

Railway Systems

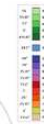
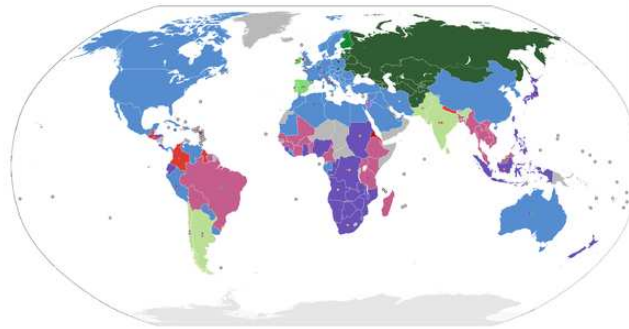


AH2026 Railway Traffic - Market and Planning, BC

The Swedish Rail Network

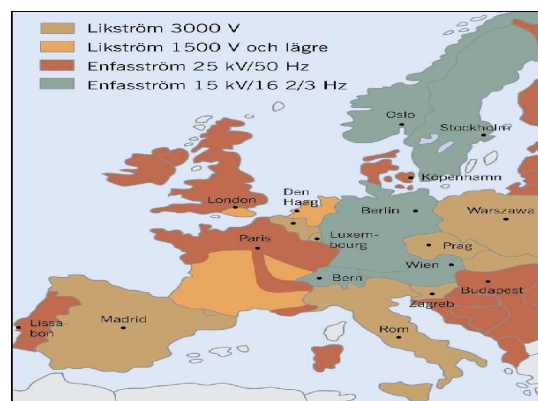


Railway gauges around the world



ft' in"	mm
5' 6"	1676
5' 5½"	1668
5' 3"	1600
5'	1524
4' 11⅞"	1520
4' 8½"	1435
4' 6"	1372
3' 6"	1067
3' 5¼"	1050
3' 3⅝"	1000
3' 1⅜"	950
3'	914
2' 6"	762
2' 5½"	750
2'	610
1' 11⅞"	600

Electrical traction system in Europe



Electrified railways in Sweden



Elektrifierade banor



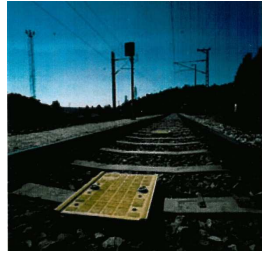
Traffic Control Systems



Trafikstyrningssystem



ATP – ATC in Sweden

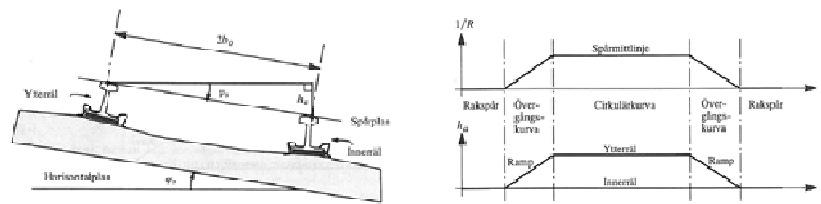


Passenger lines in Sweden



Radius for high speed

The faster the train runs, the larger will the horizontal forces be in curves. That could be compensated by large radius in the curves, with a cant angle of the track and by tilting trains.



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Freight Flows in Sweden

Figure 4. Totala varor godståg per vardagsdygn 2008

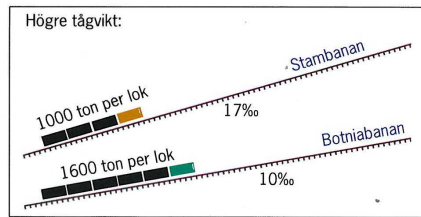


Källa: Grafisk tillbehör, bearbetning Banverket

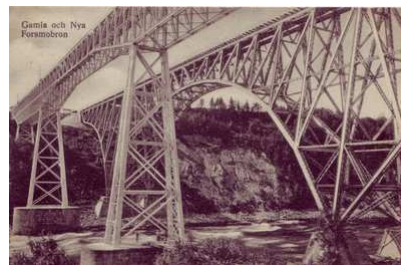


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Total weight per train ?



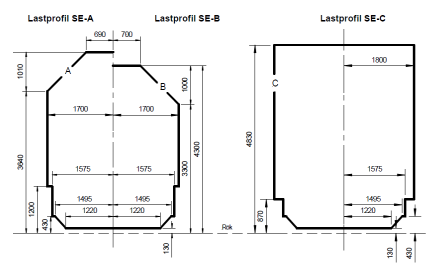
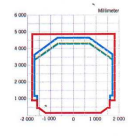
Heavy trains ?



