Thesis Outline

\*Introduction

\*Ch1

-Problem definition

High failure rate due to PD & breakdown

At limit maximum allowed volume

Total production cost can be reduced ( Product is not optimized)

\*Ch2

-Current Situation

Past 5 years test data

Current manufacturing proccess

Pd Analysis of the current design

\*Ch3

-Methodology

Highest stresst points will be localised by Finite Element Analysis

Safe stress levels for the insulation will be determined

Coil will be constructed for smallest possible volume while keeping the stress level below pd inception

\*Ch4

-Optimization

2d layer analaysis

2d coil analysis

Cost function & final design

\*Ch5

-Validation

3D analysis of the final design will be done

Design will enter serial production (100+) , test data will be collected.

Calculation of the total cost difference from the original design for one years production