

Highly wear resistant cylinder rod coating for industrial and civil engineering applications

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Bosch Rexroth introduces laser cladded Enduroq 1 coating for hydraulic and hybrid cylinders to substitute chrome and nickel chrome layers

- ▶ Highest wear resistance for hydraulic and hybrid cylinders
- ▶ In-house laser cladding process delivers highest quality coating
- ▶ No porosity and zero permeability guarantees long lasting surface protection



Photo: Laser cladding machine Bosch Rexroth in Boxtel

Bosch Rexroth, the leading company in hydraulic cylinders and electro-hydraulic and electro-mechanic actuators, introduces its highly wear resistant Enduroq 1 coating, the latest in its series of single layer coatings. Aimed at civil engineering and industrial applications, Enduroq 1 is based on a laser cladding technology developed in cooperation with the Fraunhofer institute, Europe's largest application-oriented research organization. Laser cladding enables faster production of coatings with more flexibility in materials, compared to traditional arc welding (PTA) process.

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Enduroq 1 is a very wear resistant layer made by welded overlay of stainless steel powder, making use of laser cladding technology. It supersedes traditional coatings, providing a replacement layer for chrome and nickel/chrome coatings. Enduroq 1 is produced by Rexroth in-house using a complete, controlled process, ensuring the high quality and robustness necessary for demanding applications.

“We implemented this new coating process to obtain more flexibility in applying protective rod coatings,” said Michiel Kuijper. “We have worked closely with the Fraunhofer Institute to develop the new laser-based process. And, drawing on our long experience with tribology, we again achieved the right tribological system of coating, fluid and seals for this new layer.”

Enduroq 1 has no porosity and zero permeability, guaranteeing long lasting surface protection. This means minimal downtime, along with easier maintenance in the field. “Our release of the wear-resistant Enduroq 1 follows the introduction of the Enduroq 3 corrosion-resistant layer earlier this year,” said Michiel Kuijper. “It offers engineers a replacement layer for chrome and nickel/chrome coatings, at the same base price but with less pollution. Perfect for civil engineering applications.”

More information: www.boschrexroth.com/lhc

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