Forged Steel Rolls & Cast Steel Mill Rolls
Mill Rolls for Steel, Paper and Chemical Mills
Rolling Mill Rolls and Equipment Components | Pg. 3
--- | ---
List of Steel Rolls and Precision Machined Equipment Parts Supplied | Pg. 4
  • Cold Rolling Mill Rolls
  • Hot Rolling Mill Rolls
  • Thick Plate Line
  • Continuous Casting Line
  • Precision Machined Parts, Roll Assemblies
Rolling Mill Roll Manufacturing Capabilities | Pg. 5
  • Steel Roll Diameter
  • Steel Roll Length
  • Heat Treating and Coating Options
  • Materials
Rolling Mill Steel Roll Patented Technology & Certification | Pg. 6
Manufacturing Equipment List | Pg. 7
Major Clients – Steel Mills | Pg. 8
Major Clients – Paper and Chemical Mills | Pg. 9

As a supplier of precision machined forged and cast steel rolls for steel mills, and steel manufacturing equipment manufacturers, LPR has been serving leading cold rolling mills, hot rolling mills and steel manufacturing equipment makers globally. We supply machined finished forged rolls and cast steel rolls and mill equipment components to international steel mills, paper mills and chemical mills. Our ability to design and manufacture forged and cast steel mill rolls, suggest manufacturing solutions to clients, and in-house machining are what gives us the advantage in the industry to maintain long term relationship with one of the most competitive steel producing mills globally.

Long Term Supplier to Leading Steel Mill Makers & Paper Mill

Steel Rolls Supplied – Forged, Casted and Machined

Steel Rolls Supplied

Cold Rolling Mills
• Conductor Roll
• Sink Roll
• Bridle Rolls and Units
• Steering Roll
• Table Roll
• Guide Roll
• Tension Roll
• Tension Meter Roll
• Wringer Roll
• Looper Roll
• Top Roll
• Cooling Roll
• Feed Roll
• Hearth Roll

Continuous Casting Line
• Segment Roll
• Bender Roll
• Guide Roll
• Hold Down Roll
• Hot Rolling Unit Roll
• Hot Leveler Cassette Assembly
• Turn Table Roll
• Hot Leveler Roll
• Tension Levelling Roll
• Deflector Roll

Precision Machined Parts
• Bearing Sub-Assembly
• Hot Leveler Cassette Assembly
• Roller Table
• Recoiler & Uncoiler
• Bridle Roll Assembly
• Steering Roll Assembly
• Deflector Roll Assembly
• DS Pinch Roll Assembly
• SS Pinch Roll Assembly
• Feed Roll Assembly
• Hollow Roll Assembly
• Conveyor Roll Assembly
• Miter Gear Assembly
• DSTS Exit Pinch Roll

Hot Rolling Mills
• Table Roll
• Unit Roll
• Pinch Rolls and Units
• Counter Shaft

Thick Plate Line
• Leveller Roll
• Back-up Roll
• Hollow Table Roll
• Solid Table Roll

Steel Roll Manufacturing Capabilities

Forged & Cast Steel Manufacturing Capabilities

Roll Diameter
- Up to 2,500 mm / 98 inches
- Galvanizing Coating Line Cooling Mill Stand Roller: 1,500 mm / 59 inches
- Cold Strip Mill Leveling Roller: 30mm / 1.2 inches

Roll Length
- Up to 15,000 mm / 590 inches
- 9,800 mm / 386 inches (Hot Strip Mill Drive Shaft)
- Minimum Length: Based on Order

Roll Heat Treating & Coating Options
- Hard Chrome Plating
- Flame Hardening
- Induction Hardening
- Nitriding
- Ceramic
- Tungsten Carbide
- Copper
- Plasma Spray Coating
- NBR (Nitrile Rubber)
- Polyurethane (PU)
- Hypalon
- Roller Lagging
- Non-Tex (Non-woven Mill Rolls)
- Nylon, MC Nylon
- Neoprene Brush Roller
- Wire-wound Metering Rolls (Meyer Rod)

Carbon Steel
- S20C, S35C, S45C, SS400,
- S235JR, S235J2, S355J2G3, etc

Alloy Steel
- SCM440, 42CrMo4, SUJ2 (52100),
- SNCM220 (8620), SNCM447, SKD61 (H13),
- SCM822, 21CrMoV5-11, KRC14 (Special Alloy),
- 3-5% High Chrome (3-5 Cr Alloy Forged Steel),
- SUS304, SUS630, SUS420J2, SUS316L, SWQ1R

Casting
- SCH13, SCH21, SCH15, KHR 35C (Kubota Heat Resistant Steel), SCMnCr3, GS20Mn, G240, SC450, SC430, FCD300~450, KCR 48N (Kubota Specification)
Steel Roll Patented Technology & Certification

**Cylindrical roll patent:**
Cylindrical rolls are manufactured by bending and rounding a flat plate, and welding the ends that meet to make a hollow roll. Our patented technology ensures that consistent hardness of the roll is maintained from the welded surface to the rest of the roll. Our hollow roll diameter capability: ø500-1500mm

