REPORT

2015 PREVIEW
COMPLETE TUBE MILL TM8 FOR VIETNAM
FABTECH & METAL EXPO 2014

JANUARY 2015
The year 2014 has closed in a positive way for Adda Fer Meccanica, which has increased its global presence by confirming itself as a solid and reliable partner, not only for the study and the realization of individual plants, but also as a partner able to provide turnkey solutions, complete and integrated, for the production of quality steel pipes.

So, the new year can’t only start with renewed confidence and optimism about the new challenges which are waiting for the company, thanks to the awareness to count on the following important acquired projects:

- No. 7 Cutting Line DB10 double blade shear for one of the largest tube manufacturers in the world, that will be installed in Texas (USA) in the first months of the year;
- A packaging machine for tubes up to 5 inches, in USA;
- A TM4 Tube Mill for the production of tubes up to 4 inches, in Europe;
- A TM3 Tube Mill for the production of tubes up to 3 inches with packaging system, in Africa;
- A Tube Finishing Line and an Automatic Packaging System for pipes up to 8 inches, in Vietnam.

On our social networks, on our web-site www.addafer.it and on the main magazines of our branch, we will give large space, with photo features, to the above described projects. Stay tuned!
Recently Adda Fer Meccanica has supplied a complete line for the production of electro-welded pipes up to 219,1 mm. (8 inches) diameter to an important Vietnamese pipes manufacturer.

The new tube mill is able to produce round tubes from 76,0 up to 219,1 mm. diameter, square tubes from 70 x 70 up to 175 x 175 mm. and rectangular tubes from 100 x 40 up to 200 x 150 mm. Range thickness is from 3,0 up to 8,0 mm. while the length range is from 6,0 up to 12,00 meters. Maximum working speed is about 60 mt/min.

In mid-2015, the plant will be further implemented with a tube finishing equipment and an automatic packaging line.

Here below please find the details of the installed equipment with some pictures.
LINE COMPOSITION:

- Charge Coil Car
- Uncoiler
- Opening Group
- Full Automatic Strip Joint Bench
- Horizontal Spiral Accumulator
- Complete profile unit composed by:
  - 1° Beak Down
  - 2° Break Down
  - Linear Cage Forming
  - 3 Finnpass Stands with Quick-Change
  - Edge guiding
  - Internal Scarfing System
  - 4 Rolls Welding head
  - Zinc Spray System Predisposition
  - Double Scarfing Unit
  - Normalization Rollway
  - Cooling Unit
  - 4 Sizing Stands with Quick-Change
  - 4 Turk Heads Stands
- Double Blade Shear Flying cutoff DB.10
- Run Outlet Table
- Hydraulic equipment
- Electrical equipment
- H.F. Welder 600 kW installed power
- Tooling

LINE DETAILS:

<table>
<thead>
<tr>
<th>Dimensions (indicative)</th>
<th>Length</th>
<th>Width</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>150 m.</td>
<td>14 m.</td>
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</table>

<table>
<thead>
<tr>
<th>Pass-line height (indicative)</th>
<th>50+1.000 mm.</th>
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</thead>
</table>

| Max working speed            | 060 m/min.   |
PRODUCTION CAPACITY

Round tubes
- Min diameter: 76.0 mm.
- Max diameter: 219.1 mm.

Square tubes
- Min: 70 x 70 mm.
- Max: 175 x 175 mm.

Rectangular tubes
- Min: 100 x 40 mm.
- Max: 200 x 150 mm.

Tube thickness
- Min: 2.5 mm.
- Max: 8.0 mm.

Tubes length
- Min: 6.0 m.
- Max: 12.0 m.
### MATERIAL DETAILS:

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material</td>
<td>Low Carbon Steel</td>
</tr>
<tr>
<td>Din</td>
<td>ST12; ST13; ST14; ST37,2; ST44,3; ST52,3.</td>
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<tr>
<td>En 100027-1</td>
<td>E235; E275; E355; S235 JR; S275 JR; S355 JR; S420 JR.</td>
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<tr>
<td>ASTM</td>
<td>A500 Grade A,B</td>
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<td>AS 1163</td>
<td>C350</td>
</tr>
<tr>
<td>BSA1</td>
<td>BS 1387</td>
</tr>
<tr>
<td>Yield Strength</td>
<td>Max 475 N/mm²</td>
</tr>
<tr>
<td>Ultimate Tensile Strength</td>
<td>Max 500 N/mm²</td>
</tr>
<tr>
<td>Elongation</td>
<td>Min 12%</td>
</tr>
<tr>
<td></td>
<td>Max 28%</td>
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<tr>
<td>Width</td>
<td>Min 270 mm.</td>
</tr>
<tr>
<td></td>
<td>Max 700 mm.</td>
</tr>
<tr>
<td>Thickness</td>
<td>Min 2,5 mm.</td>
</tr>
<tr>
<td></td>
<td>Max 8,0 mm.</td>
</tr>
<tr>
<td>Coil external diameter</td>
<td>Max 2.100 mm.</td>
</tr>
<tr>
<td>Coil internal diameter</td>
<td>Min 508 mm.</td>
</tr>
<tr>
<td>Coil Weight</td>
<td>Max 10,000 Kg.</td>
</tr>
</tbody>
</table>
The line is completed with the double blade flying cutoff DB10.

This machine is equipped with a controlled movement along the orthogonal axis for the range of diameters up to 219.1 mm. and their derivatives.

It is a result of a basic project evolution, with formerly very high basic performances.

Its last configuration gives the following advantages:

- Extreme flexibility: the wide range of sizes and sections can be constantly cut with the best parameters requested by the blades (HSS or TCT blades);
- High-quality precision cut and long blades service life;
- Unique cutting line in the world that can follow unequal pathways.

A double vice group, both at inlet and outlet side, arranges the locking of the tube during the cut step in order to avoid dangerous vibrations.

The small distance between clamps and blades (only 100 mm.) also helps to increase the use of the same set up to 7,000 cuts.
The software is developed on 2 levels:
- the first, PLC, made by tool “SIMOTION Scout” while the second;
- the supervisor’s touch screen, made with the new development environment Siemens Simatic TIA Wincc Comfort.

The operator’s interface graphic pages will be designed to allow operators a rapid takeover of the machine after the start up.

Interactive diagnostics allow the operator to immediately identify the cause of any operational stop or anomaly of the system.

The alarm/failure signals follow its logical sequence, avoiding irregular indications and the operator will be timely in helping to solve functional problems, the alarms will also be saved in data base for diagnostics and maintenance.

Pages with trend graphs of the main parameters measured by the machine will be instantly available and data based.
Adda Fer Meccanica thanks the over 500 visitors, friends and customers of Fabtech in USA and Metal Expo in Russia for the friendship, trust and loyalty showed during these exhibitions.

Moreover has established the success of Adda Fer that has been growing thanks to a win-to-win strategy implemented in the last decade that bases its foundations on quality, technological innovation and customer service.

All of this has allowed the organisation to become the ideal and trustable partner for the design, manufacture and installation of complete tube mills: from slitting lines, tube-mill to produce API tubes up to 16”, automatic-packing systems, hydro-test and end-facing.

Have a look at some pictures of our booth in Atlanta and Moscow.