

# Structure and Properties of Lengthy Rails after Extreme Long-Term Operation

A.A. Yuriev, V.E. Gromov, Yu.F. Ivanov,  
Yu.A. Rubannikova, M.D. Starostenkov, P.Y. Tabakov

Monograph / PDF eBook DRM Free

The long-term operation of rails has been studied.

*Keyword:* Long Rails, Long-term Operation, Transmission Electron Microscopy, Steel, Differentiated Hardening, Structural Phase States, Nanoscale Structures, Wear, Deformation Effects, Recrystallization, Segregation, Homogenization, Relaxation, Phase Transitions, Phase Decomposition, Amorphization, Sintering, Filling of Micro- and Nanopores, Nanocapillaries, Severe Plastic Deformation, Megaplastic Deformation

**ISBN 13:** 978-1-64490-147-2, **Publication Date:** 2021 (8/5/2021)

**Direct URL:** <https://www.mrforum.com/product/lengthy-rails>

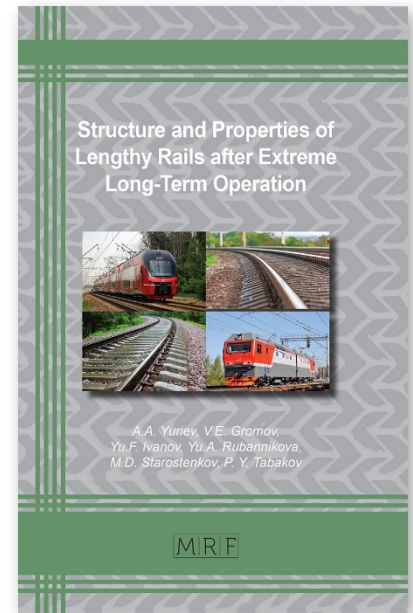
194 pages, PDF eBook DRM Free, USD 85.00

*Materials Research Foundations Vol. 106* / **BISAC:** TEC021000 / **BIC/Thema:** TGM

**Imprint:** Materials Research Forum LLC, *Publisher's sales rights are Worldwide*

Summary:

The long-term operation of rails has been studied with focus on (1) the formation and behavior of structural-phase states and nanoscale structures, (2) the modelling of the processes occurring in the surface layers of rails under severe plastic deformation and (3) the methods and techniques for assessing the structural and phase states of rails, internal stresses, and their evolution during the life cycle. The book references 264 original resources and includes their direct web link for in-depth reading.



## Full Color Print Book Information

# Structure and Properties of Lengthy Rails after Extreme Long-Term Operation

A.A. Yuriev, V.E. Gromov, Yu.F. Ivanov,  
Yu.A. Rubannikova, M.D. Starostenkov, P.Y. Tabakov

Monograph / color print, paperback

The long-term operation of rails has been studied.

*Keyword:* Long Rails, Long-term Operation, Transmission Electron Microscopy, Steel, Differentiated Hardening, Structural Phase States, Nanoscale Structures, Wear, Deformation Effects, Recrystallization, Segregation, Homogenization, Relaxation, Phase Transitions, Phase Decomposition, Amorphization, Sintering, Filling of Micro- and Nanopores, Nanocapillaries, Severe Plastic Deformation, Megaplastic Deformation

**ISBN 13:** 978-1-64490-146-5, **Publication Date:** 2021 (8/5/2021)

**Direct URL:** <https://www.mrforum.com/product/lengthy-rails>

194 pages, color print, paperback, USD 85.00

*Materials Research Foundations Vol. 106* / **BISAC:** TEC021000 / **BIC/Thema:** TGM

**Imprint:** Materials Research Forum LLC, *Publisher's sales rights are Worldwide*

## Summary:

The long-term operation of rails has been studied with focus on (1) the formation and behavior of structural-phase states and nanoscale structures, (2) the modelling of the processes occurring in the surface layers of rails under severe plastic deformation and (3) the methods and techniques for assessing the structural and phase states of rails, internal stresses, and their evolution during the life cycle. The book references 264 original resources and includes their direct web link for in-depth reading.

