Universal tandem mills are used in rolling installations for rails and sections. The tolerance precision and surface quality of the final bar are greatly affected by the wear condition of the finishing rolls. The duration (tons) of a rolling campaign can only be extended by reducing the wear of the finishing rolls.

**FIELD OF APPLICATION**
Rolling mills for long products

**3+1 EVO UNIVERSAL TANDEM MILL**
**INCREASED PRODUCTION WITH LONGER ROLLING CAMPAIGNS**

**MAIN BENEFITS**
- fewer downtimes
- longer rolling campaigns with the same dimensional tolerance and finishing quality
- larger production for a given time availability
- OPEX reduction of roll sets, associated change parts, rollshop equipment
- CAPEX fast payback
- compact arrangement of the mill

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MAIN FEATURES
The 3+1 EVO is a reversing tandem mill for universal rolling of rails and sections. The first three stands are arranged in universal-edging-universal configuration and operate during the reversing pass sequence. The fourth universal-finishing stand is instead kept open or off-line, and used only once for each bar at the end of the sequence. Available with housing- and housingless-type stands, the 3+1 EVO facilitates a reduction of operating costs and a fast CAPEX payback.

FEWER DOWNTIMES, LONGER CAMPAIGNS
By using the the fourth stand only for a low-reduction finishing pass, the roll wear is reduced and its lifetime significantly extended before redressing is needed. Therefore, rolling campaigns may be longer. Considerable savings of OPEX in terms of roll sets, associated change parts and rollshop equipment are possible.

TECHNICAL DATA (E.G. NOMINAL 700 KTPY)

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Increase of production</td>
<td>5%</td>
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<tr>
<td>Saving of OPEX</td>
<td>10-12%</td>
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<tr>
<td>Payback time</td>
<td>&lt; 1 year</td>
</tr>
</tbody>
</table>

REFERENCES
• FEWER DOWNTIMES, LONGER CAMPAIGNS