REPORT

ADDA FER @ TUBE DUSSELDORF 2014

READY FOR RUSSIA

- Tube Mill TM14 A.P.I.
- Orbital Flying Cut Off FB16

METAL EXPO 2014
Adda Fer Meccanica thanks the over 600 visitors, friends and customers of Tube Dusseldorf 2014 for the friendship, trust and loyalty showed during the exhibition.

Tube Dusseldorf 2014 has established the success of Adda Fer that has been growing thanks to a vin-to-vin 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.
It is now four editions that Adda Fer Meccanica brings innovative products showing to the tube industry its own technological development and competitive edges and in this year Adda Fer aimed to bring the attention to the latest evolution of its Flying Cut Off that have 2 independent blades programmable for two different tube’s profiles for tubes up to 10”.

Four Blade Orbital Flying Cut Off for API tubes up to 16” and 20 mm. of thickness.

Full Automatic strip joint bench with 5° diagonal cut.

Welding Head with 4 rolls for tubes ranging from 3” to 8” with quick change system and in addition Linear Cage Forming motorised.

Quick Change solution from break-down, fin-pass and calibration in order to reduce setting changes.

Adda Fer Meccanica strongly believes that this great positive success trend showed in the last few years will follow as it has allowed the organisation to gain some very important projects at the world-wide scale, like: Russia, Kingdom of Saudi Arabia, Vietnam, United States of America and Mexico.

Adda Fer Meccanica will attend Metal Expo Russia 2014 and it will be happy to guess you again at its stand on the 11th of November 2014 in Moscow.
Adda Fer Meccanica is ready to install a new plant for the production of A.P.I. electro welded pipe up to 355,6 mm. diameter for a known Russian pipes manufacturer.

As with all plants that Adda Fer produces, the study of the project was performed according to specific customer requirements and tailored in all its parts.

The new mill is able to produce round tubes from 159,0 up to 355,6 mm. diameter, square tubes from 130 x 130 up to 260 x 260 mm. and rectangular tubes from 160 x 100 up to 250 x 280 mm. Range thickness is from 4,0 up to 12,7 mm. while the length range is from 6,0 up to 13,00 meters.

Here below please find the details of the installed equipment with some pictures.
Tube Mill **TM14 A.P.I.**

**LINE COMPOSITION:**
- Coil loading car
- Uncoiler with opposed cones
- Coil opening group
- Automatic strip joint bench
- Horizontal spiral accumulator
- Complete profile unit composed by:
  - 2 Beak down stands
  - Cage forming
  - 3 Finn-pass stands
  - Edge guiding stand
  - Impeder support
  - Welding head – 4 rolls
  - 2 External scarifying units
  - Normalization rollway
  - Water cooling stand
  - 6 Sizing/Squaring stands with 4 rolls
  - 2 Turk heads
- Orbital flying cut-off 4 blades
- Discharging rollway
- Hydraulic equipment
- Electrical equipment
- H.F. Welder 850 kW installed power
- Tooling

**LINE DETAILS:**

<table>
<thead>
<tr>
<th>Dimension (indicated)</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>134 m</td>
</tr>
<tr>
<td>Width</td>
<td>16 m</td>
</tr>
<tr>
<td>Pass-line height (indicated)</td>
<td>960 mm</td>
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</tbody>
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Max working speed: 35 m/min. (ø 6” x 0,8 mm.)
Tube Mill TM14 A.P.I.