**Noise Prevention Table Roll**
Table rolls that lowers noise, by using non-woven fabric to absorb the noise and provide cushioning effect. This extends the life of the roll, and improves working condition for operators. No heat deformation or weight deformation.
## Manufacturing Equipment List

<table>
<thead>
<tr>
<th>Manufacturing Equipment</th>
<th>Size</th>
<th>Maker</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grinding Machine</td>
<td>1300 x 7000 L</td>
<td>YOMIS</td>
</tr>
<tr>
<td>CNC Lathe Machine</td>
<td>2000 x 5000L</td>
<td>HANKUK</td>
</tr>
<tr>
<td></td>
<td>1800 x 7500 L</td>
<td>IKEGAI</td>
</tr>
<tr>
<td></td>
<td>950 X 7000 L</td>
<td>HANKUK</td>
</tr>
<tr>
<td></td>
<td>2600 X 10000 L</td>
<td>HEYLIGENSTAEDT</td>
</tr>
<tr>
<td></td>
<td>1600 X 14000 L</td>
<td>WALDRICH SIEGEN</td>
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<tr>
<td>Lathe Machine</td>
<td>2500 x 12,000 L</td>
<td>SCHIESS</td>
</tr>
<tr>
<td></td>
<td>1600 x 14,000 L</td>
<td>ANYANG</td>
</tr>
<tr>
<td></td>
<td>1600 x 7000 L</td>
<td>IKEGAI</td>
</tr>
<tr>
<td></td>
<td>1250 x 8000 L</td>
<td>Anyang</td>
</tr>
<tr>
<td></td>
<td>1000 x 8000 L</td>
<td>LSPO</td>
</tr>
<tr>
<td></td>
<td>900 x 6000 L</td>
<td>DAINICHI</td>
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<tr>
<td></td>
<td>720 x 3000 L</td>
<td>HANKUK</td>
</tr>
<tr>
<td>Floor Boring Machine</td>
<td>160 T</td>
<td>LSPO</td>
</tr>
<tr>
<td>NC P/M</td>
<td>2000 x 6000 L</td>
<td>WAGNER</td>
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<tr>
<td>MCT</td>
<td>1000 x 1000 L</td>
<td>TONGIL</td>
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<tr>
<td>Deep Hole Machine</td>
<td>150 x 4000 L</td>
<td>SHIBAURA</td>
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<tr>
<td>CNC Gun Drill</td>
<td>64 X 1700 L</td>
<td>SHINIL</td>
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<tr>
<td>Radial Drilling Machine</td>
<td>NBR- 2600</td>
<td>NAMBUK</td>
</tr>
<tr>
<td>Balancing Machine</td>
<td>2000 X 7000 L</td>
<td>IRD</td>
</tr>
</tbody>
</table>

Clients: Steel Mills
Steel Rolls & Assemblies Equipment

Major Rolls Supplied to POSCO

Gwangyang Works
- No.1 PL/TCM Roll
- No.1 Cold Rolling Mill PL-TCM Full Line
- No.2 Cold Rolling Mill TCM Full Line for PCM
- Hot Strip Mill TWB 600 Ton Blanking Line
- Hot Strip Mill Roller Table
- VST STS SPL Bridle & Steering Unit
- TWB 600ton Blanking Line Entry & Exit Equipment

Posco Vietnam
- CSVC Special Bridle Roll (Over HS 65 Hardness)
- STS APF Roll Unit

Posco Turkey
- TST Bridle Roll and Steering Roll Unit (540 Ton)

Posco Mexico
- No.2 CGL Bridle and Steering Roll Unit (680 Ton)

Major Rolls Supplied to Hyundai Steel

Pohang Works
- Cast Iron Work Rolls Contract (6,000tons per year)
- H-beam Line Table Roll Assembly
- H-Beam Leveler Roll Assembly

Dangjin Works
- Post Bender Roll Assembly
- Feed Roll Assembly
- Pinch Roll Assembly
- Leveler roll Assembly

Major Rolls Supplied to Dongkuk Steel | Union Steel

- Plate Mill Shop Table Roller (Hollow Type)
- PM-TCM Complete Line

- Solid Roller for Thick Plate Roller Table
- Plate Mill Pinch Roll Assembly (DS, SS, DSTS Entry & Exit)

Major Rolls Supplied to JFE Steel Corporation

Chiba Work
- Coiling Bed Equipment Entry & Exit
- Roller Table
- Hearth Roll Assembly
- Back Up Roll Assembly Segment Roll Assembly

Shinco Work
- Pinch Roll Assembly at Shinco Works
- Leveler Roll Assembly at Chiba Works

