CELINE* - LP
Induction Heating Solution
* Compact Electromagnetic Induction Equipement

The safer value for high-power induction heating system of Long Product

HIGH FLUX:
- Power density x6 conventional inductors
- Electrical efficiency: 20 to 30% above conventional inductors
- One single inductor diameter for multiple product outer sections

APPLICATIONS
- Reheated billets for pressing, stamping, forging, or hot rolling
- Reheated pipes or rails for continuous heat treatment
Celes CELINE LP represents the current state-of-the-art of induction for in-line heating for long products the development of this high-flux induction heating solution.

The technology was developed based on Fives’ experience in producing high-intensity magnetic fields generated by multilayer coiling.

Advantages of the Fives solution

The low loss conductor winding technique patented by Fives has enabled the development of this Hi-flux induction heating solution.

- Power density: up to six times that of conventional inductors
- Electrical efficiency: 85% at Curie point and beyond, as opposed to 50 to 60%, with conventional inductors, thus representing considerable saving in production cost
- High power per Induction length:
  - 3 MW/m for bars
  - 6 MW/m for tubes
- Sizable capital saving: one single inductor for multiple product outer sections, thus reducing the investment, maintenance and down time
- Reduced maintenance: typically, once a year, an inspection is sufficient, mainly due to the absence of refractory and an adequate thermal and mechanical protection.

Celes CELINE LP inductors are powered by Celes IS high power generators, enabling a perfect heating control over the temperature range.

Applications

Reheating Long products:
- Round or square billets
- Rails
- Tubes

Compatible materials:
- STEEL: all grades
- NON FERROUS: Copper, aluminium, silver

Technical characteristics

<table>
<thead>
<tr>
<th>Power generator type</th>
<th>IGBT Transistor</th>
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<tbody>
<tr>
<td>Output power</td>
<td>Up to 5 MW</td>
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<tr>
<td>Electrical supply</td>
<td>12 pulses 690 V</td>
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<table>
<thead>
<tr>
<th>Standard dimension</th>
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<tbody>
<tr>
<td>Overall length</td>
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<tr>
<td>Mechanical window</td>
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