces steel forgings in large and medium series for the automotive, truck and motorcycle markets. Forges de Courcelles is the die forge for medium series within the SCIFOR group.



The participants of the second Euro-Mexican Forging Conference in Querétaro at the end of the event.



IN THE LIGHT OF RECENT EVENTS, WE HAVE SUSPENDED THE CURRENT SERIES „PERFORMING PROCESSES FOR DIE CASTING“. WE WILL CONTINUE IN OUR NEXT ISSUE. INSTEAD, WE WILL PRESENT ABOUT READY-TO-USE, IMMEDIATE SOLUTIONS TO OUR CUSTOMERS WORLDWIDE.

# INTERNET-BASED LASCO MAINTENANCE SERVICES

LASCO machines and systems are characterized by high availability and operational reliability. In order to guarantee this continuously, optimal customer service is particularly important to us.

**We offer our customers additional service with the following Internet modules:**

## 1 REMOTE MAINTENANCE

### Remote access to the machine control

Since 1998 already, LASCO has been offering remote maintenance solutions that enable our service technicians to access the control systems of LASCO lines worldwide from Coburg.

### Prerequisites:

- ▶ Modem with internet/telephone connection
- ▶ S7 control or higher

### Benefits:

- ▶ Access to the control level
- ▶ Online check/optimization of the software code

## 2 REMOTE ASSISTANCE „SMART“

### Use of the Internet-based LASCO maintenance platform

The „LASCO Remote Assistance System SMART“ represents the technically superior alternative to conventional means of communication. Via video stream bi-directional image and sound transmission as well as the fast and direct search, detection and rectification of malfunctions in cooperation with the customer’s maintenance technology on site become possible, accompanied by the LASCO expert in Coburg virtually.

### Prerequisites:

- ▶ Mobile device with internet access, camera and microphone

### Benefits:

- ▶ Data transfer of all common formats
- ▶ Video and chat function
- ▶ Documentation of service cases

## 3 REMOTE ASSISTANCE „TURNKEY“

### Use of the Internet-based LASCO maintenance platform - plus

We offer you all the advantages of the „LASCO Remote Assistance System TURNKEY“ as a tailor-made turnkey solution. LASCO will identify the necessary hardware and software with the customer in advance. Our specialists will determine the position and required number of WLAN access points at your LASCO line to ensure a high-performance WLAN.

