



## ROLLER COVERING FOR THE METAL INDUSTRY

# MANAGEMENT OF MECHANICAL FORCES

### THE REQUIREMENTS

- Grip improvement
- Resistance to abrasion and edge cutting
- Resistance to mineral oils and other lubricants (*rolling, skin-passing, tension-leveling, stretching...*)
- Long lifetime

The production and coating of steel, stainless steel and non-ferrous strip requires a perfect management of traction, tension and steering in every step of the process. Covered rollers are often used to improve the friction coefficient on the strip whilst protecting it against damage.

A perfect transport of strip as well as other mechanical functions, usually require roller coverings of very different nature, sometimes combined with particular finishes like crowning and grooving. Hannecard has developed a complete range based on rubber, polyurethane, composite and carbide materials.

All proposed solutions share a very good resistance against mineral oils and against the most common lubricants.

### THE HANNECARD TOUCH

- **Very smooth grinding**
- Rough grinding up to  $Ra = 25 \mu$ , even with high precision
- **Razor blade surface grooving**
- **Spreader and diamond grooves** or other groove types
- **Crowning** (*parabolic, flat + tapered, special geometries*)
- **Nip measurement** and **crown calculation**
- **Multi-layer and hybrid coatings**
- **Light-weight roller** design (*especially for horizontal looper rollers*)
- **Concept improvements**
- **Tungstene and chromium carbide coatings** by HP-HVAF thermal spray

Application	Solution	Characteristics
Bridle, detour, strip support, pinch rollers All process lines	<b>Hannethane-S</b> Brown - PU 70-95 shore A	<ul style="list-style-type: none"> <li>• Excellent cut-in, tear and abrasion resistance</li> <li>• Excellent oil resistance</li> </ul>
Bridle, pinch, press, stretch rollers - high traction and pressure forces All process lines	<b>Hannethane-XP PureDrive</b> Brown - PU 70-95 Shore A 55 and 67 Shore D	<ul style="list-style-type: none"> <li>• Excellent cut-in, tear and abrasion resistance</li> <li>• High load resistance</li> <li>• Excellent oil resistance</li> </ul>
Bridle, pinch, stretch, brake rollers, very high traction and pressure Aluminium, stainless steel and carbon steel strip processing	<b>Kaltryl</b> Brown - PU 70-90 Shore A	<ul style="list-style-type: none"> <li>• Outstanding cut-in, tear and abrasion resistance</li> <li>• High load resistance</li> <li>• Low dynamic heat build-up</li> <li>• Excellent fuel and oil resistance</li> </ul>
Bridle, pinch, press rollers – for grip enhancing Coil coating, tin plate, annealing and galvanizing lines	<b>Hannethane-CR</b> Brown - PU 70-90 Shore A	<ul style="list-style-type: none"> <li>• Excellent abrasion resistance</li> <li>• High and long lasting roughness and surface grip</li> </ul>
Bridle, detour, pinch, press rollers Ironing rollers Rollers at oven exit Aluminium, stainless steel and carbon steel strip processing	<b>Hannetherm Hannetherm-XP Hannedyn-XP</b> Brown/White - PU 70-98 Shore A	<ul style="list-style-type: none"> <li>• Outstanding cut-in, tear and abrasion resistance</li> <li>• High load resistance</li> <li>• Low dynamic heat build-up</li> <li>• Temperature resistant up to 150 °C</li> </ul>

**THE FUNCTION OF COATED ROLLERS IN THE MANAGEMENT OF MECHANICS :**

- **Management of pressure and traction**
- **Strip centring and guiding**
- **Strip stretching** (*aluminium*)
- **Strip detour and deflection**
- **Strip accumulation** (*horizontally or vertically*)
- **Noise reduction**

Application	Solution	Characteristics
Various rollers All process lines	<b>RollMet-S</b> Black - Rubber 65-90 Shore A	<ul style="list-style-type: none"> <li>• Very good overall physical properties</li> <li>• Excellent oil and fuel resistance</li> </ul>
Bridle, pinch, press rollers – for grip enhancing Coil coating, tin plate, annealing and galvanizing lines	<b>RollMet-CR</b> Black - Rubber 75-85 Shore A	<ul style="list-style-type: none"> <li>• Good overall properties</li> <li>• Excellent oil resistance</li> <li>• High and long lasting surface grip</li> </ul>
Various rollers at high temperature All process lines Ironing rollers for aluminium cold rolling	<b>RollMet-HT</b> Black - Rubber 80, 85 and 90 Shore A	<ul style="list-style-type: none"> <li>• Very good physical properties</li> <li>• Temperature resistant up to 160 °C</li> <li>• Excellent oil and kerosene resistance</li> <li>• Low dynamic heat build-up</li> </ul>
Recommended for bridle and tensioning rollers (improved traction control) Cold rolling, strip processing	<b>KalGrip</b> Black - Rubber 90 Shore A	<ul style="list-style-type: none"> <li>• Very good overall physical properties</li> <li>• Excellent oil and fuel resistance</li> <li>• Long lasting surface grip</li> </ul>
Recommended for pinch and pressure rolls on high-gloss stainless steel strip annealing lines	<b>Velvet</b> Purple - Rubber 75 Shore A	<ul style="list-style-type: none"> <li>• Special covering with very high grip and friction coefficient</li> </ul>
Furnace rolls, bridle rolls, deflector rolls, tensioning rolls	<b>HanneSpray-W</b> <b>HanneSpray-W Plus</b>	<ul style="list-style-type: none"> <li>• Tungsten carbide coating in HP-HVAF spray</li> <li>• Max. 950°C</li> <li>• Thickness 50-1000 µ</li> <li>• Hardness up to 1300 HV</li> <li>• Porosity &lt; 0,5% possible</li> <li>• Ra 0,05-6 on demand</li> </ul>

**RELATED DOCUMENTS**

- Solutions - ‘**Cleaning & degreasing**’
- Solutions - ‘**Colour Coating & Chemcoating**’
- Solutions - ‘**Carbon Steel Pickling**’
- Solutions - ‘**Stainless Steel Pickling**’
- Solutions - ‘**Metal packaging**’
- Solutions - ‘**Steel, Stainless Steel, Aluminium & Non-ferrous coils**’
- Product Information - ‘**Velvet**’
- Product Information - ‘**Elastic Sleeves**’

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