

REQUIREMENTS FOR MATERIALS DESIGN

COMPONENT NAME		piston
WBS No.		2.5.3.1.2
		<i>What does the component do?</i>
		<i>What kind of mechanical load is applied on the component?</i>
	1	
FUNCTION	2	Gas pressure
		<i>What non-negotiable conditions must be met?</i>
	1	reducing wear
	2	sealing
CONSTRAINS (Hard)	3	expanding size and wear resistance
	4	dimensions
	5	Tensile strength
		<i>What negotiable but desirable conditions must be met</i>
	1	ss420
	2	
CONSTRAINS (Soft)	3	
	4	
	5	
	6	
		<i>What is to be maximized or minimized?</i>
	1	Maximize Impact Strength
	2	Maximize wear resistance
OBJECTIVES	3	Maximize flexural Strength
	4	Maximize glass Transition (Tg)
	5	Maximize heat deflection Temperature
	6	
		<i>Which Parameters on the problem is the designer free to change?</i>
	1	ss420
	2	
FREE VARIABLE	3	
	4	
	5	
	6	