

CASE STUDY

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Tank Car Modification

Company Profile

Rail car owners and leasing firms that operate tank cars throughout North America

Business Challenge

Government agencies develop and maintain tank car design standards. Agencies like the FRA and Transport Canada frequently update their standards to include improved safety protocol or technological advances. Tank car leasing firms are forced to retire their outdated cars or modify them to comply with these rapidly changing regulations. The majority of outdated tank cars still have a lot of life left in them, so fleet manager and car owners rely on BNSF Logistics to quickly engineer design modifications that maximize their tank car investments while complying with governing regulatory agencies.

Solution

BNSF Logistics engineers carefully review governing car requirements to deliver a compliant design modification specific to individual tank cars. Tank car modification designs typically include calculations, stress analysis using Finite Element Analysis (FEA), and full detail drawings.

Process/Procedure

For tank car modifications, BNSF Logistics engineers develop a scope of work after an analysis of client requirements and individual tank car specifications (build date, original builder, and existing tank car design configuration). Deliverables vary based on client needs and typically include calculations, engineering drawings, structural analysis (FEA), and complete drawing packages that directly address government agency requirements.

Results

- Increased value of asset for resale
- Maximized client tank car ROI
- Prolonged client rail fleet usability

