ArcelorMittal in Bremen, Germany has successfully installed and commissioned Millmate Roll Force Systems

ArchelorMittal Bremen’s temper mill is running with ABB’s Millmate Roll Force Systems

In the 1980’s Bremen Steelworks and ABB’s Pressductor technology load cells started a successful cooperation leading to a good development with high quality results. As a matter of curiosity the two partners started its operations in the same year more than half a century ago, in 1954.

Since a year back ArcelorMittal Bremen is conducting an optimization project in the temper mill. The main reasons for optimizing the temper mill are to control the properties of the material, increasing productivity and improving mill performance.

In this optimization process the ABB load cells have an important part being a contributor of good roll force measurement results.

What has been achieved?

We ask Mr. Mario Mahnke, Manager Electrical Maintenance, Flat Carbon, Cold Rolling Mill, about the Millmate Roll Force System installation:

“The latest set of Millmate Roll Force load cells were installed in 2008 and so far we have not had any problems whatsoever. The Profibus connection works very well in our optimization project and we feel very secure with the robust and reliable load cells.”
We are also experiencing a continuous reduction of scrap and we have better control of the strip head and tail ends of the coils.

The ABB load cells are connected to the control system and working very well in the elongation and gap control.

Mr. Andreas Meyer, Electrical Engineer, Flat Carbon, Cold Rolling Mill, expresses his opinion about the Millmate Roll Force System installation:

“The latest set of Millmate Roll Force load cells were installed in 2008 and so far we have not had any problems whatsoever. The Profibus connection works very well in our optimization project and we feel very secure with the robust and reliable load cells.

Our customers are happy with our deliveries of high and continuous strip quality and especially the improvements of the bending and deep drawing qualities.”

Supplied equipment

ABB Force Measurement has supplied the following equipment to ArcelorMittal in Bremen, Germany:

- **Temper mill**
  - One Millmate Roll Force System
  - Two rectangular load cells, PFVL 141V-20 MN

- **Hot strip mill**
  - 11 Millmate Roll Force Systems
  - 22 circular load cells, PFVL 141C-20 MN

- **Tandem cold mill and pickling line**
  - 6 Millmate Strip Tension load cells, PFBL 141 - 63 kN
  - 6 PillowBlock strip tension load cells, PFTL 201

### 2-hi Temper mill

<table>
<thead>
<tr>
<th>Supplier</th>
<th>DEMAG Blaw-Knox</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rolled material</td>
<td>Flat carbon steel</td>
</tr>
<tr>
<td>Strip qualities</td>
<td>Critical exposed automotive strip</td>
</tr>
<tr>
<td>Tonnage</td>
<td>375 000 tons/year</td>
</tr>
<tr>
<td>Coi weight</td>
<td>45 tons</td>
</tr>
<tr>
<td>Strip thickness min./max.</td>
<td>0.35 – 4.00 mm</td>
</tr>
<tr>
<td>Strip width min./max.</td>
<td>600 - 2080 mm</td>
</tr>
<tr>
<td>Work roll diameter</td>
<td>540 – 580 mm</td>
</tr>
<tr>
<td>Backup roll diameter</td>
<td>1320 – 1420 mm</td>
</tr>
<tr>
<td>Maximum roll force</td>
<td>1500 tons</td>
</tr>
<tr>
<td>Motor, drive power</td>
<td>2 x 700 kW</td>
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<tr>
<td>Max. rolling speed</td>
<td>1200 m/min</td>
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</tbody>
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Contact us

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