The "Free Space" around the train



Geografisk placering av lastprofil A och B



Marshalling Yards

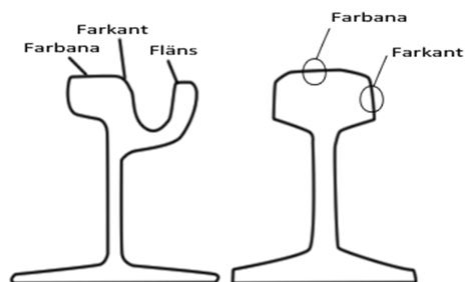


The railway track



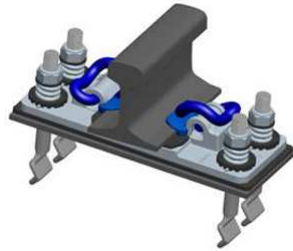
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The railway track



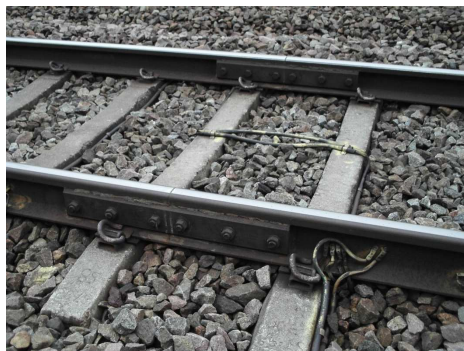
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Pandrol-Clip



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Insulated Joint



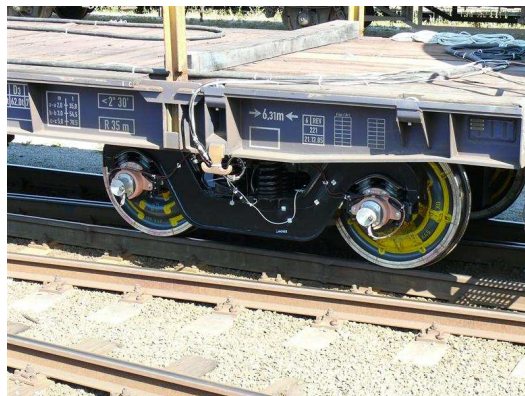
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Wheel-axle



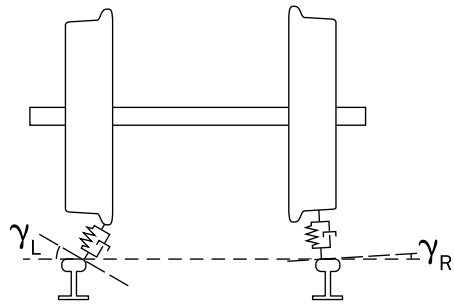
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Boogie



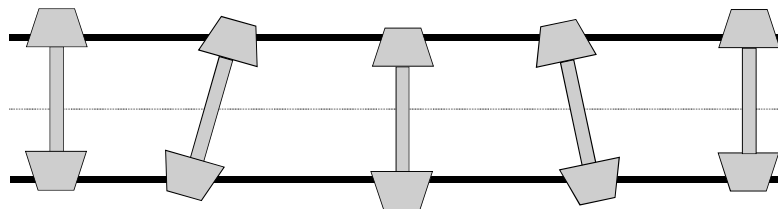
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Fixed wheel-axle



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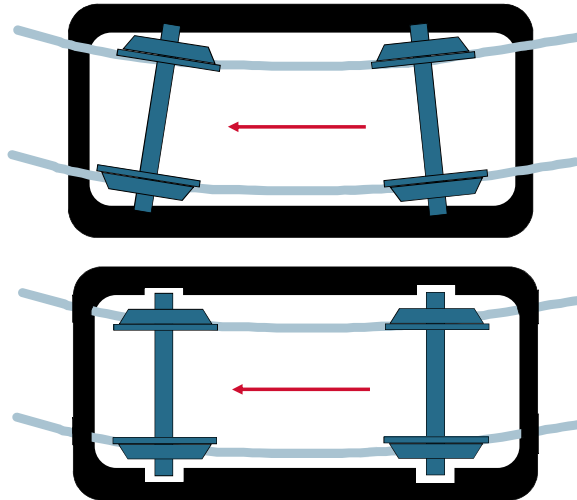
Hunting



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Soft boogie



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Loco-hauled train



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Driving trailer



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Motor unit train DMU, EMU



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Steam-train



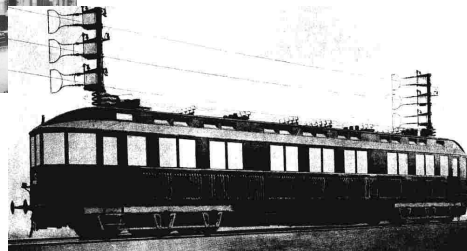
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Diesel-train



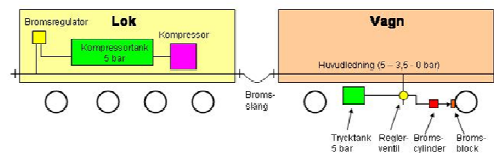
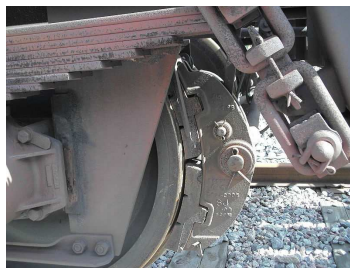
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Mixed train ?



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Braking systems



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