Hitachi Cast Roll Manufacturing Process

Hitachi’s highly efficient and wear resistant rolls are manufactured using various casting methods. In conventional casting, rolls are formed into a particular shape by pouring molten metal into a mold and allowing it to solidify. Hitachi uses static (conventional) casting, spin casting, continuous casting for cladding (CCC), and hot isostatic pressing (HIP). The casting method is determined by the use of the roll and the amount of alloys present in the metal. A high alloy content increases the rolling performance.

- **Static Cast:** Used for mono structure rolls: low cost manufacturing method.
- **Spin Cast:** Used for mono and complex structure rolls; higher alloy than static cast, lower cost than CCC and HIP.
- **CCC:** Used for complex structure and steel core rolls; higher alloy than spin cast, lower cost than HIP.
- **HIP:** Used for mono and complex structure rolls; highest alloy.

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<thead>
<tr>
<th>Static Cast</th>
<th>Spin Cast</th>
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<tr>
<td><strong>CCC</strong></td>
<td><strong>HIP</strong></td>
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ISO 9001, ISO 14000 Certified
Since 1915, Hitachi Metals, Ltd. has been a leading roll manufacturer. Through constant study and research, Hitachi has kept abreast of the demands and advances of the industry. Today, Hitachi is a full-line roll manufacturer, second to none in the world. With its innovative roll manufacturing techniques, Hitachi supplies all types of mill rolls to industries in all parts of the world, meeting the special demands of each industry.

This information does not constitute a warranty or guarantee.