

Design And Selection Of A Load Cell To Be Used With A Portable Winch

Status:	Filled
Group Members:	Peter Hsu, Vinh Kiet (Joe) Leung, Ronnie Kwan, Jeffrey To, James Un
Sponsor(s):	DCD Design & Manufacturing Ltd.
Supervisor(s):	Krishna Vijayaraghavan, PhD, PEng, Assistant Professor, Mechatronics Systems Engineering

Project Description

The objective of this project is to design, configure, test and calibrate a load cell for the company's line of portable gas and electric winches. Due to the space restrictions imposed on the load sensor by the winch accessories and mounting configurations, a compact and durable load cell and mounting method will be required to fit with existing equipment and stay within a cost target that will keep the product competitive. In addition, the load cell will need to be configured to work with the company's existing data logging software for live readout to the PC and for a smartphone application.

To facilitate the project, we would offer your team access to the winches and accessories for measurement, design and testing, the data logger and software. We will also provide support to assist with familiarity of the product, applications and possible testing/calibration methods.

Project Deliverables (within the 8 month timeline):

- Evidence of brainstorming, ranking and selection of concepts based on initial cost and

- A gantt chart, dependency chart or similar to indicate scheduling and resource planning to complete the said deliverables
- Meet or exceed specified performance and cost requirements for the product

About the company:

DCD Design has been designing, engineering and manufacturing Underground and Aerial Cable installation tools as well as Horizontal Directional Drilling (HDD) down-hole equipment used for pullback of utilities for over 25 years. Our tooling is carefully developed around our customer's needs and requirements. We handle each customer request, need or idea with quick turnaround time. Our head office and manufacturing facility is located in Richmond BC. We ship to Canada, USA and worldwide.



CABLE INSTALLATION TOOLS

ENGINEERING SOLUTIONS

DIRECTIONAL DRILLING ACCESSORIES