

ME349

Engineering Design Projects

Requirements/Specifications Example Design of a Portable Slide Projector

Consider the design of a portable slide projection device. A short list of customer requirements was developed and then a list of equivalent, measurable engineering requirements developed. It is not presumed that these are all inclusive lists, but merely examples of the procedure to be followed.

Customer Requirements:

- Good image quality
- Easy to transport
- Keeps presentation flowing
- Image visible in bad conditions
- Minimizes unplanned interruptions (reliable)
- Attractive product
- Device sets up quickly
- Well suited to short presentations

Engineering Requirements:

- Brightness
- Weight
- Overall dimensions
- Time required to set-up
- Number of steps required to set-up
- Image distortion
- Distance from presenter that device can be operated at
- Time to insert/remove slides