

Curriculum Vitae of Coenraad Esveld

GENERAL

Born: May 1, 1944
Nationality: Dutch



EDUCATION:

Ph.D. Technical University of Warsaw 1978
M.Sc. in Civil Engineering (cum laude), Delft University of Technology, 1970

SUMMARY:

Coenraad Esveld is the author of the book *Modern Railway Track* and has wide experience in railways, both in the field of design and maintenance. He worked during 17 years for Netherlands Railways in the Permanent Way Department, with special responsibility for quality control, and was for 13 years professor of railway engineering at Delft University of Technology. He is also director of Esveld Consulting Services, a company operating since 1991. He published hundreds of papers and headed numerous research projects. The last decade an important focus in his work was on high-speed, with a close involvement in projects in The Netherlands, Korea and Taiwan.

EXPERIENCE:

- 1993 - 2006: Professor of Railway Engineering at TU Delft
- 1990 - present: Director of Esveld Consulting Services Ltd.
- 1973-1990: Netherlands Railways, Research Department (1973-1974), Engineer of Staff at the Permanent Way Department (1974-1980): Cooperating in various UIC and ORE/ERRI research groups, studying track deterioration, developing tools for the analyses of track recording car data, processing of these data for Track Maintenance Management purposes and optimal deployment of Mechanized Track Maintenance (e.g. Tampers, Ballast-cleaners, Grinders, etc.). Head of Rail Technology and Quality Control (1980-1990): within the Permanent Way Department responsible for the collection and analysis of data from track recording cars and ultrasonic inspection, as well as the processing of these data as to compiling track maintenance and renewal plans. Responsible for the contacts with the rail manufacturers.
- 1973-1986: Part time lecturer at the Delft University for dynamics of structures.
- 1970-1973: Delft University, Civil Engineering Department, Section for Applied Mechanics; specialized in dynamics of structures, random vibration analysis, finite element methods.
- Author of the book *Modern Railway Track*, MRT-Productions, 2001, ISBN 90-800324-3-3. Digital edition of *Modern Railway Track* was released in 2014.
- Chairman of the Coordination Committee for Railway Engineering of CROW in The Netherlands (1995 till 2004).
- Chairman of the CUR/COB Committee G106 Vibrations (Committee finished in 2003).
- Advisor to the High-Speed Line South (Infraspeed) in The Netherlands from 1990 till 2007.
- Advisor to the Korean High-Speed project and member of the Special International Track Advisory Committee (SITAC).
- Chairman of the wheel rail interface committee (till 2006).
- Member of the Editorial Board of *European Railway Review*.
- Advisor to THSRC, the Taiwan High Speed Rail Corporation in a number of conciliation and arbitration cases (2006-2008).
- For publications and other information see: www.rail.tudelft.nl and www.esveld.com.

