



FICEP
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The Austrian company
EBNER STAHLBAU GMBH
doubled their production with
the installation of FICEP lines



When I look back to the past few decades at the structural steel industry and its changes there are two very impactful developments as an industry trend.

The first is how larger firms have gravitated towards integrated CNC automation of the fabrication processes over the past 3-4 decades.

Typically, this segment of the industry occupies large plant facilities which permits the integration of extensive material handling systems that connect the typical CNC production cells of shot blasting, sawing, drilling, coping and welding.

This trend unfortunately left the small to medium size fabricators generally excluded from this labor-saving technology because of their following limitations:

- plant space
- production volume
- internal support staff
- investment capital

These limitations typically froze this segment of the industry from growing their businesses to another level.

In addition, the labor-saving technology that larger fabricators were perfecting enabled them to start competing with small and mediums size fabricators on smaller projects.

FICEP's extensive penetration of the global markets has enabled them to realize the size of this market segment and that it had traditionally been largely ignored.

The automated labor-saving solutions that were being implemented by the larger firms typically failed to address the needs of the

small to medium size fabricators.

The first solution of FICEP, for this market segment, was their development of a single spindle traveling column drilling line.

This technology was extremely simple, required half the shop space of a traditional drilling line, was extremely versatile in its ability to handle all structural steel sections of diverse part lengths and the required investment was just 30% of drill line alternatives.

Over the past few decades this product line has evolved through 5 different models to the current Excalibur 12 product.

Having engineered a solution to automate the processing of structural steel sections for this market segment, FICEP's next focus was to automate the production of plate detail items. Once again FICEP adopted the concept of moving the tool not the material in their solution for plate processing to minimize the required footprint.

FICEP's Kronos CNC plate processor employs a movable bridge that traverses over stock plates to generate oxy-fuel/plasma cutting, drilling and scribing.





Recently we had the opportunity to learn more about the firm Ebner Stahlbau Gmbh located in Vorau, Austria.

Their history is representative of small to medium size fabricators around the world and how they have endorsed productivity solutions to compete in larger projects and grow their business.

Ebner Stahlbau Gmbh was founded in the 60's by Erich Ebner senior as a one-man weld shop engaging in repairs. By the time his son, Erich Ebner junior joined the firm it had started to grow and evolve to address some small structural steel projects. This enabled expansions of the office and plant in the 80's and 90's.

Currently the 3rd generation of this family-owned business, Mr. Matthias Ebner, is actively engaged in the progressive changes and adoption of labor-saving technology. They have now grown to 35 employees of which 20% are engaged in office support task.

Matthias reports that as they have added automation to the firm the number of support employees has increased slightly but their tonnage has substantially grown.

As Ebner Stahlbau Gmbh utilizes Tekla for detailing they are able to not only automate this aspect of their task but they have eliminated the need to manually

program their CNC systems as these are automatically generated and downloaded from the Tekla system.



Presently they organize their production planning and perform the plate and section nesting with software provided by Steel Projects, a FICEP company.

Currently 90% of their production is structural steel as they produce 2,500 tons per year.

Mr. Matthias Ebner was willing to explain more about some of the challenges that they face and the recent developments of the firm.



We now use the FICEP Excalibur 12 to process all our beams, angles, channels, tubes, flats and sometimes even plates. This drilling line has revolutionized our operation as it does not take much space compared to the prior manual process. Before we had to spread out the steel on the tables, get out the drawings, orient it to the member, manually layout one surface at a time, rotate the section to the next

Mr. Matthias Ebner, General Manager of Ebner Stahlbau GmbH

What has been your experience in hiring the additional staff that you required to grow your business?

“One of the greatest challenges in attaining this growth has been the availability of skilled employees which has accelerated our focus to automate where possible. Ebner Stahlbau GmbH, like most firms today, found the need to train our own staff. This does however have the advantage that these employees learn our system and they are not reverting back to bad habits that are not in line with our objectives.”

Generating an annual tonnage of 2,500 per year is substantial considering the size limitation of your facility. How have you accomplished this productivity?

“We, like many small fabricators, used to perform all the layout manually and then used magnetic based drills to generate the required holes.”

surface for layout etc. Once we had completed the layout process we then had to drill all the holes manually. Now we load the section on to the Excalibur table and when the drilling is done we unload a finished part. We no longer we have all the extra material handling steps and movement through the shop. Since we essentially drive all of our production through the Excalibur 12 with the exception of the plates, that are processed on the FICEP Kronos, we keep it busy on average of 10 hours per day.”





When it comes to the fabrication of your plate detail you are now using the FICEP Kronos. How was this accomplished previously?

“Before we installed the FICEP Kronos we outsourced the cutting of the plates then manually generated the layout and drilling. Now we organize the plate production and material nesting with Steel Projects software. We load on the Kronos table stock plates and then unload finished parts that are plasma cut to size, marked and all the required holes are drilled.”



The Kronos even has an automatic tool changer which eliminates the operator's need to manual change tools during the automated process.

We use the drill feature to not only generate the required bolt holes but also for the generation of starter holes for the plasma torch.

This way we always start from an edge rather than use the plasma torch to plunge through the plate thickness.

Using starter holes drastically increases the life of our plasma torch consumables.

Another added advantage of the plate nesting by our Steel Projects software is that it maximizes the stock material utilization.”

How have your operators adapted to the two FICEP lines?

“They have become very comfortable and productive with both systems.

This confidence, has been generated because of the excellent customer support they receive from FICEP when necessary.”

How have the Excalibur 12 and Kronos impacted your fabrication accuracy and required man hours for fabrication?

“The accuracy of the holes is exceptional and exactly as depicted in the Tekla system.

This has enabled us to also drastically reduce our erection cost as we are not faced with the need occasionally to make modifications in the field.

The productivity of these two machines has totally transformed our company.

We have substantially reduced our fabrication cost and have doubled production to 2,500 tons per year with the installation of these two FICEP systems.”

“The productivity of the Excalibur and Kronos machines has totally transformed our company.”

Small to medium size fabricators around the world now have cost effective solutions that require a very small footprint, are extremely reliable and are easily implemented into existing plant space to enable these firms to substantially grow their sales and profitability.

With this positive change, no longer are larger fabricators able to exclude progressive smaller firms like Ebner Stahlbau GmbH from competing on mutually targeted projects.

