Design of Drive Roller for Auxiliary Power Generator

Status: Filled

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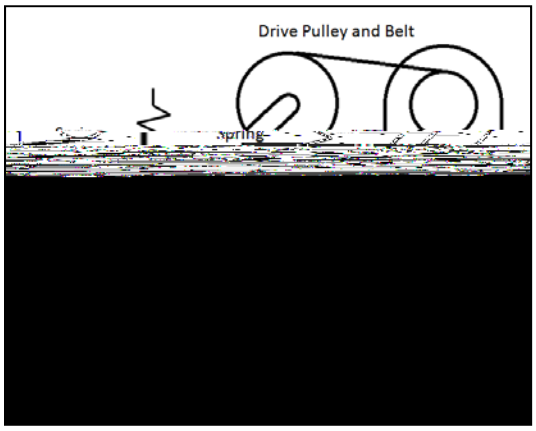
Project Description

LB Foster Rail Technologies provides wheel / rail interface technology solutions to the global freight and passenger rail industries. One project currently in development is a train car mounted auxiliary power generator which utilizes a drive roller run off of a wheel tread surface. A simple schematic of the system is shown in the following figure.



This project involves the design and development of the drive roller component of the auxiliary power system. The drive roller must not only be capable of transmitting the required power to the alternator from the drive wheel, but must be designed to withstand the (extremely harsh) railroad operating conditions.

Scope / Deliverables:
Key deliverables from this project include:

- Thorough analysis of the loading and stresses conditions on the drive roller
- Material specifications (including material properties) for each part of the drive roller
- Minimum vertical loading specification
- Engineering calculations or data showing validity of design and materials chosen

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