

**ROBERT NEWMAN ENGINEERING  
LLC**

Robert Newman

MSME, PE, AMS®

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Charleston, SC

Mechanical  
Insurance  
Legal  
Consulting  
Marketing  
Railway  
Marine  
(Accredited  
Marine  
Surveyor®)

## RESUME of G. Robert Newman

### Background:

1. More than 40 years Railway Track Engineering and Civil Engineering Experience
2. Bachelor of Science Mechanical Engineering University of Tennessee 1968
3. Masters of Science Mechanical Engineering (Postgraduate) University of Tennessee 1974
4. Registered Professional Engineer, South Carolina Registration #16987 with reciprocity in all 50 states 1974 - Current
5. National Academy of Railroad Sciences Bridge Inspector April 2012
6. Recent Career Business Experience: 21 years as President of a \$300 M per year international company constructing new track, design of new track and structures, renewal of existing track, manufacturing railway track maintenance machinery, ballast, surfacing, ties, rail, drainage, and providing other on track contract services.
7. Design of heavy track maintenance and construction machinery, engineering of structures, design for safety, Company: Harsco Track Technologies (Now Harsco Rail) 1986 – 2007
8. Railway track alignment, location, and environmental factors such as drainage, ballast, noise, clearances, overhead line catenary rail lubrication residue, soil, subgrade, ballast, and near track vegetation.
9. Typical Consulting: Railroad track and bridge consulting engineering for “heavy haul” coal mines (Patriot Coal Charleston West VA).
10. Business locations: USA, Canada, China, India, Russia, United Kingdom, Western Europe, Australia, New Zealand, Thailand, Brazil, Hungary, Ireland, and other countries
11. Track Gauge Experience: Meter Gauge, 1066 mm (42 inch), Standard 1435 mm, Russian 1520 mm, Irish 1600 mm, and the multiple gauges of Australia and Brazil.
12. Graduate US Navy Officer Candidate School: Commissioned Officer 1969 - 1972
13. Non Railroad: AMS® (Accredited Marine Surveyor® for legal, insurance, Diesel engines & safety) 2007 – 2013
14. Extensive railway and industrial safety experience.
15. Positions:
  - a. 1968 – 1969 Design Engineer Sanford Day – Long Airdox Mining Machinery
  - b. 1969 – 1972 US Naval Officer (Main Engines Officer USS Albany CG – 10)
  - c. 1972 – 1974 Graduate Student University of Tennessee MS Mechanical Engineering
  - d. 1974 – 1977 Design Engineer Tamper Division of Canron (Railroad Machinery and Railroad Track)
  - e. 1977 – 1980 Manager of Research and Development Tamper Division of Canron (Railroad Machinery and Railroad Track)

- f. 1980 – 1982 Manager of Engineering Tamber Division of Canron (Railroad Machinery and Railroad Track)
- g. 1982 – 1986 Vice President of Operations Fairmont Railway Motors Division of Harsco Corporation (Railroad Track and Railroad Machinery)
- h. 1986 – 2008 President Harsco Rail Division of Harsco Corporation (Railroad Track and Railroad Machinery) (Official Retirement Date 2009)
- i. 2009 – Present Consulting Engineer for Railroad Track and Railroad Machinery. Also Marine Engineering Consultant for Diesel propulsion.

#### 16. General Railroad Expertise

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| <ul style="list-style-type: none"> <li>a. Large Civil Engineering Project Management</li> <li>b. Procurement Systems (ADB and others)</li> <li>c. On track safety</li> <li>d. Railroad Shop Safety</li> <li>e. Industrial Safety</li> <li>f. Project and Business Finance</li> <li>g. Partial Project List::<br/>Class 1 US Railways<br/>Metros &amp; Transits<br/>Indian Railways<br/>Canadian National<br/>Union Pacific, BNSF,<br/>Norfolk Southern,<br/>Queensland Railways,<br/>Network Rail, Coal</li> </ul> | <ul style="list-style-type: none"> <li>Mines, Iron Mines, Others worldwide</li> <li>h. International Business Marketing and Management</li> <li>i. Railroad Environmental</li> <li>j. FIDIC (International Asian Development Bank Projects</li> <li>k. World Bank Projects</li> <li>l. Export Import Bank Projects</li> <li>m. Bridge Inspection</li> <li>n. Bridge Design</li> <li>o. High Speed Rail Japanese Railways East, DB Germany, and Network Rail (UK)</li> </ul> |
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#### 17. Areas of technical expertise:

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| <ul style="list-style-type: none"> <li>a. Railway Track Construction and Maintenance</li> <li>b. Railway Track Surfacing and alignment</li> <li>c. Railway track construction and maintenance machinery</li> <li>d. Railway Ballast, sleepers, rail, fasteners, drainage, switches, crossings, &amp; other trackwork.</li> <li>e. Railway Bridges</li> <li>f. Structural</li> <li>g. Track Gauge Engineering</li> <li>h. Safety engineering</li> <li>i. Track Alignment</li> <li>j. Railway Bridges</li> </ul> | <ul style="list-style-type: none"> <li>k. Rail Cars</li> <li>l. Power Train Including Railway and Marine</li> <li>m. Construction Machinery Including Earth Moving</li> <li>n. Lifting Equipment</li> <li>o. Conveyors</li> <li>p. Structural Design</li> <li>q. Material Handling</li> <li>r. Electric - Hydraulic Control Systems Metal Fabrications</li> <li>s. General Machine Design</li> <li>t. Diesel Power</li> <li>u. Brakes</li> <li>v. Rail Flaw Detection</li> </ul> |
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- w. Railway Engineering  
(Track & Rolling Stock)
- x. US Navy Experience with  
Diesel Engines, Boilers,

and Turbines

12. Other interests:

- a. Intercoastal Waterway  
Cruising
- b. Marine Surveying
- c. Antique cars
- d. High performance cars
- e. Water skiing
- f. Bicycling

13. Other Information / Accomplishments

- a. Tau Beta Pi Engineering  
Honorary Society 1966
- b. Pi Tau Sigma Mechanical  
Engineering Honor Society  
1966
- c. Eagle Scout 1962
- d. Past Leader Boy Scouts of  
America
- e. Holder 4 patents: Railway  
Engineering
- f. Author or Co-Author Several  
Papers for Railway  
Engineering

14. **CONTACT: Robert Newman: 843-860-4405**

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Example of one of many types of machines I have been involved in the design of. This is a Tamper, and it is used to surface and align railway track work.



Switch & Crossing Rail Grinder  
Network Rail – United Kingdom



Total Track Renewal Machine  
Wood Sleepers to Concrete  
Sleepers, New Rail, Pandrol  
Safe-lock