**One package - optimum added value!**

### Prerequisites:

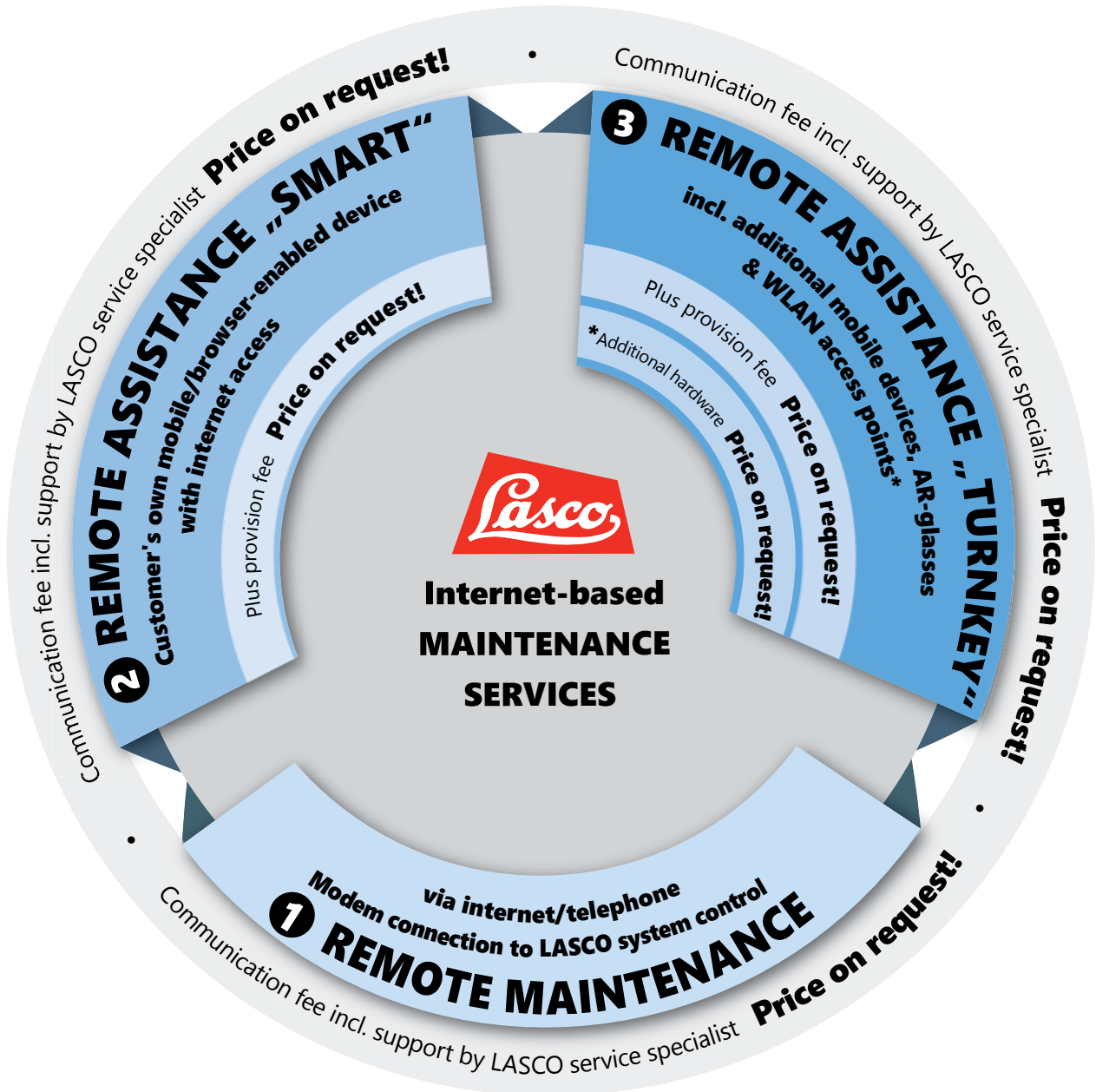
- ▶ Hardware and software included in the LASCO service package

### Benefits:

- ▶ Turnkey solution (after having determined the requirements)
- ▶ Data transfer of all common formats
- ▶ Video & chat function supported by SmartGlasses
- ▶ Documentation of service cases

DED PART 3 OF OUR  
E-FORGINGS“, WHICH  
VE WILL INFORM YOU  
DIGITALLY SUPPORT OUR

# ALTERNATIVE MODULES ① – ③



## Contact us:

We offer the right application for every requirement.

Contact us, our specialists will be pleased to advise you.

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LASCO keynote speech at symposium in Hanover

# Multi-axial presses for complex geometries

**At the 23<sup>rd</sup> Forming Technology Colloquium (UKH) in Hanover (Germany) in March 2020, current developments in the field of forming technology were presented.**

The colloquium, which takes place every three years, is attended by a large group of participants from industry and research. The event is divided thematically into the areas of solid forming and sheet metal forming. LASCO was one of the selected mechanical engineering companies invited to contribute a keynote speech. Dipl.-Ing. Sebastian Frank provided information on „Multi-axial presses in solid forming“.

Multi-axial LASCO presses are used for the production of complex geometries in solid forming, which cannot be achieved in conventional single-axis forging processes. In order to keep energy-intensive forming processes competitive for the future, it is necessary to optimize processes that significantly minimize the use of materials. Investigations have shown that multi-axis processes provide good approaches for this, especially in the area

of preforming, but also for complex finishing molds that have to withstand high loads. Multi-axial LASCO presses offer a wide range of possible applications in this area.

A trend for the future is emerging, according to which machine concepts must be increasingly adaptable - and this with output rates growing steadily. LASCO has therefore set the course from multi-axial to flexible forming: By using „LASCO Virtual Engineering“, the performance of forming and machine concepts can be examined in advance and later modelled into a „virtual twin“ that can be used in multiple ways.

