

4.6. Optimality criteria

An interesting approach in optimization is a process known as optimality criteria. The approach to the optimum is based on the assumption that some characteristic will be attained at such optimum. The well-known example is the fully stressed design where it is assumed that, in an optimal structure, each member is subjected to its limiting stress under at least one loading condition.

The optimality criteria procedures are useful for space structures because they constitute an adequate compromise to obtain practical and efficient solutions. In many studies, it has been found that the shape of the objective function around the optimum is flat, which means that an experienced designer can reach solutions which are close to the theoretical optimum.

