



UNC CHARLOTTE

The WILLIAM STATES LEE COLLEGE of ENGINEERING

Senior Design Project Description for FALL 2016

Project Title: Plant Energy Assessment (VPL_ENERGY)

Supporter: Vanguard Pai Lung

Supporter Technical Representative: ASSIGNED

Faculty Mentor: ASSIGNED TBD (check one)

Single Team Dual Team (check one)

Personnel (EN/ET): 2 E, Cp, Cv, 2 M, 2 SE

(Complete if the number of students required is known)

Expected person-hours: (250 per student)

Description of Project:

Vanguard Pai Lung has been manufacturing precision, quality and innovative custom designed knitting machines in the USA since 1916. The company is concerned with all forms of energy consumption in their facility. This project will review and analyze the energy consumption in the facility and develop a plan to reduce the energy consumption.

Initial Project Requirements (e.g. weight, size, etc.):

Energy consumption must be obtained for all modes of plant operation, including times when the facility is not operating. The team must visit the facility in Monroe NC to perform this review. Once the analysis is determined a plan must be developed to monitor energy consumption and develop a design to reduce all forms of energy consumption. The design will include cost estimates and payback to reduce energy consumption.

Expected Deliverables/Results:

The deliverable will be a report summarizing the current energy consumption and recommendations to reduce it. The recommendations will include a cost benefit analysis.

List here any specific skills or knowledge needed or suggested (If none please state none):

None.