PRODUCTION CAPACITY

<table>
<thead>
<tr>
<th>Type</th>
<th>Min Diameter</th>
<th>Max Diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Round tubes</td>
<td>159,0 mm.</td>
<td>355,6 mm.</td>
</tr>
<tr>
<td>Square tubes</td>
<td>130 x 130 mm.</td>
<td>260 x 260 mm.</td>
</tr>
<tr>
<td>Rectangular tubes</td>
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</tr>
<tr>
<td>Tube thickness</td>
<td>4,0 mm.</td>
<td>12,7 mm.</td>
</tr>
<tr>
<td>Tubes length</td>
<td>6,0 m.</td>
<td>13,0 m.</td>
</tr>
</tbody>
</table>
**Tube Mill** **TM14 A.P.I.**

**MATERIAL DETAILS:**

- **Material:** Hot Rolled Steel
  - S 235 JR
  - S 275 JR
  - S 355 JR

- **Strip Edge Condition:** Strip and milled edge

- **Yield Strength:**
  - Max: 355 N/mm²

- **Ultimate Tensile Strength:**
  - Max: 500 N/mm²

- **Elongation:**
  - Min: 12%
  - Max: 26%

- **Width:**
  - Min: 500 mm.
  - Max: 1.150 mm.

- **Thickness:**
  - Min: 4.0 mm.
  - Max: 12.7 mm.

- **Coil externa diameter:**
  - Max: 2.000 mm.

- **Coil internal diameter:**
  - Min: 600 mm.
  - Max: 700 mm.

- **Coil Weight:**
  - Max: 15.000 Kg.
The orbital flying cutoff FB16 is the result of an innovative project that have brought us the solution of the head with 4 blades in order to ensure cutting times adequate to the line speed on large diameters (over 219,0 mm.) and the possibility to work with 2 blades on the smaller sizes.

The main advantages of this system are:
• use of reduced diameter TCT blades with a high rigidity;
• very robust construction for a precise and vibration-free cut;
• possibility to continue the production even in case of blade breakage, using two coaxial blades;
• great simplification, reduction and unification of the components which allows to minimize the needs for technical assistance and stock of spare parts;
• system of universal clamps used to cover all the profiles to be cutted and their correspondent dimensions, with minimal setup time and number of clamps.

The unit is composed by the base, realised by two rough-constructed normalized welded rectangular beams with strong crossbeams supporting linear sliding guides in the upper side to support the cut carriage. A toothed rack seated on the side of the base allows the carriage running back and forth by means of a brushless motor, a gear box and a pinion.

At the end of the base high-energy shock absorbers prevent damages in case of uncontrolled running out of the carriage.

The carriage too is composed by a normalized welded and completely machined structure, mounted on heavy-duty and maintenance free roll bearings. It supports a fixed bevel frame on which is bolted a sizable axial ball bearing with external toothed ring supporting a powered turning table. On the turning table are mounted four equidistant cutting heads, separately equipped with a vectorial electric motor and a gear box driving the saw blade.

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The carriage supports also entrance and exit universal vices, each composed by two couples of opposed clamps hydraulically actuated.

The drawing of the machine ensures an efficient shaving evacuation and optimal accessibility for maintenance and fitting the machine.

The performance of a flying cut off depends upon a lot of elements, for example the quality of the sheet material and the welding type, of course the type and the characteristics of the saw blades.

We are carrying out a profitable partnership with the saw blade constructor and we are confident that with the cooperation of the customer our machine can perform the best in this field.

Indicatively, with this approach our flying cut off machine will be able to ensure a constant cutting speed of 15 m/min processing a 16” diameter – 16 mm thick pipe or an equivalent square size, which are at the top of the production range. Highest speed can obviously be performed cutting lower sizes, for example 25 m/min for a 12” diameter – 10 mm thick pipe or 35 m/min for an 8” diameter – 8 mm thick pipe.

Also the lifetime of the saw blades is influenced by several factors: the target of our machine, of course using the saw blades that we suggest, is 7,000 cuts per blade.

Our engineers are available to give assistance in order to define the real performance of our machine in cooperation with the customer.
METAL EXPO 2014

Adda Fer Meccanica will exhibit at next edition of the russian fair from 11th to 14th November 2014 in Moscow.

We’ll be present at hall 75, where Adda Fer holders and their staff will be at your disposal for any further information you’d need.

Stay in touch and follow our social network for every news about the fair!

Join us!
ADDA FER MECCANICA S.r.l.

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