Currently, complex forged parts are frequently produced on multi-stage presses using complex tool technology. In contrast, the modern LASCO press line with decentralized automation consists of compact forming units arranged in a flexible sequence. The step-by-step forming process is carried out in uncomplicated individual dies, synchronized along a virtual master axis. Individual forming units can be supplemented, eliminated or exchanged according to the respective forming process. This serves the flexibility of the manufacturing processes.



Motivated and raring to go (from left): Michael Schnabel, Nora Reinhardt and Harald Barnickel

## Sporting premiere has to wait

**The „DATEV Challenge Roth“ was to be the premiere for Team LASCO in June. The world-famous „Long Distance Roth Triathlon“ will be completed together as a team. However, the competition had to be postponed due to current events.**

Swimmer **Nora Reinhardt** (26), runner **Harald Barnickel** (50) and cyclist **Michael Schnabel**

(26) practice the sport in their free time ambitiously and passionately. In the company team competition of the IT service provider for tax consultants DATEV (Fürth/Germany), company employees also want to demonstrate more than just sporting spirit and deliver good performance. All forces are to be mobilized to put pressure on competitors. Now the trio has a little more time to prepare for the competition, which will probably take place next year.

## Spotlights

**Additional qualification:** A partial amendment of the industrial metal and electrical professions and mechatronics technicians now makes it possible to obtain additional qualifications in vocational training. A curriculum for the professional development of specialist knowledge for the additional qualification „Programming“ was drawn up by the working group „Vocational Training“ at the responsible Chamber of Commerce and Industry (CCI) in Coburg. It consists of the two modules „Sensor Technology“ and „Programming in TIA Portal“.

The TIA Portal (Totally Integrated Automation Portal) allows complete access to the entire digitized automation from digital planning and integrated engineering to transparent operation. The first module focuses on getting to know sensor technology. Topics are „Functional Principle“, „Application“, „Fields of Application“, „Signal Processing“ and „Adjustment and Evaluation“. The second module deals with practical programming work in the different languages up to the high level language SCL with the Siemens software package TIA Portal.

These modules are to be completed additionally during the standard vocational training period and taken in an examination. The additional qualification is certified by the CCI. The aim of the innovation is to promote high-performing apprentices already during their vocational training in the direction of „Automation Technology“ and „Industry 4.0“.

### 10 years with LASCO

<b>Daniel Hanff</b>	16.08.2020
<b>Christoph Schad</b>	01.10.2020

### 25 years with LASCO

<b>Klaus Bischoff</b>	01.03.2020
<b>Waldemar Simon</b>	29.05.2020
<b>Alexander Grasmück</b>	01.09.2020
<b>Matthias Kreppel</b>	01.09.2020
<b>Stefan Plenert</b>	01.09.2020
<b>Romy Musbach</b>	01.09.2020
<b>Oliver Lange</b>	25.09.2020

### 40 years with LASCO

<b>Roland Hahn</b>	03.11.2020
<b>Günther Zetzmann</b>	01.12.2020

### up grade

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Integrating digital content into everyday teaching

# Digitization of vocational education and training

**Even experts do not find it easy to keep up to date with the dynamics of digital growth in companies. New challenges arise for knowledge brokers in vocational training.**

The degree of digitization in manufacturing companies is growing and changing constantly. Triggers are industry 4.0 technologies such as „Virtual and Augmented Reality“, „Predictive Maintenance“, „Artificial Intelligence“ - to name just a few. Against this background, the „Competence Center 4.0“ (a Coburg-based organization for promoting the transfer of know-how between research, development, teaching and practice) together with teachers at vocational schools organized an event at LASCO entitled „Digitization of vocational training“. At LASCO, the ACTUAL status of Industry 4.0 were presented and the digital everyday business explained.

Contents of the event were the didactic options of future teaching units for digitization as well as the reduction of possible fear of contact with digital media, thus creating a kind of „digital mindset“.

The head of LASCO's „Virtual Engineering“ division, Michael Schnabel, presented „Virtual Engineering“ - from the “Digital Twin” to “Augmented Reality”. The event was concluded with an open discussion round.



