Engineering Design Focus Template

Points to consider-

1. What is the objective?
   a) i.e. What do you want to improve, solve or create?
2. What are the optimum designs?
   a) i.e. What is the design criteria?
      Electric conductivity
      Ease of use
      Corrosion resistant
      Strength
      Ductility
   b) Heat conductivity
      Spring-like
      Malleable
      Color
      Ease of forming
      Ease of machining
3. What is the "use" environment?
   a) Corrosive
   b) Cold
   c) Hot
   d) Room temperature
   e) Wet
   f) Dry
4. How will it be fabricated?
   a) One piece
   b) Many pieces put together
   c) How will it be assembled?
      Mechanical
      Braze
      Weld
5. How will it be used?
   a) Singular- Alone
   b) As part of something
   c) Corrosion potential due to dissimilar materials

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6. What is its life cycle?
7. Estimate cost of raw materials.
8. Estimate cost to fabricate.
9. Analyze industrial hygiene and environmental factors
   a) Toxicity of materials used
   b) Toxicity of materials used in processing
      i.e. Lubricants
           Cleaners
   C) In what manner will it ultimately be disposed?
10. What are the resource commitments to produce:
   a) Water
   b) Air
   c) Heat
   d) Electricity