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APPENDIX A Stochastic rail stress distributions (Different iterations with the same model)



Figure A-1: Stochastic rail stress distributions



Figure A-2: Stochastic rail stress distributions





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Figure A-3: Stochastic rail stress distributions



Figure A-4: Stochastic rail stress distributions







APPENDIX B Histograms of Leandra test data



Figure B-1: Histograms of lateral forces at 20km/h



Figure B-2: Histograms of lateral forces at 30km/h









Figure B-3: Histograms of lateral forces at 40km/h



Figure B-4: Histograms of lateral forces at 60km/h





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APPENDIX C





Figure C-2: Lateral left and right forces at 30 km/h, for 26 ton axle









Development of a methodology for calculating stresses in track components





Figure C-4: Lateral left and right forces at 70 km/h, for 15 ton axle











Figure C-6: Lateral left and right forces at 70 km/h, for 30 ton axle







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Figure C-7: Vertical left and right forces at 30 km/h, for 15 ton axle

Figure C-8: Vertical left and right forces at 30 km/h, for 26 ton axle









Development of a methodology for calculating stresses in track components



Figure C-9: Vertical left and right forces at 30 km/h, for 30 ton axle

Figure C-10: Vertical left and right forces at 70 km/h, for 26 ton axle









Figure C-11: Vertical left and right forces at 70 km/h, for 30 ton axle









APPENDIX D