**LASCO hosted an information event of the Competence Center 4.0 of the Chamber of Commerce and Industry in Coburg for teachers in vocational training.**

Apprentices and instructors at LASCO are already making intensive use of the new offer

## Vocational school expands online platform

**For some weeks now, vocational schools have been using the possibilities of digitization to make teaching material available to their students online. LASCO supports this by making intensive use of the service.**

Apprentices in the various industrial-technical and commercial professions are requested to use the Internet platform to download and

work on their own on the teaching materials intended for them and to hand them in digitally to teachers for correction. Depending on the profession and level of their training, LASCO allows vocational school students one or two days a week to work on and hand in the study materials.

Against the background of the CoVid 19 pandemic, the offer was intensively used in order to continue teaching specialist theory more effectively despite the shut-down of vo-

cal schools. This will certainly accelerate the development of vocational training, which was intended anyway. The digital platform is very much welcomed and intensively used by apprentices and instructors. This high level of acceptance motivates to expand the new digital training service and to exploit all its possibilities. It is already planned that instructors will also have access to the platform in order to check the current level of knowledge of their apprentices.





**Alexandre Hénon**  
General Manager Industrial  
Stévenin Nollevaux  
Les Hautes Rivières, Frankreich

## Fully convinced

**up grade:** Mr. Hénon, was it easy for decision-makers in your company to decide to work with LASCO again?

**Alexandre Hénon:** Absolutely, because we have been able to convince ourselves of the quality and reliability of machine tools from Coburg for many years in practice. Everyone can read on our website that we purchased the first fully automated hammer forging line from LASCO in 2004. All in all, we have succeeded in achieving high capacity utilization of our four forging lines. We were faced with the necessity of increasing and securing our production capacities with a fifth line.

**up grade:** Are you worried about downtime?

**Hénon:** Disturbances in the production process from the most diverse causes can never be completely avoided. In any case, we would now be able to bridge losses in our ability to deliver very quickly. In addition, the new plant will enable us to increase efficiency in maintenance and repair and to optimize the spare parts management. The investment is primarily aimed at reliability towards our demanding customers. Our clients shall always be able to rely on our ability to deliver on time, in the desired quality and on the agreed terms. This will secure our competitive position in the future.

**up grade:** How important is active cooperation with the technology supplier LASCO to you?

**Hénon:** It is of great advantage if a machine builder can respond to customer requirements. This is common practice at LASCO. The exchange of know-how between LASCO's experts and ourselves has led to the optimum solution for our requirements. We are firmly convinced of this.



Stévenin Nollevaux

# On the safe side

**The French forging company Stévenin Nollevaux has commissioned another forging line from LASCO. This has increased their production capacity to five lines. At the same time, the new investment secures two facilities running at full capacity.**

That went really fast: Only five months passed between the ground-breaking ceremony and the first hot blows with the LASCO HO-U 500 in the customer's factory. During this period, the foundation was erected, various system components were tested at LASCO, then delivered, installed at the customer's plant and accepted. This was ultimately only possible in such a short time because the client and the technology supplier already know each other well and have made a good team since previous projects. The multi-disciplinary project team at LASCO, consisting of experts for method planning, maintenance, engineering, forging, etc., included the competence leaders from Stévenin Nollevaux from the very beginning.

The forming tasks in the new line are performed by a modern hydraulically driven die-forging hammer, to which pre-rolled rod sections of round steel heated to forging temperature are fed. The semi-automated process chain offers the option to automate the trimming of the work pieces in a later optimization

step. Special attention was paid to ergonomics in the design of the semi-automatic system.

Two integrated industrial robots relieve the operating personnel of heavy physical work in handling the forged parts.

Stévenin Nollevaux (SN) with 80 employees in Les Hautes Rivières (Ardenne/France) produces hot forged unmachined and finished steel parts for automobiles, agricultural machinery, rail vehicles, trucks, conveyor systems and mechanical engineering. The unit weights are between 50 grams and 5 kilograms. Around 80 percent of the goods produced are exported.

Specialities of the company, which was founded by Jules Stévenin in 1927, are various finishing processes, including several methods of hardening by heat treatment. SN ensures the quality standard according to ISO 9001 : 2015, among other things, through its own design and tool making departments as well as through the continuous qualification of its employees.



Semi-automatic forging line with LASCO HO-U 500, step feeder, heating system and robots.