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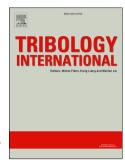
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#### ACCEPTED MANUSCRIPT

# Article: Effect of Loading on the Friction and Interface Microstructure of Lubricated Steel Tribopairs

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#### **Abstract**

In this study, the tribological behavior and interfacial evolution of GCr15/Mild steel tribopairs lubricated by inorganic sodium metaphosphate was investigated under different applied loads at 800°C. The results show that sodium metaphosphate lubricates the contact effectively at the load ranging from 5 to 30 N, with higher loads causing increased friction and wear. A layer of glassy phosphate film formed between the contacts is responsible for the improved tribological

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