MAIN PROJECTS/CLIENTS

- Province of Utrecht: advising on tramway track structure for Uithoflijn (2015);
- Mumbai Metro One, India: advising on track related issues (2015);
- Advisor to Yapi Merkezi / Yapiray for various railway projects (December 2014 -);
- Advisor to ERS Railways for investigations into the derailment near Vleuten (2009 – 2014);
- Various investigations such as:
Dutch Safety Board: participation in guidance committee investigating derailment Hilversum (2014);
PwC / Horvat & Partners: audit ProRail on management of assets cost (2015);
Horvat & Partners: impact study Quo Vadis (2009); Derailment Amsterdam (2008); Derailment Venlo (2010); Track safety on mainlines ProRail (2014); Winter resistant track ProRail (2010);
- Assisted Yapi Merkezi in Turkey and the Turkish national railways (TCDD) on the investigation of flash-butt weld quality in the high-speed track from Ankara to Konya (2012).
- Advised Metro de Lima in December 2011 on modifications carried out on recently installed crossovers;
- Advised Pinsent Masons LLP in the UK on a claim concerning a rail fastening system of DLR.
- Assisting, in cooperation with Booz & Company to a consortium formed by Turkish State Railways, Siemens and Bin Ladin, for the tender of the Haramain high-speed railway in Saudi Arabia;
- Gemeente Amsterdam, Dienst IVV, development of a track quality assessment system for Amsterdam Metro;
- Advisor to ERS Railways and Zurich Corporate Benelux, for investigations into the derailment near Vleuten 2009-2014;
- Professional services and activities related to the project "CAR LAB: Diagnostic vehicle for railway signaling system control. A project by MerMec, Italy, for the Mumbai Suburban Railway System in India;
- Advisor to COWI Denmark for vibration measurement on Brenner Eisenbahn in Austria;
- Advisor to Horvat & Partners: Derailment on turnout ProRail;
- Korea Railroad Research Institute: LCC study on the application of Slab Track;
- Yapi Merkezi Turkey: Various design aspects of high-speed line Ankara-Konya;
- Bolidit: Consultant for embedded rail Arno Tram Bridge Italy;
- Turkish State Railways TCDD: Investigation of the Train accident near Pamukova;
- RandstadRail derailment: advisor to XL Insurance;
- Dutch Advisory Board for Safety: study of a derailment near Amsterdam;
- ProRail (Dutch Rail Infra Manager): various studies on the track quality and maintenance standards;
- High Speed Project in The Netherlands: Advisor to the Ministry of Transport for track design;

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- INFRASPEED, Infraprovider HSL-South, The Netherlands: Advisor and reviewer of the design process;
- Korean High Speed Rail Corporation (KHSRC): Advisor for track design and member of SITAC (Special International Track Advisory Committee);
- Taiwan High Speed Rail Corporation (THSRC): Invited expert in a conciliation and arbitration on a design claim by the Contractor;
- Madrid Metro, Spain: Carried out a study in cooperation with Delft university on life cycle management, track structure optimization, track standards, track recording cars and maintenance management;
- Deutsche Bahn AG, Germany: Various studies on vehicle track interaction and track deterioration;
- Heavy Axle Load Studies for Banverket, Sweden: Study, together with Zeta-Tech in the US, for increasing the axle loads on the iron ore line in northern Sweden and Norway;
- London Underground, UK: Studies were carried out on the optimization of the wheel rail interface based on measurements with the MINIPROF system, as well as a track replacement study;
- Southern Railway Project in Sydney, Australia: Together with TU Delft a study was carried out on the choice of track components;
- Voest Alpine, Austria: Second opinion on the design of an expansion joint for the Kap Shui Mun Bridge in Hong Kong;
- Plasser & Theurer, Austria: Various consulting works on track maintenance applications;
- SPOORNET, South Africa: Network inspection and advise on improving track components and maintenance strategy;
- Metro Amsterdam: studies on wheel rail interface optimization and track maintenance strategies; advices on design problems with new lines;
- State Rail Authority of New South Wales, Australia: Studies carried out on track quality assessment and track recording;
- Europoint, The Netherlands: Organizing various conferences and seminars, such as Rail-Tech Europe;
- UIC/ORE/ERRI: Project management of various research projects, such as D202 on Track Stability and longitudinal forces;
- Great Belt Bridge: Advisor to ARCADIS for the dynamic analysis of the bridge transitions;

MAIN ACTIVITIES OF ECS

- Training and seminars
- High Speed Operation
- Heavy Haul and Heavy Axle Loads
- Vehicle - Track Interaction
- Track Dynamics

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- Track Maintenance Operations
- Decision Support Systems
- Life Cycle Costs
- Development and Testing of Track Structures
- Measuring and Recording Systems for Track Applications
- Optimization techniques and applications

PUBLICATIONS

<http://www.esveld.com/Download/TUD>

http://www.esveld.com/RP_PDA.htm

<ftp://213.127.130.218/> Lectures, presentations, railway videos.

Furthermore, please refer to www.esveld.com and www.railprof.com