

“MIX AND MATCH” MATERIALS SELECTION

Advantages for
Design and Performance,
Availability and Cost

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Design and Performance

- ▣ **Mechanical Properties**

 - Strength

 - Hardness

 - Toughness

 - Physical Properties

- ▣ **Corrosion Resistance**

 - General

 - Pitting & Crevice

 - Stress Corrosion Cracking

Availability

- ▣ **Standard Product Forms**

 - Plate and Sheet

 - Tube

 - Pipe

- ▣ **Hardware**

 - Filler Materials

 - Bolts and Nuts

 - Fittings, Flanges, Nozzles etc.

Cost

- ▣ **Material Cost**
 - Dollars per Pound
 - or Dollars per Square Foot
- ▣ **Fabrication cost**
 - Welding
 - Cutting and Forming
 - Machining
- ▣ **Erection and Installation Cost**
 - Transportation
 - Structural
 - Erection Equipment

Combinations

- ▣ **Heat Exchanger**

 - Shell, Tube Sheet, Heads and Tubes

- ▣ **Pressure Vessel**

 - Shell and Heads, Nozzles,
and Internals

- ▣ **Tank**

 - Walls, Floor and Roof, Nozzles, Manways
and Internals

A well thought out “mix and match” design can provide long lasting performance at an affordable price.