# Clients: Steel Mills
## Steel Rolls for Rolling Mills

### Rolls for Cold Rolling Mill

<table>
<thead>
<tr>
<th>Product</th>
<th>Specifications</th>
<th>Quantity</th>
<th>Client</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bridle Steering Deflector</td>
<td>ø800 x 1900</td>
<td>350 Ton</td>
<td>POSCO VST</td>
</tr>
<tr>
<td>Back Up Roll</td>
<td>ø800 x 1900</td>
<td>20</td>
<td>NSSMC</td>
</tr>
<tr>
<td>Bridle Steering Deflector</td>
<td>ø1200 x 2100</td>
<td>400 Ton</td>
<td>POSCO TST</td>
</tr>
<tr>
<td>Bridle Steering Deflector</td>
<td>ø1200 x 2100</td>
<td>650 Ton</td>
<td>POSCO Mexico</td>
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<tr>
<td>Bridle Roller</td>
<td>ø1200 x 2100</td>
<td>20</td>
<td>POSCO TST</td>
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<tr>
<td>Bridle Roller</td>
<td>ø1200 x 2000</td>
<td>16</td>
<td>POSCO Mahasatra</td>
</tr>
<tr>
<td>Sink Roller</td>
<td>ø800 x 2100</td>
<td>4</td>
<td>POSCO Gwangyang</td>
</tr>
<tr>
<td>Hearth Roll</td>
<td>ø1600 x 2250</td>
<td>25</td>
<td>HYSOCO Suncheon</td>
</tr>
<tr>
<td>Deflector Pinch Roll</td>
<td>ø800 x 1950</td>
<td>5</td>
<td>JFE Steel</td>
</tr>
<tr>
<td>Bridle Roller</td>
<td>ø1000 x 2100</td>
<td>8</td>
<td>JSW Steel (Jindal)</td>
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</table>

### Rolls for Thick Plate Hot Rolling Mill

<table>
<thead>
<tr>
<th>Product</th>
<th>Specifications</th>
<th>Quantity</th>
<th>Client</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table Roll</td>
<td>ø400 x 5817</td>
<td>17</td>
<td>HYUNDAI Steel</td>
</tr>
<tr>
<td>Back Up Roll</td>
<td>ø280 x 972</td>
<td>54</td>
<td>JFE Steel</td>
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<tr>
<td>Unit Roll</td>
<td>ø400 x 2850</td>
<td>21</td>
<td>HYUNDAI Steel</td>
</tr>
<tr>
<td>Leveler Roll</td>
<td>ø285 x 5730</td>
<td>5</td>
<td>HYUNDAI Steel</td>
</tr>
<tr>
<td>Feeder Roll</td>
<td>ø400 x 5817</td>
<td>15</td>
<td>HYUNDAI Steel</td>
</tr>
<tr>
<td>Table Roll</td>
<td>ø450 x 6225</td>
<td>10</td>
<td>NSSMC</td>
</tr>
<tr>
<td>Leveler Roll</td>
<td>ø275 x 6120</td>
<td>11</td>
<td>JFE Steel</td>
</tr>
<tr>
<td>Turn Table Roll</td>
<td>ø565 x 8447</td>
<td>7 (100 Ton)</td>
<td>HYUNDAI Steel</td>
</tr>
<tr>
<td>Lubricating Roll</td>
<td>ø500 x 6710</td>
<td>11 (100 Ton)</td>
<td>JFE Steel</td>
</tr>
</tbody>
</table>

Clients: Rolls for Paper and Chemical

- **Daeyang Paper**
  - Press (Top and Bottom) Roll Grinding
  - Calendar Roll Grinding
  - Paper Roll, Wire Roll, Canvas Roll Grinding
  - Drive Rod Assembly

- **Hankuk Paper**
  - Spool Roll, Felt Roll, Paper Roll Spindle Repair
  - Inner Gate Roll Grinding, H-Cr Plating
  - Wire Roll, Paper Roll, Guide Roll, etc.

- **Yuhan Kimberly**
  - Embossing Roll Grinding
  - Anvil Roll, Drive Roll, Single Drum Grinding

- **Hansol Paper**
  - Calendar Roll, Backing Roll Grinding

- **Hanchang Paper**
  - Press Roll, etc.

- **LG Chem**
  - Hearth Roll for Film Grinding & Plating
  - Mold Tie-Bar Plating
  - Calendar Roll for HI-PET Line Grinding

- **Hanwha L&C**
  - Calendar Roll

- **Samyang Corporation**
  - Calendar Roll

- **Seotong Chemical**
  - PET Corona Roll Assembly Manufacturing and Grinding
  - P.R.S. Roll Assembly Manufacturing
  - Elongation Roll Manufacturing
  - Heating Roll Assembly Manufacturing, Grinding, and Plating

- **Other**
  - Elongation Roll Manufacturing for Kawasaki
  - Rolls for Heat Treatment for Hyosung

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LPR Global, Inc.
344 Bloor Street W, Suite #607 Toronto, ON M5S 3A7 Canada
www.lprglobal.com | www.uskoreahotlink.com
Tel: +1 416-423-5590
E-Mail: info@lprglobal.com