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Modeling of Surface Roughness in a New Magnetorheological Honing Process for Internal Finishing of Cylindrical Workpieces

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## Highlights

- Theoretical model for material removal mechanism in magnetorheological honing process
- Evaluate magnetic flux density in working gap also with the effect of ferromagnetic cylindrical workpiece
- Evaluate the magnetic force acting on different iron particles present in working gap
- Analyze the process mechanism in terms of reduction in surface roughness values
- Developed mathematical model is used to predict finishing performance of process

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